

Even the smallest difference matters

Turkey is worth all our efforts

2019
Annual Report

Türk Telekom





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Glossary

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As Turkey’s first and largest integrated telecom operator, Türk Telekom offers all broadband, mobile, fixed voice and TV products and services to 47.8 million subscribers. Türk Telekom continues to provide value to Turkey with “accessible communication for all” principle throughout its 179-year history, while making its stakeholders feel they are esteemed.

Shaping its operations in line with its “Not just for some, but for everyone” service approach, Türk Telekom is committed to delivering the most recent and advanced communication technologies with the best in class customer experience to all its subscribers; from a single person living in the most remote part of the country to crowded families; from the smallest companies to the largest enterprises.


Making its presence felt in every step of national technology transformation, Türk Telekom is the readiest operator for 5G in Turkey with its strong fiber network of 304 thousand kms, which it has expanded 10 times over the last 10 years, and its 5G investments.





**Leading
Company**

in Turkey Offering Integrated
Telecom Services



Most Valuable Telco
Brand for

11

Consecutive Years



92%

LTE Population Coverage



21.9

Million
Fiber Homepass in 81 Provinces



304

Thousand Kms
Fiber Network



Serving
47.8

Million
Subscribers



45%

Fiber Connected
LTE Base Stations



2nd

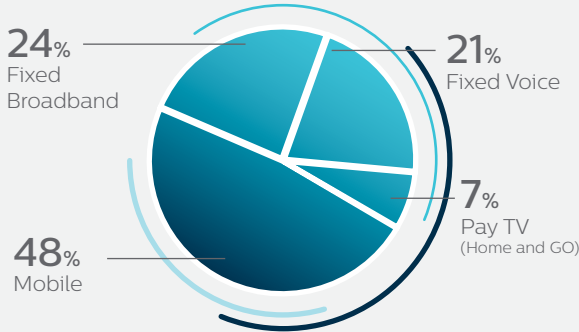
Player In TV Market

Türk Telekom at a Glance

Türk Telekom Group Companies provide services in all 81 provinces of Turkey with 32,180 employees, **with the vision of introducing new technologies to Turkey and accelerating Turkey's transformation into an information society.**

Strongest Position in Multiplay Offers

Total Subscribers
47.8 million
as of Q4'19



Türk Telekom, with 179 years of history, is the first integrated telecommunications operator in Turkey. In 2015, Türk Telekomünikasyon A.Ş. adopted a “customer-oriented” and integrated structure in order to respond to the rapidly changing communication and technology needs of customers in the most powerful and accurate way, while maintaining the legal entities of TT Mobil İletişim Hizmetleri A.Ş. and TTNET A.Ş. intact and adhering to the rules and regulations to which they are subject. Having a wide service network and product range in the fields of individual and corporate services, Türk Telekom unified its mobile, internet, phone and TV products and services under the single “Türk Telekom” brand as of January 2016.

“Turkey’s Multiplay Provider” Türk Telekom has 14.6 million fixed access lines, 11.4 million broadband, 3.5 million TV and 22.9 million mobile subscribers as of 31 December 2019. Türk Telekom Group Companies provide services in all 81 provinces of Turkey with 32,180 employees with the vision of introducing new technologies to Turkey and accelerating Turkey’s transformation into an information society.

Türk Telekomünikasyon A.Ş., providing PSTN and wholesale broadband services, directly owns 100% of mobile operator TT Mobil İletişim Hizmetleri A.Ş., retail internet services, IPTV, satellite TV, Web TV, Mobile TV, Smart TV services provider TTNET A.Ş., convergence technologies company Argela Yazılım ve Bilişim Teknolojileri A.Ş., IT solution provider Innova Bilişim Çözümleri A.Ş., online education software company Sebit Eğitim ve Bilgi Teknolojileri A.Ş., call center company AssisTT Rehberlik ve Müşteri Hizmetleri A.Ş., project development and corporate venture capital company TT Ventures Proje Geliştirme A.Ş., Electric Supply and Sales Company TTES Elektrik Tedarik Satış A.Ş., wholesale data and capacity service provider Türk Telekom International, provider of combined facilities support activities TT Destek Hizmetleri A.Ş. and indirectly owns 100% of subsidiaries of Türk Telekom International, TV Broadcasting and VOD services provider Net Ekran Companies, telecommunications devices sales company TT Satış ve Dağıtım Hizmetleri A.Ş. and payment services company TT Ödeme ve Elektronik Para Hizmetleri A.Ş. and counselling services company 11818 Rehberlik ve Müşteri Hizmetleri A.Ş.

Focused on High Growth Areas

2019 Consolidated Revenue Breakdown

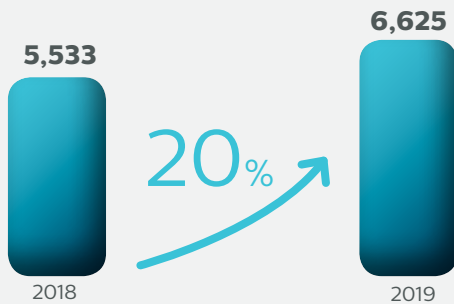
TL 23.7 bn



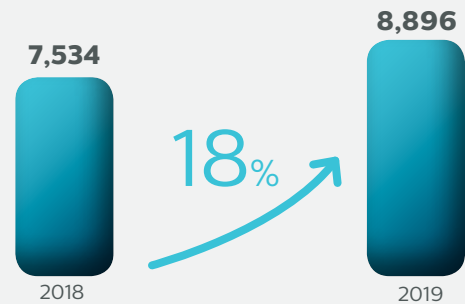
* Other: TV, international sales, interconnection, IFRIC 12 adjustment, eliminations and other revenue

Revenues Based on Segments

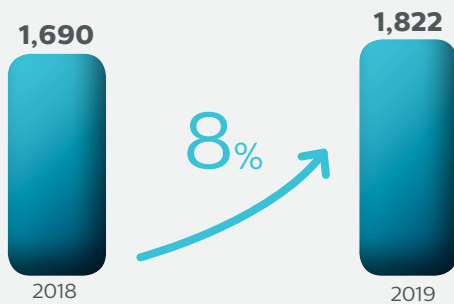
Fixed Broadband (TL million)



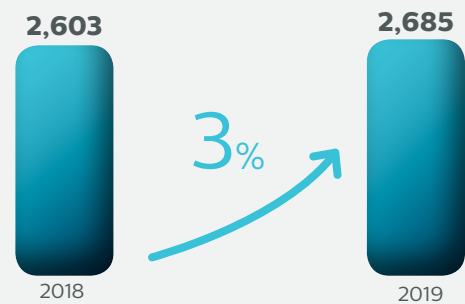
Mobile (TL million)



Corporate Data (TL million)



Fixed Voice (TL million)



ARGELA



- ProgRAN and vRAN: SDN based RAN solutions for LTE and 5G with 31 patents granted in 5G domain
- NPM/CEM: Network Performance Monitoring and Customer Experience Management solutions used by telecom operators in Turkey and throughout the world.
- ULAK: Turkey's first and only LTE base station development project
- SEBA: SDN Enabled Broadband Access Technology for fixed networks
- Commercialization of R&D activities
- A member of ONF and ONAP through its US based subsidiary, NETSIA
- A leading role in the Türk Telekom Network Transformation Project

Solution provider and R&D company for 5G and beyond next-generation telecommunication technologies

INNOVA



- System Integration Solutions
- Smart City and Smart Store Solutions
- Health Campuses
- Fintech Solutions
- IoT Platform and Solutions
- SAP Consultancy Services
- Business Applications (Document Management, Law Process Management)
- CRM and Business Intelligence
- Self-Service and Automation Solutions
- Managed Services

Turkey's leading system integrator & solution provider

Türk Telekom International



- A fiber network of over 45 thousand km in CEE, Turkey, the Middle East and the Caucasus
- More than 114 major POPs in Europe, ME and Asia
- Unique Solutions
 - AMEERS: New path connecting WE to ME
 - SEA-ME-WE-5: Submarine cable system connecting Europe to Africa, the ME and Asia

The Group's international arm in wholesale data, voice and roaming services

AssisTT



- Beyond traditional call center services, solutions such as sales and marketing, social media management, e-mailing and payroll
- Serving Turkey's largest private and public institutions with around 12 thousand employees

A leading customer service solutions company

SEBİT



- E-educational products, covering all grades from Pre-School to High School
- Leading and innovative e-Education products: Raunt, SEBİT VCloud and Vitamin
- Content and platform provider for the national e-Education transformation project (FATİH)

Leading and largest edtech company in Turkey

Türk Telekom Ödeme Hizmetleri ve Elektronik Para



- Electronic Money License from the BRSA
- Strong position in Direct Carrier Billing (DCB)
- Expansion plans in other payment related services & products (Digital Wallets, Carrier-Billing, Money Transfers, Tax/Bill payments, E-money)

Payment services and electronic money company

TT Ventures



- Focus on investing in early stage and scale-up companies primarily in healthcare, energy and education verticals, as well as opportunistic horizontals
- First deal on healthcare vertical: DoctorTurkey
- Second deal on education vertical: MentalUP
- Third deal on energy vertical: Eltemtek

Corporate venture capital company

Türk Telekom is guided by a set of shared values, namely **customer focus, innovation, human focus, trust and agility**.

Our Vision

As Turkey's undisputed leader in communication and entertainment technologies, Türk Telekom, enriches its customers' businesses and lives by excelling in every field.

Shared Values and Attitudes

Customer Focus

- We listen to our customers, understand them and make their lives easier with solutions customized for their needs.
- We take all decisions in due consideration of their possible impact on our customers.
- We provide our customers with timely and accurate information, as well as high standards of services.

Innovation

- We anticipate market trends and pioneer the new initiatives in the industry.
- We press ahead, live up to the challenges and courageously implement new ideas.
- We learn from mistakes, as well as achievements, and strive for perfection.

Human Focus

- We respect differences of opinion and view diversity as our key strength.
- We invest in people, learn constantly, develop and enable to develop.
- We establish frank, fair and constructive relations among ourselves.

Trust

- We believe in open communication and share our knowledge with each other.
- We place trust in the competencies of our colleagues and work collaboratively.
- We work for the success of everyone among us, appreciate each other and celebrate success together.

Agility

- We take quick decisions and get immediate results.
- We work with passion and responsibility to reach our goal.
- We share our authority with others and empower them.
- By taking the initiative, we both facilitate and improve our work.

1840

The Post Office was established in order to meet postal requirements, and started to provide telecommunication services in the following years.

1909

With the addition of telephone services, the institution was transformed into the PTT Directorate.

1994

Türk Telekomünikasyon A.Ş. was established on 30 June 1994.

1995

On April 24th, the telecommunications and postal services in the PTT were separated. All PTT staff, assets and liabilities related to telecommunications services were transferred to Türk Telekom, which was fully owned by the Republic of Turkey Prime Ministry Undersecretariat of Treasury.

2004

On February 19th, TT & TİM İletişim Hizmetleri A.Ş. was established through the merger between Türk Telekom's GSM Operator, Aycell and İş-TİM.

On October 15th, the trade name of TT & TİM İletişim Hizmetleri A.Ş. was changed to Avea İletişim Hizmetleri A.Ş. (Avea).

2005

Work on the privatization of Türk Telekom was completed on November 14th, and 55% of its shares were transferred to Ojer Telekomünikasyon A.Ş.

2006

On May 14th, TTNET, a subsidiary of Türk Telekom, was established and began operations after being awarded an internet service provider license.

On September 15th, Türk Telekom purchased a 40.56% stake in İş-TİM for USD 500 million and increased its stake in Avea (renamed as TT Mobil) to 81.12%.

2008

On May 15th, 15% of the shares in Türk Telekom were offered to the public and the shares started to trade on the Istanbul Stock Exchange in what was, at the time, the most successful public offering to have taken place in Turkey over the last 4 years.

2009

Avea started to successfully provide 3G services.

2010

Türk Telekom acquired Invitel International (renamed as Türk Telekom International), the leading wholesale capacity provider in Central and Eastern Europe.

2011

Türk Telekom became the first telecommunication company in Turkey to report carbon emissions to the CDP (Carbon Disclosure Project).

2012

Türk Telekom's total share in Avea's capital increased to 89.99%.

2013

Sobee Yazılım Ticaret Ltd. Şti., a wholly-owned subsidiary of Türk Telekom, was transferred to TTNET A.Ş., also a subsidiary of Türk Telekom, with all of its assets and liabilities, through a merger.

2014

Türk Telekom carried out bond issuances with maturities of 5 and 10 years, totaling USD 1 billion. The issuance was eight times oversubscribed. The transaction, which at that time was the largest corporate bond issuance in Turkey, was the first to be issued with two different maturities simultaneously.

TTNET A.Ş. acquired the rights to broadcast the UEFA Champions League and UEFA Europa League games in Turkey for three seasons, starting with the 2015-2016 season. The games were broadcast over Türk Telekom Group's broadcasting platform, Tibivu.

2015

Türk Telekom became the sole owner of Avea İletişim Hizmetleri A.Ş. with the completion of the transfer of the shares of Avea owned by the İş Bank Group, to Türk Telekom.

Türk Telekom International became a full member of the SEA-ME-WE-5 underwater cable consortium, which would connect 17 countries.

Avea participated in the Authorization Tender for IMT Services and Infrastructure (known as the LTE Authorization Tender) that was carried out on August 26th by the Information and Communication Technologies Authority (ICTA). Expanding its capacity with the packages that it had purchased in different frequency bands, Avea became the operator to have the widest frequency per subscriber.

2016

Avea, Türk Telekom and TTNET brands were unified under the “Türk Telekom” single brand in order to offer mobile, internet, telephony and TV services from a single channel.

Avea (renamed as TT Mobil), a subsidiary of Türk Telekom, started to successfully provide 4G services.

Türk Telekom became the first operator to integrate ULAK into its network. ULAK was developed by Aselsan, Netaş and Türk Telekom’s R&D subsidiary, Argela with the support of the Presidency of Defence Industries, and is Turkey’s first domestic and national LTE base station.

Türk Telekom introduced its new youth brand, Selfy, to young people.

Türk Telekom became the first operator to test the Narrowband IoT (Narrowband Internet of Things) technology on its own network in Turkey in cooperation with Nokia.

The SEA-ME-WE-5 underwater cable system, of which Türk Telekom International is a participant, started service at the end of the year, connecting 17 countries from Asia to Europe over a total distance of more than 20 thousand kilometers.

2017

TT Ödeme Hizmetleri A.Ş. a subsidiary of Türk Telekom obtained a payment services license from the Banking Regulation and Supervision Agency (BRSA) in order to provide next generation payment services to its customers.

A total of 6.68% of Türk Telekomünikasyon A.Ş. shares held by the Undersecretariat for Treasury of the Prime Ministry of the Republic of Turkey (5% Group B, 1.68% Group D) were transferred to the Turkish Wealth Fund following the related Council of Ministers’ decision.

The 5G Center of Excellence, which was designed for the development of national 5G technologies, was opened in Ankara by Argela, the R&D subsidiary of Türk Telekom.

Türk Telekom was selected as the most valuable brand in Turkey by the international brand assessment company, Brand Finance.

Türk Telekom introduced Tambu, a platform-enabled digital keyboard that it developed with the vision of developing domestic and national technology.

Türk Telekom introduced its digital music platform Muud, which it renewed with improvements to its technological infrastructure.

Türk Telekom rose to second ranking in the Pay TV market thanks to its superior technology and rich content.

Türk Telekom became the first Turkish company to join in the ONF (Open Networking Foundation) platform with a member status. ONF includes global technology giants and designs 5G and beyond technologies.

Türk Telekom became a platinum member of the Open Network Automation Platform (ONAP), which brings together leading global operators and technology suppliers.

Netsia, the US subsidiary of Argela, successfully established “RAN Slicing” technology test platform in Orange, Verizon and Telefonica.

2018

Turkey’s largest Cyber Security Center with the largest monitoring area in Turkey and the highest capacity DDoS protection infrastructure was opened in Türk Telekom’s new headquarters building in Ankara.

In line with its focus on investing in early-stage and scalable companies, Türk Telekom established TT Ventures, the first corporate venture capital company in the Turkish telecommunications sector. The company undertook its first investment in DoctorTurkey, one of the first ventures in the field of online health services in Turkey.

In order to increase internet penetration and diversify sales channels, collaborations were entered into with electricity companies in what was a first in Turkey. With

this collaboration, Türk Telekom's fixed broadband packages and electricity started to be offered from a single point.

The trademark of Türk Telekom's mobile communication company, Avea, was changed to TT Mobil İletişim Hizmetleri A.Ş. to be in line with the company's single brand perception.

A cooperation protocol was signed between Türk Telekom, Turkcell, Vodafone, Türksat and Telkoder for "Leasing of Fixed Electronic Communication Infrastructure". The protocol is aimed at ensuring the effective use of fixed infrastructure, minimizing duplicate investments, accelerating new investments, offering a high-level customer experience and managing environmental issues more effectively.

The first pilot project for active mobile network sharing with Vodafone was completed successfully.

Türk Telekom brought to life the Video Assistant Referee (VAR) system of the Turkish Football Federation (TFF) with the new MTN (Media Transport Network) technology infrastructure established in Super League stadiums for the first time in Turkey.

55% of the shares held by Ojer Telekomünikasyon A.Ş. (OTAŞ) in Türk Telekom were transferred to Levent Yapılandırma Yönetimi A.Ş., a special purpose company (renamed as LYY Telekomünikasyon A.Ş.).

2019

Türk Telekom, in collaboration with Nokia, became the first Turkish operator to test 5G artificial intelligence, Cloud Radio Access Network (Cloud-RAN) and Wireless PON (Wireless Passive Optical Network) technologies. The first Industry 4.0 tests were carried out on the 5G Smart Factory test network established at Ümraniye Teknopark in collaboration with Nokia.

As the only company to have been consistently included in the Deloitte Technology Fast 50 Turkey Program since 2006, Türk Telekom's technology solutions provider subsidiary, İnnova, won the "Big Star" award in the "Big League" category.

Türk Telekom successfully completed a USD 500 million bond offering. In addition to being the first transaction carried out by Turkish companies since April 2018, the bond issue was the first Turkish Eurobond issue reflecting fair value since May 2016, and was five times oversubscribed, attracting interest from 264 investors from 39 countries.

Together with Huawei, Türk Telekom implemented Turkey's first 5G cloud application. This test of AR and VR-based educational content was listed as "One of The Best 5G Cloud Vertical Sector Applications" by Huawei at the Mobile World Congress.

Türk Telekom's corporate venture capital company, TT Ventures, became a partner with MentalUP, Turkey's first and only gamified digital education platform for children.

TT Ventures made its third agreement with an investment in the energy vertical by purchasing 11% shares of Eltemtek, a consulting and engineering company.

Türk Telekom Group built the technology infrastructure for the "Ankara City Hospital", the largest cooperation between the public sector and the private sector in the field of healthcare in Turkey.

The Beta version of LAFF, a domestic and national messaging application developed by Türk Telekom's R&D and technology company Argela, was offered on Android and iOS platforms.

Türk Telekom completed the first phase of the corporate social responsibility project, "Life is Simple with Internet", carried out since 2014. During this period, Türk Telekom taught internet literacy to 50 thousand participants with over 300 volunteers.

Ümit Önal, who had successfully served the company in the positions of Assistant General Manager responsible for Sales, Marketing and Customer Services for three years, became the new CEO of Türk Telekom.

Türk Telekom became the first Turkish operator to use 400Gbps Ethernet technology, quadrupling connection speeds to its subscribers.

In the 20th year of Turkey's leading sector survey, the Bilişim 500, Türk Telekom received 3 first place awards in the Internet and Fixed Telephony Services categories in the Service Provider Section.

Türk Telekom broke the world 5G speed record by reaching speeds of more than 2.9Gbps in the 5G speed trial conducted with Huawei. In the same test, Türk Telekom became the first operator in the world to test 5G New Radio Carrier Aggregation Technology with commercial phones.

Türk Telekom implemented the Subscriber Donation System over SMS for the first time in Turkey in cooperation with the Turkish Red Crescent.

Türk Telekom won first prize in the IDC Artificial Intelligence Awards with its 100% domestic and national "Artificial Intelligence in Operation" project.

Türk Telekom was named "Turkey's most valuable telecommunications brand" for the 11th time in a row by Brand Finance, an international brand assessment company.

Through its subsidiary Netsia, Argela received a total of 31 patents in the area of 5G from the U.S. Patent and Trademark Office.

**Each one of our customers
is so precious**

**Customer Satisfaction
is our priority**





Key Performance Indicators

Türk Telekom Group announced record annual revenue and EBITDA growth since IPO along with a strong cash flow generation in 2019 on the back of strong operational performance.

Türk Telekom Group recorded outstanding financial and operational results with the highest revenue and EBITDA growth since IPO, strong subscriber additions and strong cash flow. Group met its 2019 revenue guidance, while EBITDA exceeded the guidance which was upgraded twice within the year.

Financial Indicators

Revenue, EBITDA and Net Income

In 2019, consolidated revenues increased by 15.8% YoY to TL 23.7 billion, the highest annual growth rate since IPO. Excluding IFRIC 12¹, total revenue growth was 15.1% YoY, in line with the guidance.

The Group's EBITDA at TL 11.2 billion, increased by 32.4% YoY, the highest annual EBITDA growth since IPO. EBITDA margin continued to increase on the back of strong revenue growth and efficiency measures undertaken in OPEX management. The Group recorded 47.2% EBITDA

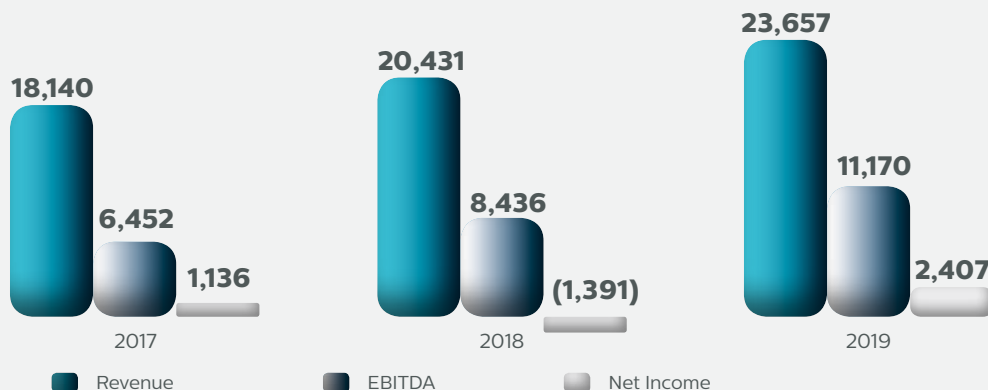
margin in 2019, 5.9pp higher than 2018. Excluding IFRS 16 impact, EBITDA margin at 44.0% was again 2.7pp higher than 2018.

Operating profit increased by 36.7% YoY to TL 6.4 billion.

Net income was TL 2,407 million in 2019, with a significant turnaround compared to a net loss of TL 1,391 million in 2018, thanks to strong operating performance, disciplined OPEX management and a more favorable FX environment.

¹ IFRIC 12 adjustment is a non-operational revenue line booked in conjunction with upgrades to fixed line infrastructure, such as the upgrade from copper to fiber network.

Revenue, EBITDA and Net Income (TL Million)

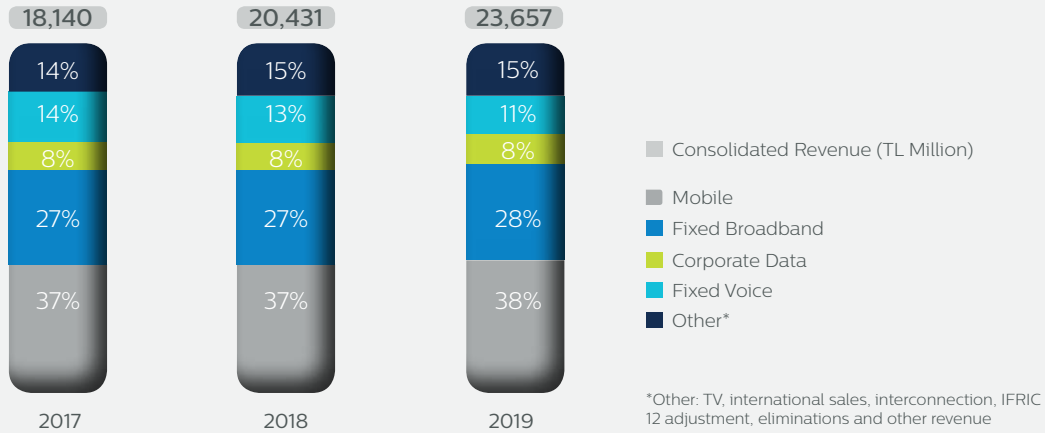


Breakdown of Consolidated Revenues

The share of the high growth businesses, namely mobile and broadband, in consolidated revenues increased to 66% in 2019, compared to 62% in 2016, driven by higher subscriber number and ARPU in both businesses.

The share of fixed voice revenues, the third largest revenue item, was 11% in 2019 compared to 17% in 2016. On the other hand, fixed voice revenues increased by 3% in 2019 compared to the 8% year on year decline in 2016.

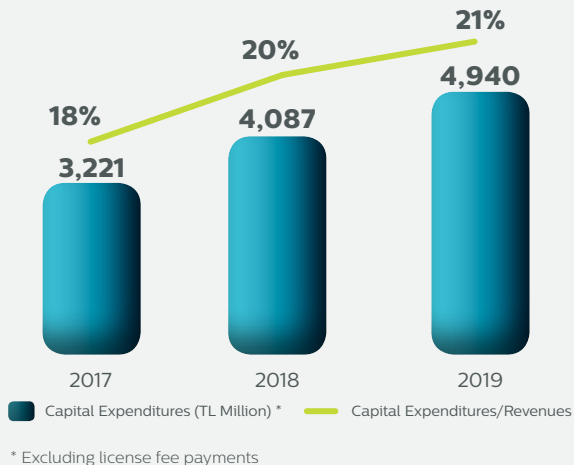
Breakdown of Consolidated Revenues



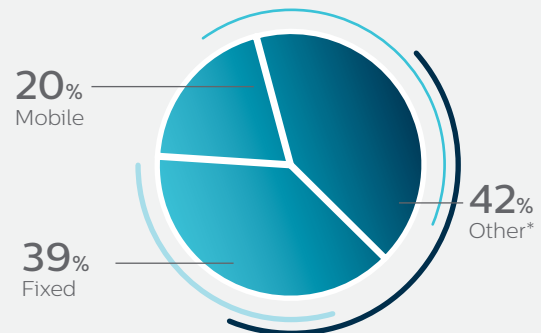
Capital Expenditures (Capex)

Capex was TL 4,940 million in 2019 compared to TL 4,087 million in 2018 mainly due to capacity increases in mobile, fiber greenfield investments and fiber transformation projects.

Capital Expenditures & Capital Expenditures/Revenues



Capital Expenditures Breakdown - 2019



*Other Capex includes IT related capex, Capex for subsidiaries, Capex for new revenue streams, IFRS 15 capitalization and other

Key Performance Indicators

Revenues

In 2019, revenues increased by 15.8% YoY (up by TL 3,226 million) to TL 23,657 million with 19.7% YoY increase in broadband (up by TL 1,093 million), 18.1% YoY increase in mobile (up by TL 1,362 million), and 18.5% YoY increase in international revenues (up by TL 171 million). Excluding IFRIC 12, top line growth was 15.1% YoY (up by TL 2,974 million), in line with the guidance. Fixed voice segment registered 3.2% YoY revenue growth (up by TL 82 million) in 2019.

Earnings Before Interest Tax Depreciation and Amortization (EBITDA)

In 2019, Group EBITDA increased to TL 11,170 million with TL 2,734 million annual increase, exceeding the guidance of TL 11 billion. 32.4% YoY increase was the highest annual growth since IPO thanks to strong revenue growth and efficiency measures undertaken in OPEX management. EBITDA margin was realized at 47.2%, up by 5.9pp compared to 2018.

Excluding IFRS 16 impact, EBITDA growth was still strong with 23.3% YoY increase and excluding IFRS impact EBITDA margin in 2019 was 44.0%, 2.7pp higher than in 2018.

Meanwhile, mobile EBITDA margin continued its upward trend in 2019, while segment net income was positive. Mobile EBITDA margin in 2019 was 32%, up from 22% in 2018 thanks to strong revenue growth, efficiencies in commercial spending, improvement in receivable management and group synergies.

Depreciation and Amortization Expense

In 2019, depreciation and amortization (D&A) expense increased by 27.1% YoY (up by TL 1,011 million) to TL 4,746 million mainly due to TL 628 million incremental D&A expenses stemming from IFRS 16 implementation.

Operating Profit

In 2019, operating profit increased by 36.7% YoY (up by: TL 1,723 million) to TL 6,424 million thanks to strong EBITDA.

Net Financial Income/Expense

Group recorded TL 3,689 million net financial expense in 2019 compared to TL 6,723 million expense in 2018 with a more favorable FX environment. IFRS 16 implementation had TL 200 million impact on financial expenses in 2019.

Tax Income/Expense

Group tax expense was TL 328 million in 2019. TL 631 million tax income was recorded due to profit before tax was negative in 2018. The main reason behind low tax expense in 2019 is related to deferred tax income attributable to the improved performance of TT Mobil in terms of profitability in 2019 leading to high probability to recover certain part of its previous years' statutory tax losses by offsetting with future statutory taxable profits.

Net Income/Loss

Group reported TL 2,407 million net income in 2019 compared to TL 1,391 million net loss in 2018 thanks to strong underlying operating performance and lower financial expenses.

Summary Income Statement (TL Million)	2017	2018	2019	2018-2019 Change (%)
Revenues	18,140	20,431	23,657	15.8
Net Operating Expenses excluding Depreciation and Amortization	(11,688)	(11,995)	(12,487)	4.1
Earnings Before Interest Tax Depreciation and Amortization (EBITDA)	6,452	8,436	11,170	32.4
Depreciation and Amortization	(3,019)	(3,735)	(4,746)	27.1
Operating Profit	3,433	4,701	6,424	36.7
Net Financial Income/(Expense)	(1,954)	(6,723)	(3,689)	(45.1)
Tax	(343)	631	(328)	n.m.
Net Profit	1,136	(1,391)	2,407	n.m.

Summary Balance Sheet (TL Million)	2017	2018	2019
Cash and Cash Equivalents	4,100	4,495	4,946
Tangible Assets ^(a)	9,138	14,274	14,727
Intangible Assets	8,482	9,783	10,328
Rights of Use Assets	-	-	1,366
Other Assets ^(b)	7,428	7,647	8,543
Total Assets	29,149	36,199	39,909
Share Capital	3,260	3,260	3,260
Reserves, Retained Earnings and Other Equity Items	1,295	4,193	6,183
Interest Bearing Liabilities ^(c)	16,492	19,921	20,783
Other Liabilities ^(d)	8,102	8,823	9,683
Total Equities and Liabilities	29,149	36,199	39,909

^(a) Tangible assets include property, plant and equipment and investment property

^(b) Major items within other assets are trade receivables, due from related parties, inventories, deferred tax asset and other current assets.

^(c) Includes short-term and long-term borrowings and lease obligations

^(d) Major items within other liabilities are deferred tax liability, trade payables, provisions, income tax payable, due to related parties, other current liabilities and provisions for employee termination benefits

Balance Sheet and Cash Flow

Total Assets

Total assets increased by 10% to TL 39.9 billion mainly due to TL 1,336 million "Rights of Use Assets" which were recognized within the scope of IFRS 16 and increase in tangible and intangible assets stemming from the capex expenditures during the year and increase in trade receivables due to increasing sales. Cash and cash equivalents increased by 10% in the same period.

Total Equities and Liabilities

Total equities and liabilities increased by 10% to TL 39.9 billion mainly due to TL 1,138 million stemming from leasing liabilities which transferred to financial tables within the scope of IFRS 16 and net income.

Additionally, despite the depreciation of TL against USD and Euro, bank loans and issued debt instruments decreased by 1% due to deleveraging.

Unlevered free cash flow² in 2019 increased to TL 6.4 billion from TL 3.5 billion in 2018, with robust EBITDA performance. Excluding IFRS 16 impact, unlevered free cash flow at TL 5.6 billion was 62% higher than 2018.

With a strong EBITDA performance, and ongoing deleveraging, Net Debt/EBITDA ratio decreased to 1.41x in Q4'19 from 1.86x in Q4'18.

Group's net FX exposure³ decreased to USD 370 million from USD 1,238 million in Q4'18 (Q4'17: USD 2,813 million).

² Unlevered free cash flow is defined as net cash provided by operating and investing activities from operations.

³ Net FX exposure is calculated as FX based financial debt less FX hedge position less FX based cash and cash equivalents. Debt calculation excludes lease obligations.

Ratios (%)	2017	2018	2019
Net Debt/EBITDA*	1.79	1.86	1.41
Net Debt/Total Assets*	0.41	0.44	0.40
Debt (Total Liabilities) / Total Equity	5.40	3.86	3.23
Debt (Financial) / Total Equity	3.62	2.67	2.20
Current Ratio	1.22	0.81	0.88

* Net Debt calculation includes market valuation (MTM) of Foreign Currency TL money swap transactions. Net Debt/EBITDA calculation does not include extraordinary provisions in EBITDA calculation.

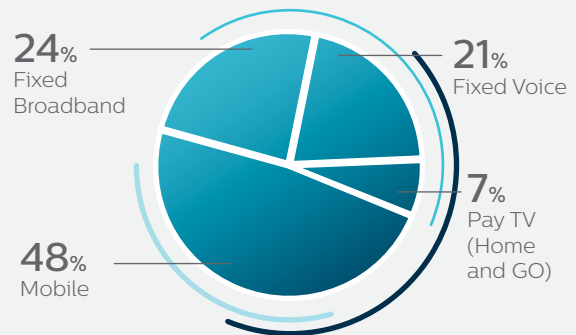
Key Performance Indicators

Operational Indicators

Total number of Türk Telekom subscribers increased to 47.8 million in 2019. For the full year, net subscriber gain was 1.8 million and 2.4 million excluding one-off impacts of the new regulation of the Information and Communication Technologies Authority (ICTA) regarding subscription of customers without Turkish or Foreigner ID and actions undertaken for the subscription cancellations in daily tariff in fixed broadband segment as per company policy.

Subscriber Breakdown

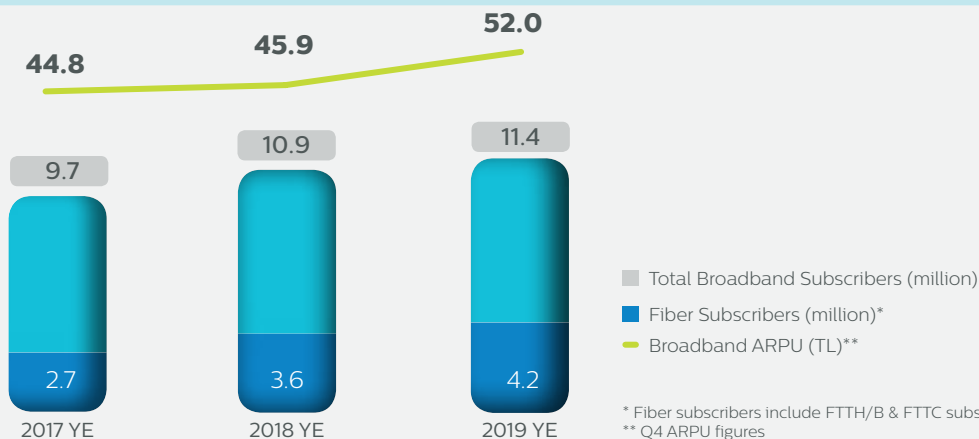
47.8 Million Subscribers



Broadband Operational Indicators

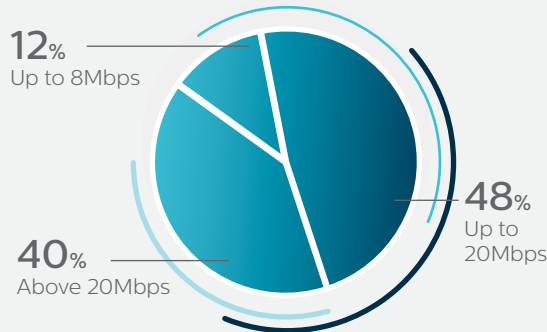
Broadband subscriber base reached 11.4 million with 458 thousand net additions in 2019. Excluding one off impacts, annual increase in broadband subscriber base was 559K. The number of fiber subscribers reached 4.2 million in Q4'19; 37% of total broadband subscriber base was on fiber tariffs.

Broadband Operational Indicators



* Fiber subscribers include FTTH/B & FTTC subscribers
** Q4 ARPU figures

Speed Breakdown (% of Subscribers)



Note: Excluding penetration campaigns
All figures are based on Türk Telekom's retail subscribers

Türk Telekom's strategy to increase fixed broadband penetration in Turkey continued to bear its fruits in 2019 and affordable entry-level penetration campaign İnternet Bizden subscribers reached 1.1 million.

Türk Telekom increased fiber cable network length to 304 thousand km and raised fiber homepass to 21.9 million at the end of 2019 with an annual increase of 3.2 million, the highest annual growth. With the increasing demand for higher speed in the market, excluding İnternet Bizden and İnternetsiz Ev Kalmasın subscribers, the share of subscribers on high speed tariffs (above 20Mbps) was 40%.

Mobile Operational Indicators

Net subscriber gain was 1.4 million in 2019 in the mobile segment. In order to comply with the ICTA regulation related to subscriptions without ID numbers, 453 thousand mobile subscriptions were cancelled in the second half of the year. Excluding this effect, net mobile subscriber gain was 1.9 million in 2019.

Türk Telekom's mobile market share increased by 6pp to 29% in the last five years.

Postpaid ratio increased by 3pp to 60% in 2019.

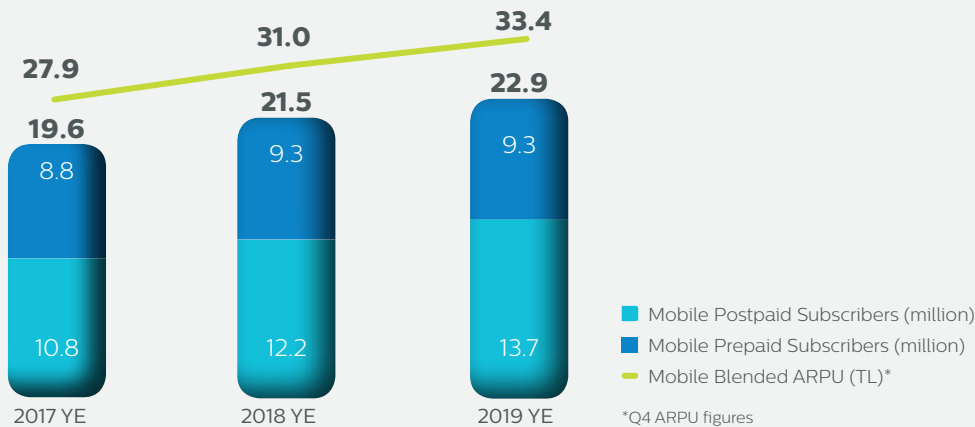
Mobile ARPU increased by 7.7% YoY with the price increases implemented during the year, higher data consumption and increasing postpaid ratio.

LTE population coverage expanded to 92% in Q4'19 from 83% in Q4'17. Share of LTE subscribers⁴ in mobile subscriber base increased to 55% in Q4'19 from 46% in Q4'18. Average monthly data usage per LTE user increased to 8.6GB in Q4'19 from 6.1GB in Q4'18 with the support of launch of data oriented loyalty campaign.

The company's customer-focused platform Online İşlemler was downloaded 36 million times since its launch. Unique subscribers using the application increased by 43% YoY to 17.8 million in Q4'19 and supported Türk Telekom's best in class customer experience and operational efficiency strategy.

⁴ Mobile subscribers who registered for LTE and have LTE compatible device and sim card.

Mobile Operational Indicators



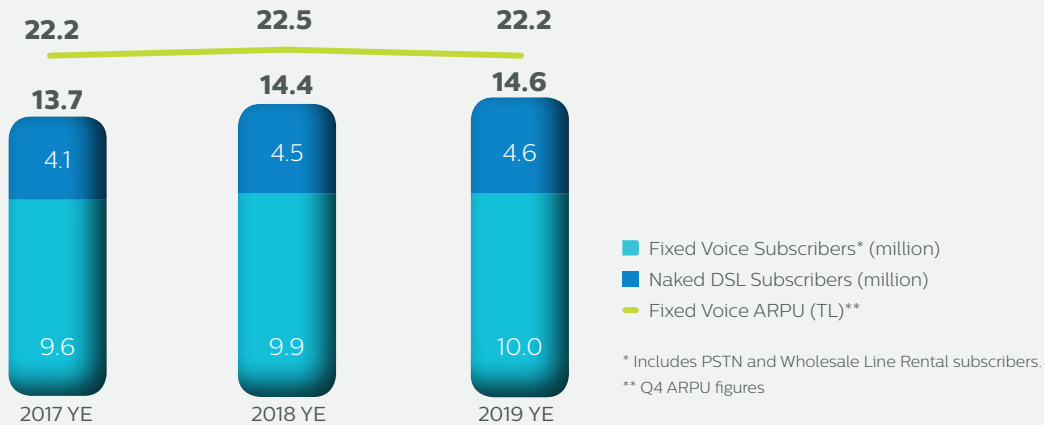
*Q4 ARPU figures

Key Performance Indicators

Fixed Voice Operational Indicators

With the growth in fixed voice segment contrary to the trends across the world, total subscribers reached 10 million in 2019. Including naked DSL, total access lines increased to 14.6 million in 2019 from 14.4 million in 2018.

Fixed Voice Operational Indicators



TV Operational Indicators

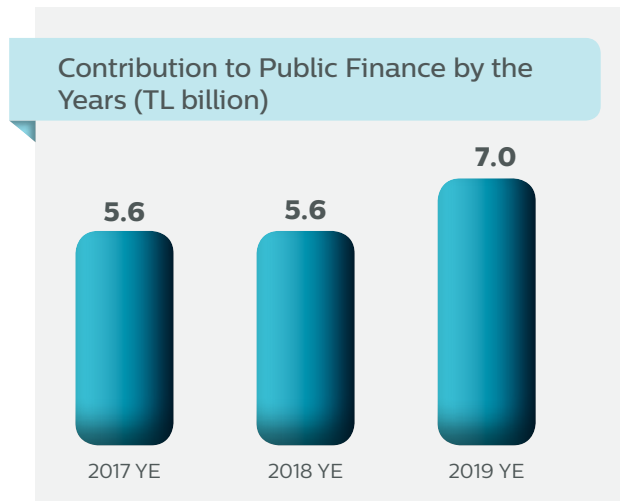
Home TV subscribers was 1.6 million as of the end of 2019 while total TV subscribers was 3.5 million. With the strong performance in 2017 and 2018, Tivibu Home moved from the fourth player position in 2016 to the second player position in 2018 in the Pay TV market and this position was maintained in 2019.

TV Operational Indicators



Contribution to Public Finance

In 2019, Türk Telekom Group made a contribution of TL 7.0 billion to Turkey's public finances through tax and Treasury share payments to the state.



Stock and Bond Information

Stock Information

Corporate Name	Türk Telekomünikasyon A.Ş.
Core Business	Telecommunication and Technology Services
Stock Exchange	Borsa İstanbul (BIST)
Average Daily Trade Volume (02/01/2019-31/12/2019)	TL 156.3 million
Market Capitalization (31/12/2019)	TL 25.8 billion
End Price (31/12/2019)	TL 7.37
High Price (02/01/2019 - 31/12/2019)	TL 7.40
Low Price (02/01/2019 - 31/12/2019)	TL 3.53
Average Price (02/01/2019 - 31/12/2019)	TL 5.31

Bond Information

Stock Exchange	Irish Stock Exchange	
Type	Eurobond	
ISIN Code	XS1028951264	XS1955059420
Issue Amount	USD 500 million	USD 500 million
Maturity	10 Years	6 Years
Redemption Date	19.06.2024	28.02.2025
Redemption Plan	Fixed and semi-annual coupon payment each year, principal amount will be paid at the end of the expiry date.	Fixed and semi-annual coupon payment each year, principal amount will be paid at the end of the expiry date.
Coupon Interest Rate	4.875%	6.875%

Credit Ratings

In 2019, Group's operational performance continued to be appreciated by credit rating agencies. Group has credit ratings from S&P Global Ratings and Fitch Ratings as of the end of 2019. Fitch Ratings revised Türk Telekom's credit ratings and outlook in line with change in Turkey's sovereign rating in 2019. On the other hand, S&P Global rating upgraded Türk Telekom's stand-alone credit profile from to "bbb-" (investment grade) due to stronger credit metrics as of 14 February 2019.

	Fitch Ratings	S&P Global Ratings
Last Update	8 November 2019	14 February 2019
Long term credit rating	BB-	BB-
Outlook	Stable	Stable

January

İnnova featured on Deloitte Technology Fast 50 Turkey Program for the 13th time in a row, in addition to winning the Big Star Award.

February

Türk Telekom successfully completed the USD 500 million bond offering that was 5 times oversubscribed with demand from 264 investors across 39 countries.

JANUARY 2019

Türk Telekom organized “Big Data” competition for refugees

The “Big Data for Refugees” competition, organized with the cooperation of Türk Telekom, Boğaziçi University and TÜBİTAK and with the support of international institutions such as UNICEF, the UNHCR and the International Migration Organization was concluded. The competition aimed to provide solutions to the problems faced by Syrian refugees. The best projects selected in various categories, from safety, security and health to education, unemployment and integration, were awarded in the ceremony held at Boğaziçi University.



Türk Telekom brings together 5G and artificial intelligence in collaboration with Nokia

Türk Telekom became the first Turkish operator to test artificial intelligence and machine learning technologies in the management of 5G and next generation fixed network services. In the tests conducted by Türk Telekom in cooperation with Nokia, the positive effects of artificial intelligence technologies on 5G mobile and fixed network performance were demonstrated. Türk Telekom successfully tested next generation technologies in artificial intelligence and machine learning applications that will significantly benefit operator activities in the near future. These applications are also being tested and developed on existing LTE networks.



Innova wins “Big Star” Award in Deloitte Technology Fast 50 program

Türk Telekom’s technology solutions provider subsidiary, Innova, featured in the Deloitte Technology Fast 50 Turkey Program for the 13th time in a row. Innova, the only company to be included in the program every year since 2006, won the Big Star award in the “Big Star” category, known as the “Big League”.

FEBRUARY 2019

Türk Telekom’s bond offering receives 5 times subscription from abroad

Türk Telekom successfully completed the USD 500 million bond offering. The issuance was 5 times oversubscribed with demand from 264 investors across 39 countries. This intensive level of interest for the bond issuance served as an indicator that Türk Telekom’s strong balance sheet, its record growth in subscriber numbers, revenues and operating profitability, and its high cash generation capacity are appreciated by investors.

Türk Telekom introduces new technologies at the World Mobile Congress 2019

Argela exhibited its solutions for 5G infrastructures at Mobile World Congress

Türk Telekom subsidiary Argela introduced its innovative products and solutions to the world at the Mobile World Congress held in Barcelona, Spain. Argela’s Netsia Mac product for the infrastructure of 5G networks, was exhibited at the stand of the ONF (Open Networking Foundation), the world’s leading platform in the field of next generation telecommunications technologies.

Türk Telekom’s “5G Cloud Vertical Sector Application” ranked among the best in the world

In February, Türk Telekom and Huawei remotely tested the access of virtual reality (VR) and augmented reality (AR) based educational content using cloud technology over 5G. This work represents Turkey’s first 5G cloud application and was highlighted by Huawei at the Mobile World Congress 2019 as one of the “Best 5G Cloud Vertical Sector Applications” in the countries in which the company operates.



Türk Telekom introduced “Safe Family” application

Türk Telekom introduced its Safe Family application at the Mobile World Congress (MWC 2019), which provides the controls needed to keep children safe in the digital world. It was stated that the digital experience of children could be better managed with the Safe Family digital security solution offered by Türk Telekom in collaboration with McAfee. The application, which can be installed on all devices connected to a mobile connection or the fixed internet, is also the most comprehensive application offered in Turkey in this field.

Türk Telekom becomes the first Turkish operator to test “Cloud Radio Access Technology”

Türk Telekom became the first Turkish operator to test Cloud Radio Access Network (Cloud-RAN) technology, one of the basic architectures of 5G. At the Mobile World Congress (MWC 2019) demo carried out with Nokia, participants could experience the next generation 3D video placement application thanks to the high speed low-latency communication provided by the new cloud architecture solution.

A first in next generation education technologies with 5G from Türk Telekom

Türk Telekom and Huawei carried out a first in Turkey by joining forces for virtual and augmented reality technologies with 5G, which will be a breakthrough in education. In this context, Türk Telekom successfully tested cloud-based virtual reality and augmented reality use cases through its 5G test network, which is compatible with international 3GPP standards, established with Huawei at the Ümraniye Teknopark Mobile Network Test Center. These technologies, which provide more opportunities for learning through experience, will enrich the reality perception and create potential new areas of business for companies by eliminating the physical constraints on the daily lives of institutions in the future.

TT Ventures, Türk Telekom’s corporate venture capital company, invests in MentalUP, the game-structured digital education platform for children

Continuing its investments aimed at improving the entrepreneurial ecosystem, Türk Telekom invested in MentalUP, Turkey’s first and only gamified educational platform, which develops children’s cognitive and learning skills.



March

Türk Telekom Group established the entire IT infrastructure of Ankara City Hospital in Bilkent, which is the largest public-private cooperation project in the health area in Turkey.

Türk Telekom providing employment to young talented individuals through the START program

Türk Telekom, one of Turkey's largest employers, offers opportunities to help young people achieve their dreams for the future with the Young Talent Program, "Türk Telekom START". Having successfully completed the evaluation stages and interviews for the Türk Telekom 2019 START program, 68 young candidates started their careers, working full-time at Türk Telekom.

Türk Telekom tests Wireless PON technology in Turkey for the first time

Working in cooperation with Nokia, Türk Telekom became the first operator in Turkey to test the Wireless PON (Wireless Passive Optical Network) solution, which offers fixed internet at fiber-optic speeds to homes and businesses with wireless technology. This new solution aims to improve the customer experience by further expanding the fiber internet service area offered for large hubs such as universities, hospitals and airports.



MARCH 2019

Türk Telekom Group establishes the technological infrastructure of "Ankara City Hospital", the largest public-private cooperation project in the field of health in Turkey

Türk Telekom Group established the entire IT infrastructure of Ankara City Hospital in Bilkent, which is the largest public-private cooperation project in the health area in Turkey. The hospital's data center, computer and peripherals, information security infrastructure as well as the Hospital Information Management System (HIMS) are also provided by Türk Telekom. With Innova's HICAMP Health Solutions platform at the Ankara City Hospital, solutions are offered under one roof, from intensive care services and security, to cleaning and waste management.

APRIL 2019

Türk Telekom hosts special guests on April 23rd National Sovereignty and Children's Day

Türk Telekom hosted 10 students from the Siirt Türk Telekom Special Education School in İstanbul on April 23rd National Sovereignty and Children's Day. The students celebrated their holiday by visiting İstanbul's historical and touristic sights.

Türk Telekom receives "Outstanding Customer Service Initiative" Award

Türk Telekom received the "Outstanding Customer Service Initiative" award at the Global Business Excellence Awards 2019 with its "Accessible Life Mobile Application" developed to bring ease to the lives of the disabled and their relatives.



April

Türk Telekom introduced the low latency, high capacity and speed capabilities of the next generation communication technology in the 5G test network established with Nokia at Ümraniye Teknopark.

Beta version of LAFF, Turkey's latest instant messaging app, is released

The Beta version of LAFF, a domestic and national messaging application developed by Türk Telekom's R&D and technology company Argela, was released on Android and iOS platforms. LAFF Beta is available for use on all mobile platforms in an operator-independent form.

Türk Telekom taught internet literacy to 50 thousand participants in its "Life is Simple with Internet" project, working with over 300 volunteers over 5 years

During the first 5-year phase of Türk Telekom's corporate social responsibility project, "Life is Simple with Internet", ongoing since 2014, over 300 volunteers provided internet literacy tuition to 50 thousand participants, mostly women. Following the training, these women overcame the national borders to become beacons of success, selling their handcrafts to even the farthest countries. The training programs held within the scope of the project covered a range of subjects showing how the internet can make life easier such as basic internet usage, secure internet, e-government, e-pulse, internet banking and online shopping. The training sessions helped not only participants, but also their family members and their circle to recognize the advantages of the internet more effectively and to use it consciously.



Türk Telekom's digital advertising purchasing platform "Programattik" opening companies up to the world

Türk Telekom's digital advertising purchasing platform Programattik expanded its service area to include Russia, the Commonwealth of Independent States (CIS) countries, the Middle East and Gulf countries, and China. In accordance with the agreement reached, Programattik has become the sole sales representative for Mail.Ru group and Aviasales ad space in Turkey.

Türk Telekom carries out first Industry 4.0 5G test in Turkey

Türk Telekom introduced the low latency, high capacity and speed capabilities of the next generation communication technology in the 5G test network established with Nokia at Ümraniye Teknopark. The most striking aspect of the collaboration between Türk Telekom and Nokia, which introduced 5G technology with three tests, were the tests in the area of Industry 4.0. Türk Telekom and Nokia's Smart Factory test was the first Industry 4.0 5G test in Turkey and utilized the low latency, high bandwidth and high data transmission speed capabilities of 5G with the goal of minimizing errors in critical industrial applications and increasing production and efficiency.

MAY 2019

SIGMONA project wins Eureka innovation of the year award

Argela, the next generation telecommunications solutions provider subsidiary of Türk Telekom, continues to bring new successes to Turkey through its R&D focused efforts. Argela played an active role in the SIGMONA project carried within the scope of the Celtic-Next research program conducted by the European Union. SIGMONA project was successfully completed and won the Eureka Innovation Award at EUREKA Global Innovation Summit.

The SIGMONA project explores the use of SDN (Software Defined Network) and NFV (Network Function Virtualization) technologies in the LTE network; with the

PROGRAMATİK



May

Türk Telekom subsidiary Argela played an active role and successfully completed the SIGMONA project, which won the Eureka Innovation Award at the EUREKA Global Innovation Summit.

June

Türk Telekom took yet another pioneering and innovative stride for the telecommunications industry, becoming the first Turkish operator to use 400Gbps Ethernet technology.

aim of virtualizing the communication network and its functions by making them software-based, thus reducing the cost of network installation and facilitating network management. In the project, network solutions become independent of the vendor, while network resources can be managed centrally and dynamically. This will also pave the way for advanced security solutions.

innova's loyalty management solution maintains its success in international markets

Innova has maintained its success in international markets and sustained its contributions to Turkey's technology exports. Innova's customer loyalty management program for Ooredoo, one of Algeria's leading telecom operators, reached a total of more than 7 million customers and a transaction volume of 2 billion. "The PayFlex Loyalty" loyalty management solution enables fast and easy execution of all required loyalty transactions with dynamic identification options.



Special celebration for the Galatasaray championship under Türk Telekom's sponsorship

Galatasaray won its 22nd championship, lifting the Spor Toto Super League Lefter Küçükandonyadis Season Championship Cup at Türk Telekom Stadium with a Türk Telekom sponsored special event. The celebrations drew tens of thousands of spectators in the fun-packed event.

JUNE 2019

Data flow at quadruple the speed with Türk Telekom 400Gbps technology

Türk Telekom took yet another pioneering and innovative stride for the telecommunications industry, becoming the first Turkish operator to use 400Gbps Ethernet technology. With this technology, Türk Telekom aims to provide 4 times faster data flow to its subscribers.

TT Ventures continued its investments in the energy vertical

TT Ventures made its third agreement with an investment in the energy vertical and purchased 11% shares of Eltemtek, a consulting and engineering company. With this investment Türk Telekom aims to be positioned as Turkey's one of the key players in the digitalization of energy infrastructure.



July

During the 7th term of the PiLOT program, which Türk Telekom launched to support early stage ventures, 9 technology-focused teams were given the opportunity to cooperate with Türk Telekom, along with a cash support.

Türk Telekom participates in the 5G Summit in London

The CEO of Türk Telekom discussed Turkey's digitalization journey the Türk Telekom's contribution at the 15th 5G World Summit, which was held in London in 2019.

Türk Telekom employees working to protect the environment

Türk Telekom employees in all 81 provinces are working to contribute to the protection of the environment. In 2019, employees collected more than 10 thousand items of electronic waste and ensured it was recycled. The waste collected was utilized in the electronics workshop training of gifted children. The revenues generated from the recycling of electronic wastes was donated to the Red Crescent.

AssisTT becomes EMEA Champion in "Best Customer Service" category

AssisTT won two major awards in the EMEA Finals of the Contact Center World Awards, one of the most prestigious award organizations in the call center industry. AssisTT, which won the "Best Customer Services" category Gold Award, and "Best Large Scale Outsource Call Center" category Silver Award at the EMEA finals, which drew the participation of over 100 call center companies from 70 countries throughout Europe, the Middle East and Africa, also represented Turkey in the global finals of the "Champions' League" of the call center industry.

JULY 2019

Türk Telekom 2018 Annual Report receives 24 awards in four different categories at the 2018 Vision Awards

Türk Telekom's 2018 Annual Report received a total of 24 awards in four different categories at the 2018 Vision Awards organized by the League of American Communication Professionals (LACP), one of the most prestigious platforms in the world, which sets the standards for excellence in communication. As a result of the jury evaluation, the Türk Telekom Annual Report was ranked 12th among the Top 100 annual reports published globally in 2018, and ranked first among Turkish companies. The Türk Telekom 2018 Annual Report was ranked 5th among the Top 50 Reports in Europe, Africa and the Middle East, also receiving a Gold award in the Telecommunication main category, a Platinum award and three Gold awards in the General Classification, four Gold awards in the Best Report Financials category and four Platinum awards in the Best Report Financials - EMEA region category.

Türk Telekom and Innova collect awards in the Bilişim 500

In the 20th year of the Bilişim 500, Turkey's leading sector survey, Türk Telekom received 3 awards. While Türk Telekom ranked first in the Internet and Fixed Telephony Services categories of the Service Provider Section, it also ranked first among the top 10 Ankara Companies. Innova also received three awards while ranking 28th among the top 500 IT companies. Innova ranked first in the "Consulting, CRM and ERP" categories in the System Integrator and Partner Section.

PiLOT program - Türk Telekom's startup acceleration program - enters its 7th term

The seventh term startups of the PiLOT program, which Türk Telekom launched to support early stage ventures, were announced. Nine technology-focused teams which develop applications in different areas were given the opportunity to cooperate with Türk Telekom, along with a total cash support of TL 1.1 million.



August

Developed by Türk Telekom within the scope of its Sunshine at Schools project, “the TahtApp” application improves the physical conditions of children with low vision in the classroom.

September

Within the framework of Türk Telekom’s “Life is Simple with Internet” project, internet literacy training was provided to 50,000 participants with over 300 volunteers in 5 years.

AUGUST 2019

Türk Telekom developed TahtApp in class education for children with low vision

Developed by Türk Telekom within the scope of its Okulumda Güneşi (Sunshine at Schools) project, “the TahtApp” application improves the physical conditions of children in the classroom, which enables children with low vision to receive education together with their peers in primary education schools. Thanks to the application, which instantly reflects the information the teacher writes on the board to the students’ tablet screens, students with impaired vision can easily follow the lessons together with their peers without hindrance.

SEPTEMBER 2019

“Life is Simple with Internet” project aiming to reach 5,000 women with entrepreneurial potential in its next phase

Türk Telekom launched the “Life is Simple with Internet” project in 2014 with the objective of making information technologies accessible for everyone, which is the main driving force for people-centric, sustainable development and economic growth. Within the framework of the project, internet literacy training was provided to 50 thousand participants with over 300 volunteers. Türk Telekom continues to support the contribution of women as entrepreneurs in the national economy during the new phase of the “Life is Simple with Internet” project.



OCTOBER 2019

7th term graduates of PİLOT, Turkey's first corporate venture acceleration program, introduced to entrepreneurs and investors

At the "PİLOT Demo Day", held for the seventh time, Türk Telekom brought together investors with start-ups that aim to grow and seek investment and support. During the PİLOT Demo Day, which was attended by the leading names of the entrepreneurship ecosystem, entrepreneurs and Türk Telekom senior management, nine 7th term graduate start-ups supported by Türk Telekom within the scope of the PİLOT project presented their projects and business models.

NOVEMBER 2019

Significant support from Türk Telekom to a "Breath for the Future" with 38,540 saplings

Within the scope of the "Breath for the Future" campaign implemented by the Ministry of Agriculture and Forestry in order to leave a greener Turkey to the future generations, Türk Telekom donated 38,450 saplings on behalf of all employees. Contributing to the country's digital transformation with numerous projects, investments and cooperation, Türk Telekom stood out with its support for leaving a better and greener Turkey to the future generations with this donation.

World speed record with real 5G test from Türk Telekom

Türk Telekom broke the world record in this field by reaching speeds of over 2.9Gbps in its test with Huawei on a live 5G test network. With this test, Türk Telekom became the first operator in the world to test 5G New Radio Carrier Aggregation Technology (NR Carrier Aggregation) with commercial phones.

Azercell, Azerbaijan's leading operator, uses Argela solutions for network performance

Argela, signed an important collaboration agreement with Azercell. Under the agreement, Azercell, Azerbaijan's leading operator with approximately 4.8 million subscribers, will use the "Mobile Network Performance Monitoring and Customer Experience Management" solutions developed by Argela.



Türk Telekom International awarded the "Best Wholesale Sales Team" award in Global Carrier Awards

Türk Telekom's international wholesale voice and data infrastructure sales and marketing company, Türk Telekom International, received the "Best Wholesale Sales Team" award at the Global Carrier Awards, one of the telecommunications industry's most prestigious awards.

Türk Telekom implements Turkey's first Subscriber Donation System with the cooperation of Red Crescent

Türk Telekom implemented a first among mobile operators in Turkey through its cooperation with the Turkish Red Crescent for the Subscriber Donation System. With the new collaboration, Türk Telekom users who wish to donate to the Red Crescent at regular intervals can donate with a single SMS, with the amount of their donation automatically added to their bill each month, or deducted from the subscriber's balance.

Award for Türk Telekom's "100% Domestic" Artificial Intelligence project

Türk Telekom won first prize in the IDC Artificial Intelligence Awards. Türk Telekom, which won the "Artificial Intelligence in Operation" project in the Innovation Accelerator category (Machine Learning), aims to increase customer satisfaction even further with this fully domestic and national project.

DECEMBER 2019

Türk Telekom sets in its current position in fiber broadband with a press conference and new advertising campaign

Türk Telekom's CEO, Ümit Önal, set out the current position of Türk Telekom in fiber internet and its new term strategy in a broad press conference held on December 25th. In the meeting, Türk Telekom introduced a new advertising campaign explaining how Türk Telekom was working to provide the best service to each of its customers nationwide with its "not just for some, but for everyone" message.



Chairman Message



Esteemed Stakeholders,

Cyclical political movements, geopolitical tensions, the Brexit process and trade negotiations all left their mark on the global economic agenda in 2019, while the positive direction in the monetary policies implemented by leading central banks such as the FED and ECB went some way to limiting the risks to the economy.

When it comes to the Turkish economy, 2019 was a year in which the economic system achieved some balance with growth and the recovery exceeding expectations across the board. Thanks to the accurate and timely economic measures taken by the public authorities, as well as reforms aimed at driving growth, Turkey posted a current account surplus in the second half of the year.

In this stabilizing environment, Türk Telekom sustained its successful rise in financial and operational performance in 2019, adding value to Turkey and bringing value to its stakeholders.

We are carrying the highest investment in technology and infrastructure in Turkey

As word rapidly develops and digitalizes towards Industry 4.0, Türk Telekom remains squarely on the front line in our country when it comes to playing our part in this race; we are pressing ahead with our investments at every step in national technology advancement and to complete the digital transformation of Turkey.

Our top priority is to move and develop our country to a better future. For this purpose, we have invested more than USD 16.6 billion in driving Turkey's digital transformation over the last 14 years, since the privatization in 2005. We have contributed USD 49.6 billion to the Turkish Treasury during the same period. These figures also clearly demonstrate that we are undertaking the highest technology and infrastructure investment in the sector in Turkey.

Today, with more than 30 thousand employees and around 48 million subscribers, we continue to add value to Turkey by supporting employment and the economy through our operational performance, effective balance sheet management, support for ventures, technological investments and strategic business partnerships.

We have devoted 10 years to expanding our fiber network, which will carry 5G

The key point for the development of our country and the industry is the establishment of the fiber infrastructure that will support 5G and next generation technologies. Therefore, as the leading telecommunications company which forms and develops Turkey's communication backbone, we approach the development of the fiber infrastructure with a special sensitivity. For the last 10 years, we have accelerated the expansion of our fiber network, a process which will contribute to our country's digital transformation and provide the fixed infrastructure for 5G technology. Today, with our understanding of "Not just for some, but for everyone", we are unwavering in pressing ahead with our investments in our nationwide fiber infrastructure.

We are one of the key players in digitizing Turkey's energy, education and health infrastructure

We fully and unconditionally support the vision of domestic and national production as spearheaded by our President for the goal of a strong, self-sufficient Turkey which will reach the point we desire among the world's economies as we move towards Turkey 2023. With the vision to lead the digital and technological transformation of Turkey, we maintain our claim to determine the standards of the next generation technologies by experimenting and applying the products and technologies we have developed in the 5G field with our group companies, not only in Turkey but also on international high-level platforms.

As a result of the outstanding efforts of our group company, Argela, which is particularly active in the field of convergence technologies, and its Silicon Valley subsidiary Netsia, we are leading the world in slicing and virtualization of 5G base stations with intelligent software.

We will uphold Turkey's digital transformation with smart technologies

While developing artificial intelligence applications and optimizing our mobile and fixed networks for the goal of a better customer experience, Türk Telekom has already implemented a vast array of projects with our tests, collaborations and applications in the areas of smart cities, the Internet of Things, artificial intelligence and robotics, which are concrete indicators of digitalization and the forerunners of 5G.

On the other hand, as the first security service provider operator in Turkey, we have the largest and most

advanced Cyber Security Center in Turkey. With the end-to-end cyber security solutions we offer, we perform an important task in order to ensure our national security by constantly protecting both Turkey's data and our country's most strategic and prestigious companies from cyber threats.

We bring the internet to all through our projects which add value to Turkey

One of our most important goals at Türk Telekom is to bring every sector in Turkey to a level that uses the internet at the same level as developed countries. Thus, internet usage and household penetration in Turkey have increased significantly in the last five years thanks to the contributions of Türk Telekom.

Again, with the same purpose, we have provided 50 thousand people in the last 5 years with face-to-face internet literacy training within the scope of our "Life is Simple with Internet" project for individuals who have not yet been acquainted with the internet in the community. In the second phase of our project, which is also exemplified by the United Nations, launched in September 2019, we aim to improve the knowledge of women on issues such as information and communication technologies, e-services and e-commerce.

As Turkey's first integrated information and communication technologies company, we have been carrying the latest technology all across Turkey for 179 years, eliminating distance and bringing people together. As one of the precious sources of value in this country which has succeeded in being both its memory and its compass in the field of technology, Türk Telekom will continue to lead all new technologies today and tomorrow, as it always has, especially in 5G – which will meet the needs of our country and our nation.

We are a huge family all over the country, working day and night to connect Turkey to the future. In the coming period, we will continue to invest in the country's economy and grow together with the nation, connecting Turkey to the future with the vision of "a stronger and more prosperous Turkey that produces more value and shares more fairly" towards achieving the 2023 goals.

I would like to extend my thanks to our valuable employees who have contributed greatly to our current situation, to our most valuable shareholders, business partners and all of our stakeholders who have believed in us and supported us.



Dr. Ömer Fatih Sayan
Chairman of the Board of Directors

Record revenue, EBITDA growth and cash flow, along with a solid operational performance

Assessment on the Financial and Operational Results

Türk Telekom Group achieved successful financial results in 2019 with record annual revenue, EBITDA growth since IPO on the back of strong operational performance and a strong cash flow generation.

Unmatched diversified portfolio under the integrated business model combined with the strategy focused on increasing the penetration and on a balanced growth in ARPU and subscriber metrics enabled to deliver these strong results. While EBITDA guidance was revised upwards two times within the year, EBITDA exceeded the latest guidance. 2019 revenue growth was in line with the guidance.

In 2019, top line increased by 15.8% YoY to TL 23,657 million with 19.7% YoY increase in fixed broadband revenues, 18.1% YoY increase in mobile revenues and 18.5% YoY increase in international revenues. Fixed voice segment registered 3.2% YoY revenue growth in 2019. Excluding IFRIC 12⁵, top line growth was 15.1% YoY.

In 2019, Group EBITDA increased to TL 11,170 million with TL 2,734 million annual increase, exceeding the guidance of TL 11.0 billion. 32.4% YoY increase in EBITDA was the highest annual growth since IPO due to efficiency measures undertaken in OPEX management and strong revenue growth. EBITDA margin was realized at 47.2%, up by 5.9pp compared to 2018. Excluding IFRS 16 impact, EBITDA growth was again strong with 23.3% YoY increase. EBITDA margin in 2019 was 44.0%, 2.7pp higher than in 2018.

Operating profit was realized as TL 6,424 million in 2019 with 36.7% YoY increase on the back of strong EBITDA.

Net income was TL 2,407 million in 2019 with a significant turnaround compared to TL 1,391 million net loss in 2018 due to strong operating performance, disciplined OPEX management and more favorable exchange rate environment.

With a strong EBITDA performance and ongoing deleveraging, Net Debt/EBITDA ratio decreased to 1.41x at the end of 2019 from 1.86x at the end of 2018.

Group's net FX exposure⁶ decreased to USD 370 million from USD 1,238 million at the end of 2018.

2019 Operational Highlights

Total number of Türk Telekom subscribers reached 47.8 million in Q4'19. For the full year, net subscriber gain was 1.8 million and 2.4 million excluding one-off impacts.

In the fixed broadband segment, full year net subscriber addition was 458 thousand (559 thousand increase excluding one-off impacts). Fixed broadband ARPU increased by 13% YoY in Q4'19- the highest annual growth since 2011. Fiber subscriber reached 4.2 million at the end of 2019 and 37% of total fixed broadband subscriber base was on fiber tariffs. Subscriptions for the penetration focused entry level campaign, İnternet Bizden (including retail subscribers), reached 1.1 million.

In mobile for the full year, net subscriber gain was 1.4 million (1.9 million excluding one-off impacts) mainly with the strong support of postpaid segment and mobile subscriber base increased to 22.9 million.

⁵ IFRIC12, non-operational income that results from the accounting classification of fixed line infrastructure improvements such as transition from copper to fiber infrastructure.

⁶ Net FX exposure is calculated as FX based financial debt less FX hedge position less FX based cash and cash equivalents. Debt calculation excludes lease obligations.

While LTE population coverage increased to 92% at the end of 2019, 3G indoor coverage also improved by 32pp in the last four years, reaching 89% (3G population coverage: 97%). Share of LTE subscribers⁷ in mobile subscriber base increased to 55% at the end of 2019 from 46% at the end of 2018. Average monthly data usage per LTE user increased to 8.6GB in Q4'19 from 6.1GB in Q4'18.

In 4Q'19, number of fixed voice subscribers increased by 24K to 10.0 million. Including nDSL, the number of total fixed access lines was strong at 14.6 million – the highest level since Q2'12.

Fiber cable network length increased to 304K km at the end of 2019 from 282K km at the end of 2018. Fiber homepass increased to 21.9 million from 18.6 million at the end of 2018 reflecting increased focus on fiber transformation.

The ratio of subscribers who provided consent for sharing and using their information within the Group reached 79% in 2019 compared to 72% in 2018. As of the end of 2019, the share of multiple product ownership among subscriber base⁸ increased to 63% from 60% in Q4'18.

Risks and the Assessment of the Board of Directors

Enterprise Risk Management is a systematic process established in order to define potential events that may have an impact on the company, manage risks in line with the corporate risk appetite and provide a reasonable degree of assurance for the Company to achieve its objections, shaped by the senior management and all other employees of the company and implemented across the entire company.

The Company Enterprise Risk Management Plan and the activities to be addressed within the scope of this plan are developed in light of the Türk Telekom Enterprise Risk Management Approach. With this approach, while the framework for the risk management activities is determined and the tasks, responsibilities and processes related to risk management are defined, the risk management terminology, the best practices and standards are closely followed, and compliance with the applicable legislation is monitored.

The ISO 31000 standard is adopted while Enterprise Risk Management processes are defined. In this connection, Enterprise Risk Management process consists of the following phases:

- Establishing the context;
- Risk identification;
- Risk analysis;
- Risk assessment;
- Risk treatment and as well as the following phases to be continuously improved communication/opinion exchange;
- Monitoring, reviewing and reporting.

Risk Management aims to support the Company in its quest to deliver its strategic targets with its structure that adds value and preserves the added value. The company aims to manage risks at all levels extending from the Company's long-term strategic objectives to its daily operations in order to achieve its strategic targets. With the integration of Enterprise risk management in all processes, decision-makers can act with an awareness of risks.

Efforts are undertaken to make sure an efficient and holistic management of potential risks. For this purpose, the risks which the Company is exposed to are identified by the business and technology teams, and the root causes and potential consequences of the defined risks are determined. With the Bow-Tie analysis used in this process, the entire end-to-end risk profile from the root causes to their impact on the targets, including the control points, is determined.

The probability of the realization of the risks, and their impact if realized, is determined, and the current situation of the risks is measured and monitored. While a risk analysis is carried out, the fact that a particular risk may influence more than one area is taken into account. The existing controls are defined for the risks identified, assessed and prioritized by the relevant parties, and the effectiveness of the controls is assessed. The optimal balance between risks and return is considered in order to ensure that the targets are delivered, and actions are planned according to the risk appetite.

⁷ Mobile subscribers who registered for LTE and have LTE compatible device and sim card.

⁸ Among constant subscriber universe that provided consent for sharing and using their information within the Group last year.

Risk Management aims to support the Company in its quest to **deliver its strategic targets.**

The final authority and responsibility regarding the effectiveness of the Enterprise Risk Management rests with the Board of Directors. The Board of Directors fulfills this responsibility that is rather related to supervision via the Committee for the Early Detection and Management of Risks. The Group's entire organizational hierarchical levels, particularly the senior management and risk owners, contribute to and support the implementation of Enterprise Risk Management. Risk management activities, intended to inculcate a risk culture across the Group, and activities are performed with the contribution of all units which are stakeholders of risks. Risk management is an inherent task of all employees.

The principal risks faced by the Türk Telekom Group are classified in three main categories:

Financial Risks

The Türk Telekom Group is exposed to financial risks such as liquidity risk, currency risk, interest rate risk and counterparty risk.

Within the framework of the strategy to minimize liquidity risk, financing is raised from different regions (The Americas, Europe, the Gulf, Japan, China, and Turkey) and a diversified pool of investor groups (commercial banks, international financial institutions such as the EIB and the EBRD, official export credit agencies and bonds) with long term maturities. This strategy allows the Group to have access to long-term financing on competitive terms, by eliminating any dependence on a single geographical region and investor group.

With regard to the Eurobonds issued by Türk Telekom, the Group actively monitors the price and yield dynamics of these bonds, which are tradable instruments in the secondary markets, in order to formulate optimum cash management strategies on a total return and cost basis.

As a result of long-term credit terms for investments and diversified funding sources, Türk Telekom carries liabilities in foreign currency. Due to the net liabilities being denominated in foreign currency and the fluctuations in foreign exchange rates, the company may be exposed to currency risk, which may have an impact on its financial statements.

By planning foreign currency cash flow, Türk Telekom can minimize the negative impact of currency risk on its financial statements. With respect to the fluctuations in the value of the TL against hard currencies, the Group initiated a long-term hedging strategy in 2015, and in this framework, the Company has a hedge position of USD 2 billion, details of which are provided in the footnotes to its financial statements. In addition, Türk Telekom holds a significant portion of its cash assets in hard currency as a natural hedge against currency risk. Efforts continue to convert the supply contracts into TL to manage the currency risk driven by investment expenses. While 88% of the total value of major supply contracts concluded in 2016 was in foreign currency, only 32% of the total value of the contracts signed in 2019 was in foreign currency.

In addition to the aforementioned derivative instruments, for management of the interest rate risk, Türk Telekom entered an interest-rate swap position equivalent to USD 450 million, details of which are provided in the footnotes to the financial statements. Together with the use of fixed-interest funds such as bonds, Türk Telekom reduces its exposure to the floating interest rate risk.

With regard to its financial assets, Türk Telekom maintains a position to minimize counterparty risk in accordance with the framework of the limits and diversification policy applied to the other parties.



Risk Management

Risk management activities, intended to inculcate a risk culture across the Group, and activities are performed with the contribution of all units which are stakeholders of risks.

Türk Telekom carries out the hedge transactions regarding financial risks within the framework of the guidance and authorizations set by the Board of Directors

Strategic Risks

Türk Telekom operates in a sector with high levels of technological innovation, competition and regulatory developments. With an awareness of the sector, Türk Telekom carefully analyzes both the positions of its competitors and the technological developments in the market and the varying customer preferences. Taking these factors into consideration, proactive risk management activities are carried out within the framework of the Company's strategic priorities, which contribute to both increasing company revenues and meeting customer expectations.

In line with the strategic objectives, information technologies are used and solutions are developed to facilitate lives of individuals and the public sector. With this target, Türk Telekom has achieved a number of firsts in its sector, and continued to bring the latest state-of-the-art communication technologies to the Turkish public. In order to prepare for the future and focus on its strategic objectives, the Company decided to provide the infrastructure required for the products and technologies to a high performance and using the risk management products and models to maintain and strengthen the market position and goodwill in order to create a competitive edge.

Moreover, with its structure strengthened with its subsidiaries, the Company substitutes the areas in which

it might lose market share because of the changes in legislation and the developments to cause significant changes in the market with new products and services and evaluates the opportunities in the country and abroad.

Operational Risks

Operational risks are defined as the risk of loss caused by inadequate or failed internal processes, human resources and systems or external events.

Türk Telekom provides services that are dependent on technological infrastructure. Thus, correct identification of the risks exposed by these services and successful management of these services are important in delivering business targets. Factors such as malfunctions, power cuts and natural disasters which may have an impact on the communication infrastructure and critical systems of Türk Telekom may weaken the Company's capacity to provide services to its subscribers.

Business Continuity Management can be defined as a holistic management process that determines the potential threats and if realized, their impacts on key activities, and which provides protection for internal and external stakeholders, its reputation, goodwill and value-adding activities, as well as corporate flexibility. Critical products and services are subject to Business Impact Analysis and Risk Assessment, and necessary performance improvements are undertaken in the light of continuity objectives following performance assessments.

Cyber security risk may arise as a result of the combination of threats and weaknesses in the digital environment, disrupt the confidentiality, integrity and accessibility of information and impact the delivery of the strategic objectives. Events such as the interruption of critical systems (Denial of Service (DDoS) attacks), disruption of competitive power as a result of loss of strategic data (trade secret theft), loss of the customer's trust and reputation as a result of personal data breach, financial and operational losses caused by the destruction of corporate data and systems, and penalties that may be faced as a result of failure to comply with the applicable laws and regulations, as well as their consequences are assessed. All Information Technologies and Network operations are carried out within the scope of security policies. Problems in this scope are continuously analyzed and are controlled within the scope of the early detection mechanisms established.

Türk Telekom undertakes extensive efforts to protect itself and its subscribers from business interruptions and security breaches, ensures compliance with the best practices, standards and policies, and takes significant steps including obtaining certificates such as ISO 22301 and ISO 27001. In addition, Türk Telekom holds PCI-DSS certification for the mobile network.

It is often impossible to produce a product or service and make it available for the customers using internal resources only. The nature of the sector requires working with a limited number of suppliers producing advanced technology. In this context, realization of risks related to suppliers and subcontractors could result in an adverse effect on Türk Telekom's business, negative customer experience due to reduced quality of service provided to customers, or a security breach and data leakage that causes disruption of service that could result in reputational damage. Thus, an effective procurement is aimed by taking into account main factors such as the TCO (Total Cost of Ownership), supply chain risks and sustainability.

The increased demand for skilled and specialist labor increases the importance of employees further. Finding, recruiting, training and retaining the right employees are critical factors in the success of the company. Türk Telekom employs many human resources practices in order to effectively manage human resources at the company. The Türk Telekom Academy continues to launch training projects supporting the employee development.

Türk Telekom aims to create a working environment which respects human rights and to act in accordance with human rights in its operations. With this target, the Türk Telekom Human Rights Policy was approved by the Board of Directors and disclosed to the public.

Risk Appetite

Risk appetite is defined as the extent and type of risk which the Company is willing to take/assume while carrying out its activities. Risk Appetite may be defined as a series of limits providing clear guidance to all levels of the organization setting out the limits of the risks they can take.

With the completion of Risk Appetite studies which take into account the views of the Board of Directors and senior management, a more effective risk /reward decision making in line with Risk Appetite throughout organization is aimed.

Assessments of the Committees of the Board of Directors

Assessment of the Activities of the Early Identification and Management of Risks Committee

The Early Identification and Management of Risks Committee has effectively fulfilled the duties assigned to it within the framework of its working principles. In 2019, the Committee convened four times to review the identified risks, to notify the Board of Directors about the significant risks, to provide the necessary resources for the effective fulfillment of the Enterprise Risk Management function and to ensure the coordination of Enterprise Risk Management and Internal Audit and other business units.

Assessment of the Activities of the Corporate Governance Committee

The Corporate Governance Committee has effectively fulfilled the duties assigned to it within the framework of its working principles. The Committee convened four times in 2019 and monitored and evaluated the Corporate Governance Rating process which is carried out every year and monitored the preparation process of the Corporate Governance Principles Compliance Report, which is part of the Annual Report and presented it to the Board of Directors. In addition, the Committee carried out studies on the "Board of Directors Women Membership Policy" during the year and the policy was approved and put into practice by the Board of Directors.

Assessment of the Activities of the Audit Committee

The Audit Committee was established with the decision of the Board of Directors dated 16.08.2008. The Committee was established to assist the Board of Directors in meeting its supervisory role regarding its oversight requirements regarding the Company's financial reporting process, internal control system, audit process and compliance with laws and regulations and the code of conduct and other matters to be delegated to the Committee by the Board. The Committee acts in accordance with the authority and responsibility granted by the Board and reports to the Board of Directors.

The Audit Committee consists of at least two independent members elected by the Board from among its members. The Audit Committee carries out its activities within the framework of the Audit Committee Working Principles approved by the Board of Directors. The Audit Committee effectively fulfils the duties assigned to it within the framework of its regulation.

The Committee meets at least once every three months and four of these meetings are held before the financial statements are announced; and the Committee may, if deemed necessary, convene more frequently. The Committee informs the Board of Directors about its meetings and activities within the year.

The Committee convened 7 times in 2019 to effectively monitor the accounting, finance and auditing processes of the Türk Telekom Group and compliance with the laws and regulations and the code of conduct and to review and monitor the other issues that are assigned by the Board of Directors from time to time.

Some of the Committee's activities within the year are as follows:

- During the process of disclosing Company's financial information to the public, examined whether this information contains sufficient and appropriate information and presented its opinion to the Board of Directors before it was disclosed to the public.
- Worked for the selection of independent auditors and presented its proposal to the Board of Directors.
- Having obtained information on matters such as audit work, significant findings, significant changes in accounting policies, etc. by conducting periodic meetings with the independent auditors, informed the Board of Directors in cases where necessary.
- Monitored the activities of the Internal Audit Department, reviewed the risk assessment results, approved the annual internal audit plan, obtained information about important internal audit findings and the actions taken by the management units regarding these findings, performance indicators of the Internal Audit Department and held meetings with the Head of Internal Audit.

Assessment of the Internal Control and Internal Audit Activities

At Türk Telekom, an internal control environment is established for achieving strategic targets, ensuring effectiveness and efficiency of operations, ensuring the reliability and accuracy of financial information, protecting customer personal data and corporate assets, and ensuring compliance with laws, regulations, policies and procedures.

Türk Telekom's Internal Audit Department conducts assurance and consultancy activities in Türk Telekom and all Group companies in an independent and objective manner by evaluating the effectiveness of risk

management, internal control, and compliance with legislation and governance processes. In order to carry out its activities in an independent and objective manner, the Internal Audit Department works directly with the Audit Committee, which is a part of the Board of Directors, with the authority and responsibility derived from the principles approved by the Board of Directors.

During the audit activities, an assessment is conducted into the effectiveness of the existing internal controls which are carried out to reduce the business risks which may prevent the delivery of strategic targets. The reasons and effects of the control weaknesses determined during the audits are analysed and management action plans for eliminating problems are received from the related units and the Internal Audit Department monitors whether these actions are implemented in a timely manner. In addition to auditing activities, inspection and investigation activities are carried out where necessary.

The Department carries out its work in accordance with International Standards for the Professional Practice of Internal Auditing. As a part of compliance to those Standards an external assessment must be conducted at least once every five years by a qualified, independent assessor or assessment team from outside the organization. In this context, as a result of the quality assessment performed by an independent firm in 2017, Türk Telekom's internal audit department received a positive opinion that its activities conform with the International Standards for the Professional Practice of Internal Auditing.

The Department attaches importance to the professional competence and improvement of its employees and encourages auditors to gain internationally recognized certificates in the field of auditing. The majority of the auditors hold internationally recognized certificates such as CIA (Certified Internal Auditor), CISA (Certified Information Systems Auditor), CFE (Certified Fraud Examiner) and CPA (Certified Public Accountant) certifications. Audit teams carry out financial, operational, information technologies and compliance audits according to their competencies.

Assessment of the Activities of the Remuneration Committee

The Remuneration Committee was established on 16.12.2019, and a meeting was not held in 2019. The Remuneration Committee will effectively fulfill the duties assigned to it within the framework of its working principles.

Assessment of the Activities of the Nomination Committee

The Nomination Committee was established on 16.12.2019, and a meeting was not held in 2019. The Nomination Committee will effectively fulfill the duties assigned to it within the framework of its working principles.

Board of Directors

Dr. Ömer Fatih SAYAN

Chairman of Board of Directors / Member of Board of Directors

Dr. Ömer Fatih Sayan was born in İstanbul in 1977. He received his Bachelor degree from the Electronics Engineering Department of İstanbul University Faculty of Engineering; Faculty of Law of Bahçeşehir University and Diplomatic Studies of Oxford University - St Antony's School. He completed his Master's Degree at Electrical and Electronics Engineering and Communications Engineering Department of Technical University of Munich and at Biomedical Engineering Department of İstanbul University Institute of Science and Technology. He also received his PhD on Biomedical Engineering at the İstanbul University Institute of Science and Technology. Starting his career in İstanbul Metropolitan Municipality in 1995, Mr. Sayan worked in private companies in Turkey, Germany and USA in the fields of chip manufacturing, cell phone design and R&D after receiving his Bachelor's Degree. He carried out studies in entrepreneurship by working under the initiative of Silicon Valley and he gave lectures on Information Law and New Trends in Informatics in many universities in Turkey and Germany. Ömer Fatih Sayan has given many lectures in conferences about research subjects and he has many articles published in scientific journals. He carried out his duty as Advisor to the Prime Minister and Chief Advisor to the Prime Minister between the years of 2007 and 2014. He has worked as Information and Communications Technologies Authority (ICTA) Chairman from June 2015 to July 2018. He has been assigned as the Deputy Minister of the Ministry of Transport and Infrastructure on 21 July 2018. He is married and father of 3. He speaks English, German and French.

Eyüp ENGİN

Vice Chairman of Board of Directors / Member of Board of Directors

Eyüp Engin joined Akbank in 1978 as an Assistant Internal Auditor. Following his auditing assignment, Eyüp Engin served as Department Head in Treasury, International Banking and Overseas Financial Institutions. He was appointed as the Executive Vice President in charge

of Corporate Banking in 1996 and after 1998, Engin continued to serve as Executive Vice President in charge of International Banking and Overseas Financial Institutions Marketing.

Eyüp Engin was appointed to the position of Head of Internal Audit in 2007 and during 2007-2019, he served on Boards of Directors of Bank's subsidiaries as the President of Audit Committee. He is a graduate of Middle East Technical University, Faculty of Economics and Business Administration. Engin was elected as Executive Board Member in March 2019.

Additionally, Eyüp Engin is a Board Member of TT Mobil İletişim Hizmetleri A.Ş. and TTNET A.Ş. and also Chairman of Argela Yazılım ve Bilişim Teknolojileri Sanayi ve Ticaret A.Ş.

Yiğit BULUT

Independent Board Member

Chief Advisor of President, Economist, Financial Analyst, Banker, Journalist, Columnist. He worked as economy commentator in Kanal 6, Kanal E and CNN Türk and columnist in Radikal, Vatan, Referans and HaberTürk. He was the producer and the presenter of Parametre and Finans Analiz TV programs. He also worked as a teaching assistant in Doğuş University. Between 2009 and 2012, he was the Chief Production Director of HaberTürk TV, economy commentator in Bloomberg TR and columnist in HaberTürk Newspaper. Between 2012 and 2013, he was the Chief Production Director of 24 TV and columnist in Star Newspaper. He continued to present the TV discussion program "Sansürsüz" in 24 TV, transferring from HaberTürk TV. He has served as the Prime Minister's Chief Advisor between July, 2013 and August 2014 and has been serving as Chief Advisor of President since August 2014. He was graduated from Galatasaray High School and Bilkent University, Faculty of Banking and Finance. He studied for master degree in Sorbonne University. He speaks English and French.

Hakan ARAN

Member of Board of Directors

Born in Antakya in 1968. Mr. Hakan Aran graduated from the Computer Engineering Department of the Middle East Technical University and completed his master's degree in Management at Başkent University, the Faculty of Social Sciences. He began his career at İşbank's IT System Operations Department in 1990 as an Assistant Software Specialist. In 1999, he became an Assistant Manager in IT Solution Development Department. He was appointed to the same department as a Unit Manager in 2002 and as the Head of IT Solution Development Department in 2005. Mr. Aran was appointed Deputy Chief Executive on 17 July 2008.

Selim DURSUN

Independent Board Member

Selim Dursun was born in İstanbul in 1957. He was graduated from Mechanical Engineering Department of İstanbul Yıldız Technical University in 1980. He worked in the private sector as Mechanical Engineer and served in executive positions between the years of 1980–2002. He served as Advisor to Minister in the Ministry of Transport between 2003–2005, as Executive Assistant of Ministry of Transport between 2005–2011, as General Manager and Chairman in TÜDEMSAŞ between 2011–2012 and as Advisor to the Minister in Ministry of Transport between the years of 2012–2015. He was elected as a Member of Parliament from Sivas province in the 25th and 26th Parliaments of Turkey. In the same period, he worked as the Chair of Peru Friendship Group of Parliament of the Republic of Turkey. He carried out various social activities in Non-Governmental Organizations as chairman, manager and member. He served as a Board Member of the Taekwondo Federation between 2004–2007, as the Chairman of Transportation Sports Club Association between 2006–2015 and as the president of Sivas Demirspor Club between the years of 2011–2012. He has been working as the Deputy Minister of the Ministry of Transport and Infrastructure of the Republic of Turkey since July 2018. He is married and father of 4.

Dr. Nureddin NEBATİ

Independent Board Member

Nureddin Nebati was born in Viranşehir, Şanlıurfa on 1 January 1964.

He is a political scientist. He studied at the Department of Public Administration the Faculty of Social Sciences, İstanbul University. He took his Master's Degree in International Relations at the Institute of Social Sciences, İstanbul University. He took his PhD in Political Science And Public Administration at the Institute of Social Sciences, Kocaeli University. He gave lectures in political science, Turkish politics, state and political sociology at a variety of universities.

He is a businessman with a background in textile business. He served as a Board Member of MÜSİAD

(Independent Industrialists' and Businessmen's Association) and a Member of the Disciplinary Board at İstanbul Chamber of Commerce. He is currently a Member of MÜSİAD's High Advisory Board. He continues to act as a Member of the Alumni Foundation and Association of the Faculty of Social Sciences at İstanbul University, the Society of Scientific Dissemination, Ensar, TÜGVA, ÖNDER, UTE SAV, TDED, BEK, IDD, IDV and similar foundations and associations.

He is currently the President of the Foundation UTEV and the Turkish President of the Inter-Parliamentary Jerusalem Platform, and a Member of the Scientific Board at Opinion Center for Esenler Municipality.

He was elected as a Member of the AK Party's Central Decision Board at its 4th Ordinary Congress. He also served as the president of AK Party's Central Financial and Administrative Affairs and the Deputy Party Leader.

He was elected as a Member of the Parliament for İstanbul in the 24th term, for Şanlıurfa in the 25th term and for İstanbul once again in the 26th term.

Nureddin Nebati has taken office as Deputy Minister for the Ministry of Treasury and Finance as of 6 September 2018.

He speaks English fluently, and knows some Arabic. Mr. Nebati is married and father of 4.

Dr. Muammer Cüneyt SEZGİN

Member of Board of Directors

Cüneyt Sezgin received his undergraduate degree from Middle East Technical University Department of Business Administration, his MBA from Western Michigan University and his Ph.D. from İstanbul University Faculty of Economics. Having served in executive positions at several banks, since 2004 in addition to his membership at the Board of Directors of Garanti Bank, Dr. Sezgin serves as the Board Member and Chairman of the Audit Committee at Garanti Bank S.A. (Romania), Garanti Pension and Life and Garanti Securities. Since December 2018, Dr. Sezgin has been serving as a Board Member of Türk Telekomünikasyon A.Ş. and Member of Corporate Governance Committee, Chairman of TT International, Vice Chairman of TT Mobil and Board Member of TTNET. Dr. Sezgin is a Board of Trustees Member at Teachers Academy Foundation, World Wildlife Foundation Turkey, Kabataş Education Foundation and Board Member of Finance Executives Foundation of Turkey and Corporate Governance Association of Turkey. He has 32 years of experience in banking and business administration.

Board of Directors

Aclan ACAR

Member of Board of Directors

Mr. Aclan Acar started his career in 1974. After working for the state-owned Halkbank for three years, he joined the Central Bank of Turkey in 1978 where he served in different departments until 1990. During this period Mr. Acar undertook several managerial responsibilities including establishing trading room, managing open market operations, reorganizing and managing foreign exchange transactions division of money markets and treasury department of the Central Bank.

Mr. Acar continued his career within the Doğuř Group, one of the leading conglomerates of Turkey, between September 1990–December 2018. First, he started at Garanti Bank, one of the leading private banks in the country, as the Executive Vice President in charge of Treasury and Financial Institutions. At this position, he also undertook administration of international branches and representative offices of Garanti Bank. Between 1994–1996 period, he served as the President and Chief Executive Officer of Bank Ekspres, then owned by the Group. Following acquisition of Ottoman Bank, the oldest and one of the most respected banks of the country, by the Doğuř Group in June 1996, Mr. Acar was appointed as the President and Chief Executive Officer of the Bank. Between April 2000–December 2018 he served as a Member of Board and the Executive Committee of Doğuř Group. Between the years 2001–2005 he served as the Chairman of TANSAS and in the meantime as the Chairman of Garanti Insurance and Garanti Pension Company. Between January 2006–March 2018 he served as the Chairman of Doğuř Otomotiv. Between March 2018–December 2018 he served as the Chairman and CEO of Doğuř Media Group. In 2019 he established his own advisory company.

Mr. Acar took his Undergraduate degree from the Academy of Economics And Commercial Sciences in Ankara. Later on, he received his MS degree in Banking and Insurance from the same university. Between the years of 1985–1986, he attained his MA degree in Economics from Vanderbilt University, Nashville, Tennessee, U.S.A.

Ertuğrul ALTIN

Member of Board of Directors

Born in 1967, Ertuğrul Altın graduated from Yıldız University with a degree in Mechanical Engineering. He started his career in 1990 in his family business. Between 1996 and 2004, he worked at İGDAŞ (İstanbul Gas Distribution Co.), and as General Manager of Bursagaz of the Çalık Group from 2004 to 2008. He worked as a Freelance Consultant in 2008 and 2009. He acted as General Manager of Trakya Gaz and GAZDAŞ companies at the Zorlu Group from 2009 to 2011. He worked as General Manager of TANAP from 2011 to 2013, and was involved in the negotiation process on behalf of SOCAR Turkey, and was a member of the Technical Contract Committee at TANAP on behalf of SOCAR in 2014 and 2015. He served as an Advisor to the Minister at the Ministry of Energy and Natural Resources between 2015 and 2017. Ertuğrul Altın serves as Advisor to the Minister at the Ministry of Treasury and Finance.

Board Committees

The members of the Board of Directors were elected at the Extraordinary General Assembly Meeting held on 25.01.2019 for a three-year term.

Audit Committee

Independent Board Member Yiğit Bulut is the Chairman of the Audit Committee and Independent Board Member Selim Dursun serves as a Committee Member.

Corporate Governance Committee

Independent Board Member Dr. Nureddin Nebati is the Chairman of the Corporate Governance Committee, while Independent Board Member Selim Dursun and Board Member Dr. Muammer Cüneyt Sezgin, and Investor Relations Director Sabriye Gözde Çullas serve as Committee Members.

Early Identification and Management of Risks Committee

Independent Board Member Yiğit Bulut is the Chairman of the Early Identification and Management of Risks Committee, while Vice Chairman of the Board of Directors Eyüp Engin and Board Member Hakan Aran serve as Committee Members.

Nomination and Remuneration Committee

The Nomination and Remuneration Committee was established with the Board Resolution dated 22.02.2019.

Independent Board Member Yiğit Bulut served as Chairman of the Nomination and Remuneration Committee and Chairman of the Board of Directors Dr. Ömer Fatih Sayan and Board Member Dr. Muammer Cüneyt Sezgin served as members of the Nomination and Remuneration Committee until 16.12.2019.

On 16.12.2019, "Nomination" and "Remuneration" Committees were established to operate under the Board of Directors of Türk Telekom to carry out the current duties of the "Nomination and Remuneration Committee" established under the Board of Directors of Türk Telekom according to article 4.5.1. of the Corporate Governance Principles of Capital Markets Board's Corporate Governance Communiqué, II-17.1.

Nomination Committee

The Nomination Committee was established with the Board Resolution dated 16.12.2019.

Independent Board Member Dr. Nureddin Nebati is the Chairman of the Nomination Committee; Chairman of Board of Directors Dr. Ömer Fatih Sayan and Board Member Aclan Acar serve as Committee Members.

Remuneration Committee

The Remuneration Committee was established with the Board Resolution dated 16.12.2019.

Independent Board Member Yiğit Bulut is the Chairman of the Remuneration Committee; Vice Chairman of Board of Directors Eyüp Engin and Board Member Dr. Muammer Cüneyt Sezgin serve as Committee Members.

Executive Committee

The Executive Committee was abolished by the decision of Board of Directors dated 11.01.2019.

Statutory Audit Board

Based on the decision to amend the Articles of Association of the Company, which was taken at the Extraordinary General Assembly Meeting dated 25.01.2019, the Statutory Audit Board of the Company was removed.

CEO Message

Leading Turkey's digital and technological transformation, Türk Telekom continues to deliver value to its stakeholders and Turkey, with its vision of **providing fiber and new technologies “Not just for some, but for everyone”**.



Another successful year is behind with our vision to connect Turkey to the future

As the leader communication and technology company of Turkey, we had another successful year with our unmatched diverse products and the differentiation of being an integrated operator. The operational and financial performance we delivered, once again shows we are on the right track with our vision to pioneer the digital and technological transformation of our country.

In 2019, our consolidated revenues reached TL 23.7 billion with 16% YoY increase, which is the highest annual growth

since the IPO. While we upgraded our EBITDA guidance two times during the year, our TL 11.2 billion EBITDA exceeded TL 11 billion guidance we provided in October. EBITDA grew 32% YoY with a 47.2% EBITDA margin. With that, our net profit in 2019 reached the highest level of the last seven years and was realized at TL 2.4 billion.

The fact that there was 5 times subscription from 264 investors across 39 countries for our USD 500 million bond issuance with a maturity of 6 years in Q1'19 is an indicator that our strong operational and financial results are appreciated by investors.

We continued our sustainable growth in 2019

In 2019, we reaped the fruits of our balanced ARPU and subscriber growth strategy. We raised the number of our Group subscribers to 47.8 million with 1.8 million YoY growth. Excluding the impact of cancellation of 583K subscriptions due one-off reasons, annual subscriber net additions was 2.4 million. Our initiatives to increase fixed broadband penetration, our mobile market share increase, fixed voice growth we delivered contrary to the trends across the world, and our cross-sell strategy contributed to this growth.

The ratio of our customers providing consent to share their information within Türk Telekom Group Companies increased to 79% in 2019 from 72% in 2018. Moreover, our multi-product ownership reached 63% with a 3.2pp YoY improvement.

We expect another strong growth in 2020

With the contributions of our right strategies and more agile organization structure, we expect the strong performance to continue in 2020, when the economic indicators for Turkey are positive as well.

We expect our revenues to grow 14% YoY, our EBITDA to be TL 12.4 billion and our CAPEX to be TL 5.8 billion in 2020. In 2020, in both fixed broadband and mobile segments, we will increase capacity, increase our service quality and improve customer experience, while focusing on investments with short return periods. Additionally, within the scope of preparations for 5G, our investments on our core network will continue.

With our understanding of “Not just for some, but for everyone”, our fiber infrastructure investments continue

As Türk Telekom, we attach importance to pioneer the digital transformation process of Turkey. With our focus on increasing internet penetration, through the support of our Internet Bizden campaign which we launched in 2017 and now continue with new packages, household broadband penetration in Turkey increased from 48% to 58% in two years. As Türk Telekom, we will continue our work to increase broadband internet penetration of Turkey to 70% levels.

During the last 10 years, we have focused on digital transformation of Turkey and increasing the footprint of our fiber network which will be also the fixed infrastructure of 5G technology. We delivered a record fiber homepass increase of 3.2 million during 2019 and we raised our fiber homepass to 21.9 million at the end

of 2019. While the total length of our fiber cable network reached 304 thousand kilometers, fiber core length was around 7.5 million kilometers. In line with our “Not just for some, but for everyone” service approach, we are committed to deliver uniform service quality to all our subscribers; from a single person living in the most remote parts of the country to crowded families; from the smallest companies to the largest enterprises. In this context, we have provided fiber internet not only to the people living in the central areas, but also to all towns of our 81 provinces.

We attach importance to each of our customers, customer experience is one of our most important priorities

2020 will be a year that we make each of our customers feel valuable and that we will be working harder to increase customer satisfaction.

With the competitive customer experience approach we have adopted, in 2019 our customer satisfaction scores on fault resolution, transfer and installation continued to rise. Our customer oriented self-service application “Online İşlemler” that we launched in order to strengthen customer experience with digital transformation, has been downloaded 36 million times since its launch. The number of unique subscribers using the application increased by 43% YoY in 2019 and reached 17.8 million.

In order to provide the best experience on holistic channels to our customers, we will ensure the integration of physical and online channels in the coming period.

We continued to strengthen our position in mobile

In mobile segment, we completed 2019 with 1.4 million net mobile subscriber additions. In order to comply with the ICTA regulation related to subscriptions without ID numbers, we cancelled 169K mobile subscriptions in Q4 in addition to the 284K cancellations in Q3. Excluding this effect, we added 1.9 million net mobile subscribers in 2019.

We have raised our mobile subscriber market share to 29% with a 6pp increase over the last 5 years. As such, we have come closer to our target of reaching above 30% market share in a profitable way. With our mobile EBITDA margin which has risen to sustainable levels, the contribution of mobile segment to consolidated EBITDA continues to increase. Moreover, with our mobile investments and the advantage of our new frequencies, we increased our 3G indoor coverage by over 30pp in 4 years and we increased our LTE coverage to 92% level.



In mobile segment, we completed 2019 with 1.4 million net mobile subscriber additions. We raised our mobile subscriber market share to 29% with a 6pp increase over the last 5 years.

Türk Telekom continues to grow in the mobile segment with its partnerships with the companies that are pioneers of their sector. Additionally, the share of LTE subscribers among our customers increased from 46% to 55% in the last one year. With the effect of our loyalty program that we launched in the last quarter of the year in a way to support data consumption, average monthly data consumption of our LTE users increased to 8.6GB from 6.1GB in last quarter of 2018. The data revenues grew by 24% annually, increasing its share in service revenues to 61% in the fourth quarter of 2019.

2019 has been a year in fixed broadband deserving our motto of “You are the Limit”

In 2019, in fixed broadband segment, with our penetration focused offers particularly Internet Bizden, our partnerships with electricity companies and our offers addressing different speed needs of our customers during the transition to unlimited era, we added 458K net subscribers. Within the scope of compliance with ICTA regulations and with the actions we undertook related to inactive daily fixed broadband tariff subscriptions, we cancelled 101K subscriptions in Q4. Excluding that effect, we added 559K net subscribers in 2019.

In fixed broadband, we lifted fair usage quota on unlimited tariffs and by benefiting from our power to offer high capacity, we provided a wide range of offers to our customers. In 2019, excluding Internet Bizden and Internetsiz Ev Kalmasin subscribers, around 90% of our new subscribers preferred unlimited packages and more than 60% of our customers preferred unlimited packages during re-contracting period. With the support of upsell activities, our fixed broadband ARPU delivered a record growth of 13% in the last quarter of the year. Meanwhile, our fixed broadband revenues increased by 20% YoY.

In fixed broadband segment as well, we focused on synergy offers, benefiting from being an integrated operator. Within this scope, we expect our cross-sale campaign of fixed broadband and TV products launched at the end of 2019 to contribute to both our subscriber and ARPU growth in the coming period.

The sensitivity of the income statement against FX movements declined

2019 was a year when Türk Telekom strengthened its balance sheet structure and significantly reduced the sensitivity of the income statement against FX movements. At the end of 2019, our net debt (excluding IFRS 16 effect) declined to 2,491 million USD from 3,004 million USD at the end of 2018. Thanks to our strong EBITDA margin and our capacity to generate strong cash flow, our net debt/EBITDA ratio declined to 1.41x, the lowest level in the last 5 years. Our net short FX position which was USD 2,813 million in the last quarter of 2017 declined to USD 370 million in the last quarter of 2019. Thanks to that, we ensured higher predictability of our net financial expense and net profit.

Carrying Turkey to the future through technology is among our priorities in 2020

Offering the next generation technologies in the best way possible to our users is one of the most important priorities of Türk Telekom. In this scope, on our 5G live test network compliant with international 3GPP standards, our endeavors on all next generation technologies including 5G continue unabated.

On the test we carried on 5G test network, we broke a world record by reaching above 2.5Gbps speed. With this test, Türk Telekom became the first operator in the world testing 5G New Radio Carrier Aggregation Technology, an important technology to be used in 5G, for the first time with commercial devices. With that, we have carried a first on top of our tests on next generation education technologies, Industry 4.0, public safety, smart cities and



The readiest operator for 5G

While our endeavors on all next generation technologies including 5G continue unabated, with around 50% of our LTE base stations already connected with fiber, we are the readiest operator for 5G.

game areas. Recently, we enabled experience of Turkey's first 5G live match via 360 degree VR technology over our 5G test network.

Considering the necessity to cover the 5G sites with fiber network for the best customer experience, with around 50% of our LTE base stations already connected with fiber, we are the readiest operator for 5G.

Our efforts to support Turkey's local and national technology move continues through our subsidiaries such as "Argela" and "Innova" which generate value in information technologies. Particularly with the contributions of Argela's subsidiary in US, Netsia which owns 31 patents related to 5G, we aim to work harder to contribute more on 5G area.

We made agreements to keep the data of Turkey in Turkey

While continuing to diversify our digital services, in order to provide higher quality and faster connection to digital platforms and to minimize the latency, we are concentrated on bringing data traffic going abroad to Turkey. In order to bring the internet content to Turkey, we worked with global OTTs and we signed contracts to host their cache servers in Türk Telekom network. By this, we aim to improve user experience via enabling the mobile and fixed broadband users in Turkey access content fast and use resources efficiently via savings in the cost of bringing traffic from abroad. Additionally, in the corporate segment, in main product categories and with new generation products such as WAF (Web Application Firewall), pentest, corporate e-mail service and Centralized Sip Trunk, we continued to offer a

wider portfolio and solutions enriched with innovations addressing customer needs throughout 2019.

We are strengthening our position in Digital payment sector

With the solutions in digital and ICT area, we work to add value to our customers. With our applications such as Tivibu GO (new generation TV platform), Muud (digital music platform), e-dergi (digital reading platform), we offer best in class customer experience. Moreover, in an environment where risks related to cyber security increases for all customer groups, we offer end-to-end corporate security services under the roof of the largest Cyber Security Center of Turkey.

In addition to these solutions, we also continue our initiatives in digital payment sector. Our subsidiary in digital financial services TT Ödeme ve Elektronik Para Hizmetleri A.Ş. received the license for electronic money issuance, all transactions to manage a payment account and money transfer transactions from BRSA in 2019. Within the scope of this authorization, in addition to the products and activities offered by our Payment Services company, we aim to strengthen its position in digital payment sector as an "electronic money institution".

With this license, we are able to offer safe, easy and innovative digital payment services to millions of people in Turkey. In the coming period, with the applications we will develop in this field, we aim to make our consumer subscribers payment systems users as well. With our high-level user experience understanding and our "big-data" oriented applications, we want to become the fundamental financial application of the users who have just joined or about to join the financial system.

We aim to create and expand an entrepreneurial culture in Turkey

With the vision to lead the digital transformation of Turkey, we continued to expand the entrepreneurship ecosystem in 2019 with our projects such as Pilot, TT Ventures, Santral and Mucit, which support ventures that have innovative business ideas in the technology area. As such, we demonstrated our determination to provide economic benefits for both our country and our sector.

We have been supporting early stage ventures since 2013 within the scope of Pilot, the first venture acceleration program launched in the private sector. We have successfully graduated 65 start-ups so far, 17 of them had the opportunity to grow their innovative business ideas more by receiving funding. The ventures that we supported provided employment for 350 people in 2019 and achieved TL 41 million revenue.

With "TT Ventures", the first Corporate Venture Capital Company of telecommunication sector in Turkey, which we established in 2018 with the focus to invest in early stage and scale-up companies in healthcare, energy and education verticals, we continued our investments with Eltemtek in the energy vertical and with MentalUP in the



Sustainable development

As a testament of our commitment to sustainable development, we have committed to support 10 principles of the UN Global Compact in the areas of Human Rights, Labour, Environment and Anti-Corruption.

education vertical in 2019. We are planning to continue our investments in our focus verticals in 2020.

Sustainable development is among our priorities

As Türk Telekom, we have adopted a sustainability approach aware of our economic, environmental and social responsibilities. As a testament of our commitment to sustainable development, we have committed to support 10 fundamental principles in the fields of Human Rights, Labour, Environment and Anti-Corruption by being a party to UN Global Compact.

Moreover, we are also working to ensure the efficient use of energy resources and to reduce our carbon emission systematically. According to the Global e-Sustainability GeS report, despite the increase in the number of our customers and our bandwidth, we have been one of the very few operators in the world which succeeded to reduce energy consumption in the recent years.

In order to report our endeavors supporting low carbon economy, we are participating to the Carbon Disclosure Project (CDP). On evaluation of CDP in 2019, we achieved level B score, which is the highest level among the

telecom operators in Turkey. We aim to reach higher levels in this field in the coming period.

Türk Telekom is the national value of these lands for 179 years

As Turkey's first integrated telecommunications company, we are taking all the necessary steps for the digital transformation set in Turkey's 2023 vision and we will continue our works on this subject at full speed. While carrying out fiber roll out all over our country, as Türk Telekom for the self-sufficient and strong Turkey in every area, we will support "local and national production" strategy in the coming period fully and unconditionally.

Thus, we are also working to expand the utilization of next generation technologies in energy, agriculture, industry, transportation, healthcare, building and urban areas and by doing so we aim to save resources and serve to a sustainable society. Our initiatives on smart cities that started in 2015 are one of the most current examples of this. Leading in this area, we are investing on smart city technologies which enable to build sustainable and efficient cities with high quality of life. We are leading Turkey's largest smart city projects with our suitable solutions for new generation urbanism approach in the scope of the projects we carry together with the municipalities and Ministry of Environment and Urbanization.

As a result, all of our investments allow Türk Telekom to enjoy a more sustainable growth. I believe the strategies we implement will generate value for all stakeholders of Türk Telekom in the coming period as well. I would like to thank all our stakeholders and employees who work hard every day for all the successful results achieved in 2019 for their valuable contributions. With our mission to connect Turkey to the future, we will continue working fully motivated with a vision to deliver more value for all our subscribers and our country.



Ümit Önal
CEO-General Manager

Türk Telekom Senior Management

Ümit ÖNAL

CEO – General Manager

Marketing and Customer Care Assistant General Manager (Acting)

Corporate Sales Assistant General Manager (Acting)

Ümit Önal was graduated from Faculty of Communication of İstanbul University in 1995. Having started his Professional life in media and communication sector, Önal joined Turkuvaz Media Group in 2007 and served as the General Manager of ATV, Advertisement Group VP and Executive Committee Member respectively until 2015.

After being appointed as the CEO and Member of the Board of Directors of Digitürk in 2015, Ümit managed the sale process of Digitürk to BeIN group successfully.

After joining to Türk Telekom family at the end of 2016, Ümit Önal took over the Sales and Customer Care Assistant General Manager position between 2016 and 2018. He has been serving as the Marketing and Customer Care Assistant General Manager since December 2018.

In 2019, Ümit Önal has led the record number of revenue and EBITDA performance which has been delivered since the IPO of Türk Telekom.

As of 31 July 2019, Ümit Önal has been appointed as the CEO of Türk Telekom, the leader telecommunication and technology company of Turkey and he has been working with a vision to spearhead the digital and technological transformation of Turkey.

Having more than 20 years of experience in Media and Communication sector, Ümit Önal had the chance to be a part of the media transformation process of Turkey and he has actively taken positions in national and international associations throughout his career. Previously he served as the Chairman of TIAK (TV Monitoring and Research Committee) and currently Mr. Önal is currently the Chairman of m-TOD (Mobile Telecommunications Operators Association), Board Member of RVD (Advertisers Association), Member of YASED (Foreign Investors Association) and US Business Council Member of DEİK (Foreign Economic Relations Board). Additionally,

he is representing Türk Telekom at world GSM Association and TVYD (Association of TV Broadcasters).

Kaan AKTAN

Finance Assistant General Manager

Kaan Aktan, after Galatasaray High School, graduated from Boğaziçi University, Economics in 1995. He started his career at Anadolu Group. He worked in PepsiCo Turkey Operation in 2002 and afterwards he worked at Texas Pacific Group Investment Fund Turkey Asset Management companies as finance manager since 2007. He joined Türk Telekom in 2010 as Director of Financial Projects. He was appointed as TTNET CFO in March 2013. During his successful term of employment, he has also taken on several management roles at Türk Telekom and Türk Telekom Group Companies. Mr. Aktan is serving as Finance Assistant General Manager since December 2016.

Dr. Mehmet BEYTUR

Support Services and Procurement Management Assistant General Manager

Mehmet Beytur, after receiving bachelor's degree in Electronics and Communication Engineering from İstanbul Technical University, he completed his Master's Degree in Economics at Marmara University with his thesis on 'Energy Resources and Cooperation Opportunities of Islamic Countries'. In 2008, he received doctorate degree in Gebze Institute of Technology with his thesis on "Utilization of Outsourcing" in the field of Business Administration.

He started his career as an access engineer at Türk Telekom (at that time PTT) in 1991 and after serving as chief engineer, manager, assistant region manager and provincial manager, he has served as İstanbul Region Manager for more than 10 years. In this role, he carried out technical, commercial and all support functions.

Türk Telekom Senior Management

He has worked in technology, customer, system and management based transformation projects in the company and the sector.

Mehmet Beytur is the Chairman of the Board of Directors of the Türk Telekom BYS (Saving and Aid Fund), as well as a member of the Board of Directors of Türk Telekom Basketball Club and Board Member in Türk Telekom Group Companies.

Mehmet Beytur (PHD) is serving as Support Services and Procurement Management Assistant General Manager since September 2019.

Burak ERSOY **Consumer Sales Assistant General Manager**

Upon graduating from TED Ankara College, Burak Ersoy graduated from Middle East Technical University, Department of Mining Engineering in 1992 and he had his MBA Degree from Gazi University in 1998. He also completed the Executive Development Program of University of Chicago Booth School of Business in 2015.

His career journey started at Marsh & McLennan in 1994 as Regional Manager. Between 1999 and 2006, he worked in Kraft Food Company (now Mondelez International) first as Trade Marketing and Sales Development Manager and then as National Retail Sales Manager. Between 2006 and 2015, he worked for in Turkcell Company as National Retail Sales Manager, Corporate Indirect Channel Director and Chief Sales Officer, respectively. He served as the CEO of Lifecell in Ukraine between 2015 and 2017. Since 2018, he has been the co-founder of SocialPeople and BroFin companies. He is fluent in English and he speaks Russian at intermediate-level.

Mr. Ersoy is serving as Consumer Sales Assistant General Manager at Türk Telekom since December 2019.

Ali GÜRSOY **Head of Enterprise Risk and Business Continuity**

Ali Gürsoy graduated in Faculty of Management from Bilkent University in 1993. He started to work for Şişecam Group as Assistant Specialist in 1995 and continued his professional life at Esbank T.A.Ş. as Specialist in marketing department.

In 1997 he moved to USA and successfully completed his education at Pace University - M.S. in Investment Management, at Columbia University- Computer

Science and M.S. in Financial Mathematics Departments, respectively.

He worked as a financial analyst at ATB Consulting in the United States and then worked as a Financial Risk Manager at Aragon Asset Management. After his return to Turkey in 2006, Ali Gürsoy worked as Assistant General Manager at Risk Türk Financial Software Company for five years.

Continuing his professional life since 2011 at Türk Telekom Group as Director of Enterprise Risk Management, he was appointed as Assistant General Manager responsible from finance function at AssisTT A.Ş. in 2018 and he accompanied two titles so far.

Mr. Gürsoy is serving as Head of Enterprise Risk and Business Continuity at Türk Telekom since December 2019.

Banş KARAKULLUKÇU **Strategy, Planning and Digital Assistant General Manager**

Banş Karakullukçu graduated from İzmir Science High School and then Industrial Engineering Department of Bilkent University. She completed Management Information System Program of Boğaziçi University and Executive MBA program of Koç University.

Her career started in I-Bimsa Company as a consultant in 1996 and she continued in PwC company as senior consultant in 1997. Between 2001 and 2005, she worked at Accenture Company in charge of Global Business Solutions where she has served more than 25 countries. She has continued her career as a Partner at Accenture Turkey Office in 2005. Between 2012 and 2016, she worked as the CEO and Executive Committee Chairman of Mudo and managed the transformation journey of the company. This transformation has been studied in an academic case, which is called 'A case of Successful Leadership' in Harvard Business School. From 2017 to 2018, she took over Chief Data and Analytics Officer Position in Turkcell. In 2018, she became the Strategy Director and CEO Advisor in Invent Analytics Company and her most recent position was Global Business Services Country Leader in IBM.

She is lecturing for MBA programs in Özyeğin, Sabancı and Boğaziçi Universities and she is the Chairman of Technology and Innovation Study Group under Foreign

Investors Association. She has been listed on 50 Most Powerful Women in Turkey by Fortune in 2012, 2014 and 2016.

Barış Karakkullukçu is serving as Strategy, Planning and Digital Assistant General Manager at Türk Telekom since January 2020.

Yusuf KIRAÇ **Technology Assistant General Manager**

Yusuf Kiraç graduated in Electrical and Electronics Engineering from Hacettepe University in 1994. Following his undergraduate studies, in 1996 he started working as a manager in planning and integration management at Siemens and Nokia Siemens Networks. Mr. Kiraç started to work in Türk Telekom in 2008, taking part in the team that carried out the successful transformation projects in Türk Telekom's All IP Architecture with Rural Transformation, Türk Telekom NGN and Fiber Transformation projects. In 2010, he assumed the role of Network Director and led many projects that gave profitability and capacity to Türk Telekom such as Fiberkentt, DWDM, MPLS, DC Conversion and TTVPN. In addition to his current role, he also chaired the NANI Working Group of ETNO, European Telecommunication Operators Organization, headquartered in Brussels, between 2010 and 2014. In his managerial role at ETNO, he worked closely with international organizations such as the European Commission, CoCom, ECC, ITU, ETSI, ICANN and RIPE for numbering and addressing issues; migrating from IPv4 to IPv6, number portability, and M2M's future strategies and policies. After the integration of Türk Telekom, AVEA and TTNET, he served as Core & Transport Network Director. He served as Türk Telekom International General Manager between December 2016 and August 2018. Since August 2018, Yusuf Kiraç is serving as Assistant General Manager of Technology (CTO) at Türk Telekom; leading in areas such as the Company's fiber and digital transformation architecture; transition to next generation wireless access networks such as LTE A, Wifiv6, 5G; NFV, SDN, IMS, product and channel singularization, service and network optimization, and cyber security. Yusuf Kiraç also serves as Board Member of ESB (Access Providers Association), Board Member of ONF (Open Networking Foundation), Board Member of Innova A.Ş. and Türk Telekom Youth and Sports Club Chairman.

Yavuz TÜRKMEN **Head of Internal Audit**

Yavuz Türkmen started to study Economics on a scholarship at Bilkent University in 1995 and graduated with a degree. He worked at Türk Hava Yolları between 2004 and 2006 as Financial Control Manager, afterwards in 2006 he worked at a private company as Vice General Manager of Finance and Administrative Affairs. He joined Türk Telekom in 2007 as General Accounting Manager. Between 2009-2017, he served as Türk Telekom Financial Control Director and Türk Telekom Group Financial Control Director. During this period, he took an active role in reorganization of finance department and also took responsibility of many projects, each of which first in their fields. Yavuz Türkmen has CPA and Independent Auditor certificates.

Yavuz Türkmen is serving as Head of Internal Audit since February 2017.

Mehmet Emre VURAL **Human Resources Assistant General Manager**

After receiving bachelor's degree in Electrics & Electronics Engineering from Turkish Military Academy in 1990, Mehmet Emre Vural, completed Artillery and Rocketry school in 1991.

He started his career in Kraft Foods Turkey (formerly Kar Gıda A.Ş.) in 1994 responsible for Human Resources, Administration, IT and Legal functions where he successively took chief, manager and coordinator positions. In 2002 he joined Ülker Group and served as HR Manager, Recruitment Manager, HR Business Partner, HR Director responsible for International Operations and Yıldız Holding HR Director. After joining Matlı A.Ş. in 2012 as General Manager and board member; he took CEO position in Destek Holding starting from 2014.

Through his career, he completed numerous re-organizations, renovation, implementation and launch projects.

Mr. Vural is serving as Human Resources Assistant General Manager since December 2019.

Uğur Nabi YALÇIN

Legal and Regulation Assistant General Manager

Uğur Nabi Yalçın is graduated from Istanbul University Faculty of Law, and started his career in 1997 at Migros Türk T.A.Ş. as lawyer. He worked at BDO Denet Yönetim Danışmanlığı Şirketi, a sworn accounting and independent auditing firm, between 1998 and 2007 as lawyer and legal counsel. He worked as chief legal counsel in Aktif Yatırım Bankası A.Ş. between 2007 and 2015. He practices law as solo practitioner since 2015. Mr. Yalçın was appointed as board member in various companies throughout his legal career.

Uğur Nabi Yalçın is serving as Legal and Regulation Assistant General Manager at Türk Telekom since December 2019.

Yavuz YILDIRIM

Wholesale Assistant General Manager

Yavuz Yıldırım graduated from Uludağ University in 1999 from the Faculty of Economics and Administrative Sciences, Department of Business Administration. Following his past work experiences in trading, he started his career in 2002 at Telsim, followed by various positions in sales and marketing units at Nortel Networks Netaş between 2004 -2006 and then Vodafone between 2006-2009). Mr. Yıldırım joined Türk Telekom in 2009 as Director of SME Sales Operations and contributed to the establishment of SME sales channel. In November 2011, he undertook the Wholesale Sales Director role and served as the President of Türk Telekom Wholesale Clients Business Unit between April 2015 - December 2016.

Mr. Yıldırım is serving as Wholesale Assistant General Manager since December 2016.

CEOs of Türk Telekom Group Companies

Ali Emir EREN Innova CEO

Ali Emir Eren graduated from Marmara University with a BA degree in Business Informatics (German) and got his MBA degree at the same university. Having started his career in 1997 in Turkey, Mr. Eren then moved to Germany in 2001 to work at Deutsche Telekom, fulfilling various executive roles covering several countries until 2008.

He returned to Turkey to join Türk Telekom in 2008. In 2010, as the Director of International Investments, he led the acquisition process of Türk Telekom International (TTI). Afterwards, he was appointed as International Sales and Services Director and he successfully completed the integration process of TTI with Türk Telekom. After this process, he held two simultaneous executive positions as the COO of TTI Global in Hungary and the General Manager of TTI Turkey.

Having gained international management experience in more than 20 countries, Ali Emir Eren worked in large-scale projects and new technology development areas with corporate customers and government agencies.

Ali Emir Eren is serving as Chief Executive Officer of Innova since January 2019.

Bülent KAYTAZ Argela CEO

Bülent Kaytaz graduated from Electrical and Electronics Engineering Department of Marmara University in 1981. He also obtained his Master's degree in Management Information Systems and an MBA from European University in Belgium in 1994.

In addition to his business activities, Bülent Kaytaz served as a visiting lecturer in computer and communications engineering departments at Marmara and Istanbul Universities. In former roles, he had a five-year stint at Nortel and more than 10 years of experience at Alcatel, where he managed key software development projects in the areas of communications and internet in Belgium, Norway and Turkey. Mr. Kaytaz brings over 30 years of design, development, business development and successful leadership experience in the field of telecommunications. He founded two companies in the telecom technology area and led the Innovation drive at both companies via intensive R&D activities.

He founded Oksijen Technology, which was formerly a provider of intelligent networks and core infrastructure elements for wireless and wireline communications networks. Within three years of operation, the company brought considerable recognition to the global and Turkish telecommunications industries through strong regional growth and worldwide visibility.

Bülent Kaytaz is the CEO and the founder of Argela. He also established Netsia, an Argela subsidiary based in California's Silicon Valley, which works on developing 5G technologies.

CEOs of Türk Telekom Group Companies

Şükrü KUTLU

General Manager of Türk Telekom International Group

Şükrü Kutlu graduated from the Faculty of Law of Ankara University in 1991. Afterwards, he completed his Master's Degree in Department of Private Law, Gazi University with a thesis subjected "Interconnection Contracts in Telecommunication". He started his career in 1992 as an Assistant Auditor in Court of Accounts and then he continued his career by serving as Auditor and Lead Auditor in head office and for the on-site audits carried out in the related institutions of the Court of Accounts. In 2003, he started to work in Türk Telekom as Human Resources, Regulation and Support Assistant General Manager for 12 years. Between February 2015 and April 2016, he served as the Board Member and the General Director of Gübretaş T.A.Ş. Mr. Kutlu holds Attorney, Notary License and Public Accountant Certificate.

Şükrü Kutlu rejoined Türk Telekom in October 2016 and served as Human Resources, Regulation and Support Assistant General Manager until September 2019.

Kutlu is serving as Türk Telekom International General Manager since September 2019.

Haktan SARAN

AssisTT General Manager

Haktan Saran graduated from the Department of Statistics at Mimar Sinan University in 1998 and then completed an MBA Program in Istanbul Bilgi University.

He started his business career at Koçbank call center in 1995. After working in different positions in the call center field, he served as Manager of Alternative Distribution Channels at Denizbank between 1999-2004. Between 2005-2014, he worked as Customer Services Operation Manager and as Individual Operations Assistant General Manager at Turkcell Global Bilgi respectively. He served as General Manager at Alonet Bilgi A.Ş. between 2014 and 2018. In the meanwhile, he also held the positions of Board Member and Vice Chairman at the Call Center Association between 2015-2018.

Haktan Saran joined the family of AssisTT as Operations Assistant General Manager in December 2018. Saran is serving as CEO of AssisTT since December 2019.

Ahmet ETİ

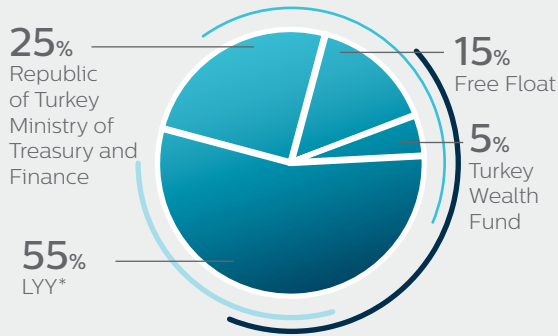
SEBİT CEO

Ahmet Eti received B.S. degree (1988) and M.S. degree (1991) in Electrical and Electronic Engineering Department from Middle East Technical University. He started his career as a researcher at TÜBİTAK in 1988 and there established the Computer Aided Education and Multimedia Research Laboratory. In 1996, after the privatization of the Laboratory by the Science Council, he founded SEBIT and realized many award winning global projects such as Akademedi and its Chinese version Tian-yi. With the acquisition of SEBİT by SBS, he acted as Global E-learning Director of Siemens and implemented the Malaysian Math and Science Teaching Courseware Development Project and iClass, the largest educational R&D project of the European Commission's 6th Framework Programme. "Adaptive Curriculum" developed after the transfer of SEBİT to Türk Telekom, was honored with several awards including; "The Best Online Educational Solution" and "The Best Virtual School Solution" of the CODiE Awards by The Software and Information Industry Association (SIIA), "Best Content Service" award at the World Communication Awards and "Distinguished Achievement Award" from the Association of US Educational Publishers. Eti was named Turkey's Most Creative and Innovative Young Entrepreneur in the World Junior Entrepreneur Businessman Contest; in 2004, he was honored with the Professor Mustafa Parlar Training and Research Association's Technology Encouragement Award.

Ahmet Eti, the founder of SEBIT A.Ş. and SEBIT LLC (Arizona), the creator of the award winning Vitamin and Adaptive Curriculum, is the CEO of SEBIT and Chairman of SEBIT LLC.

Capital Structure and Changes

Capital Structure and Changes



*LYY Telekomunikasyon A.Ş.

Note: According to Official Gazette was published on 5 February 2017, Council of Ministers decided to transfer 6.68% (5% B Group shares & 1.68% D Group shares) of the shares of the Company belonging to the Republic of Turkey Ministry of Treasury and Finance to the Turkey Wealth Fund.

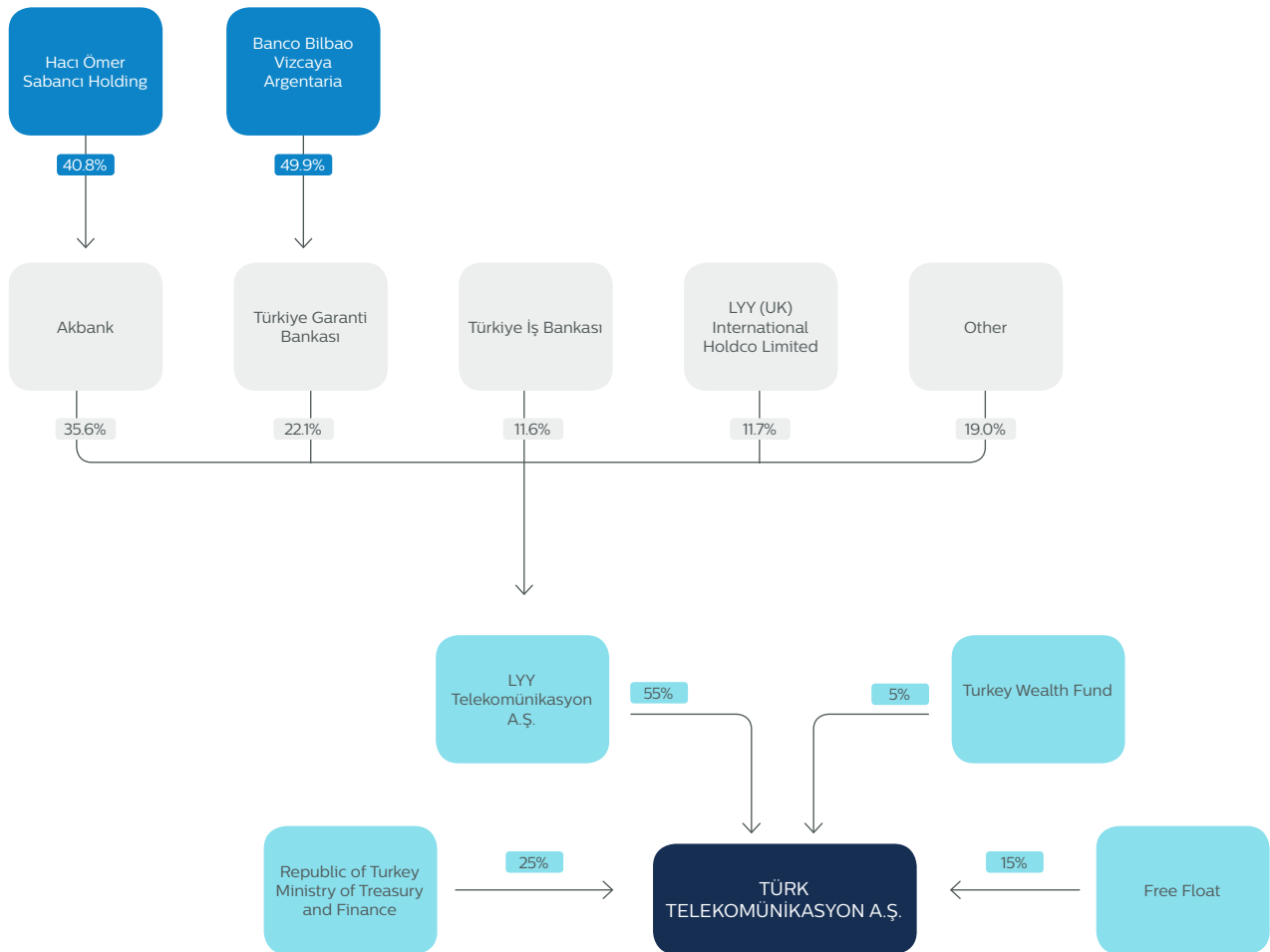
Capital Structure and Changes

Türk Telekom is among Turkey's leading companies with its strong capital structure. LYY Telekomunikasyon A.Ş. has 55% share, the Republic of Turkey Ministry of Treasury and Finance has 25% share, Turkey Wealth Fund has 6.68% share (of which 1.68% in free float) in Türk Telekom, while 15% of the shares are public.

- The Republic of Turkey Ministry of Treasury and Finance's non-public share ownership is 25% (Group B). In addition, the Turkish Treasury owns a "Group C Golden Share" with nominal price of TL 0.01.
- LYY Telekomunikasyon A.Ş.'s (Group A) non-public share ownership is 55%.
- Non-public share (B Class) ownership of Turkey Wealth Fund is 5%, and Turkey Wealth Fund's D Class public share ownership is 1.68%.
- D Class public shares constitute 15% of total capital.

On 23 September 2019, the corporate name of "Levent Yapılandırma Yönetim A.Ş.", one of the Company's partners, was changed to "LYY Telekomunikasyon A.Ş.".

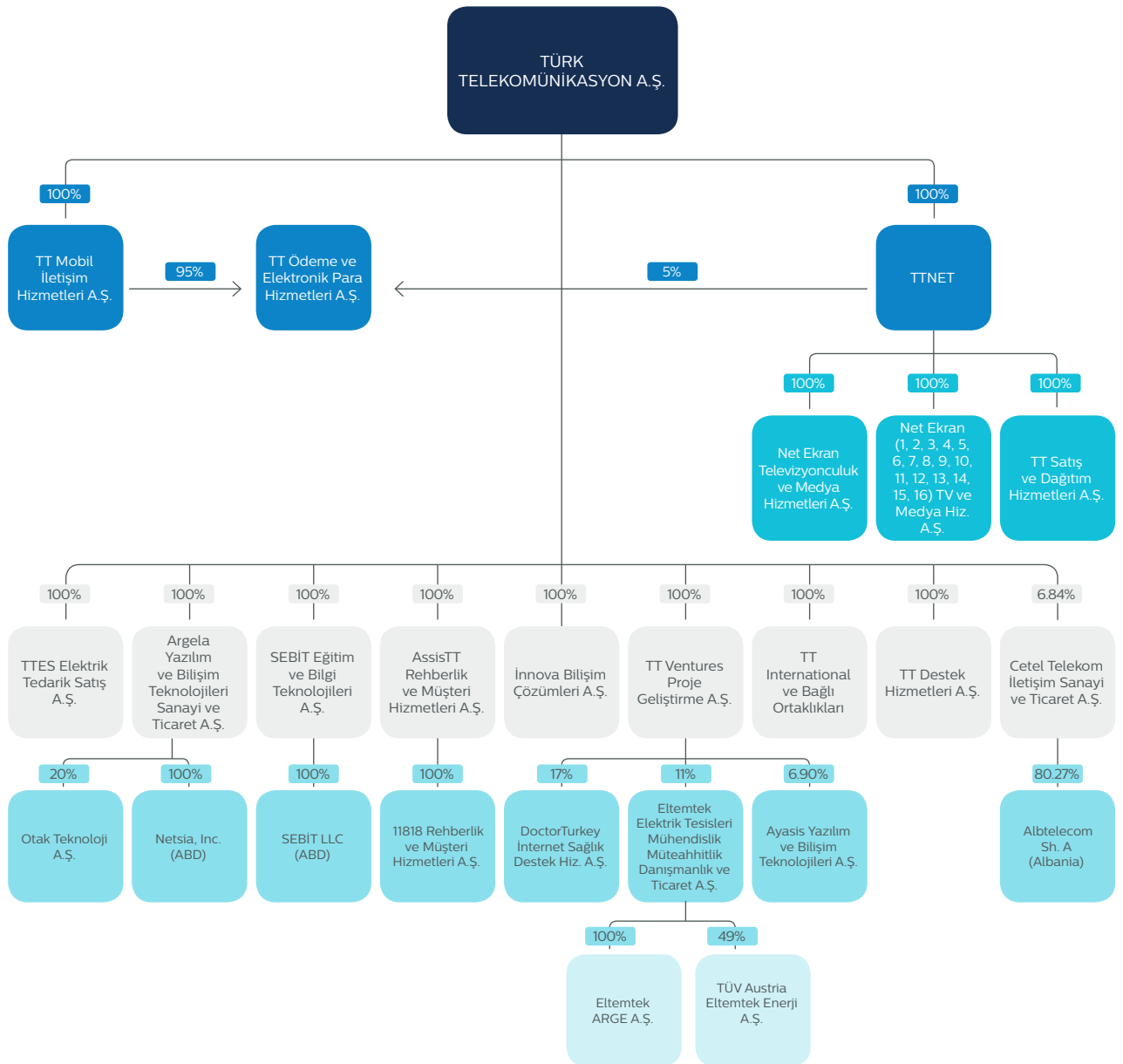
Shareholder Structure



Note: 1) There is no natural or legal persons whose shareholding exceeds 5% except those shown in the shareholder structure.

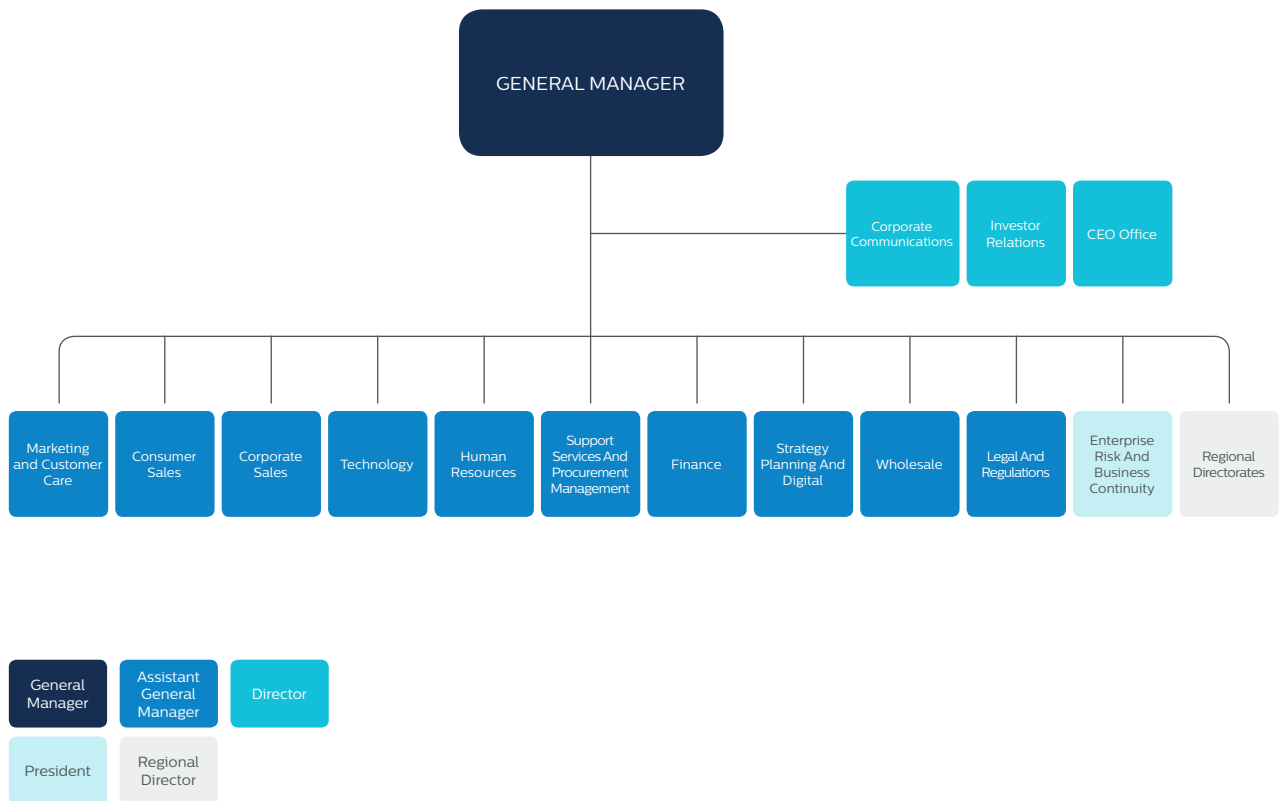
2) Turkey Wealth Fund has 1.68% public share ownership.

Subsidiaries, Affiliates and Financial Investments



Note: "Net Ekran 5, 7, 8, 9, 12, 13, 14, 15, 16", which no longer need to operate within the scope of our Company's TV strategy, have been placed into voluntary liquidation.

Organizational Structure



Organizational Changes

In 2019, the following organizational changes were carried out in the senior management structure at the Türk Telekom Group in a bid to contribute to its sustainable growth strategy for its financial and operational performance, ensuring strategic coherence among the teams and increasing the synergy in response to the competitive sector dynamics:

Boulos H. B. Doany, the General Manager-CEO of Türk Telekom, decided to leave his position on 30 July 2019. Ümit Önal, the Marketing and Customer Care Assistant General Manager of Türk Telekom, served as the Acting General Manager-CEO of Türk Telekom. On 11 October 2019, he was appointed as General Manager – CEO of Türk Telekom.

On 24 September 2019, the Regulation function, which was managed under the “Human Resources, Regulation and Support Department”, was merged with the “Legal Department”, and the “Legal and Regulation Department” was established. The support function under “Human Resources, Regulation and Support Department” was merged with the “Procurement and Vendor Management Directorate” which was reporting to General Manager, and the “Support Services and Procurement Management Assistant General Manager” position was created. The Human Resources function which was managed under “Human Resources, Regulation and Support Department” was established as the “Human Resources Department”.

On 5 December 2019, the “Enterprise Risk Management Directorate” was restructured as the “Enterprise Risk and Business Sustainability Unit” reporting to the General Manager to be responsible for ensuring business continuity and crisis management at the Türk Telekom Group.

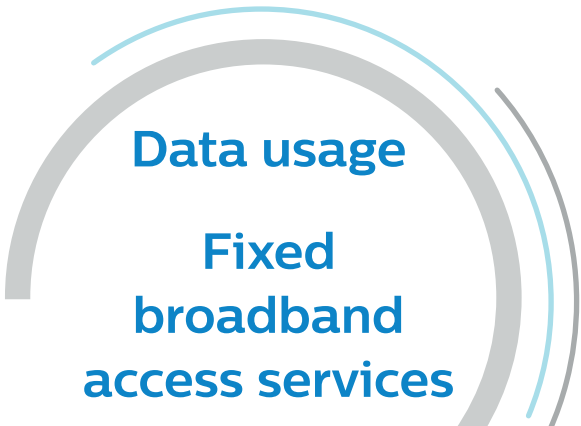
Together with the changes announced on 17 December 2019 to be effective as of 1 January 2020, the “Sales Assistant General Manager” position was divided into the “Consumer Sales Assistant General Manager” and “Corporate Sales Assistant General Manager” in order to support Türk Telekom’s focus on the segments and its added value offered to its customers.

On 8 March 2019, the “Digital and Cyber Security Product Development Assistant General Manager” position was established. Together with the changes announced on 17 December 2019 that will take effect as of 1 January 2020, the individual positions of “Digital and Cyber Security Product Development” and “Strategy, Planning and Business Development” business units were consolidated with a view to extend the Company portfolio with strategic products and platforms, thus enriching the value chain of Türk Telekom, resulting in the creation of the “Strategy, Planning and Digital” business unit.

**We support innovative
business ideas, with the
vision of pioneering
Turkey's digital
transformation**







Data usage Fixed broadband access services

Increasing data usage in mobile and fixed segments and the spread of next generation fixed broadband access services are expected to serve as driving forces of revenue growth in the global telecom market.

Revenue growth supported by the spread of fixed broadband services and increasing data usage

Increasing data usage in mobile and fixed segments and the spread of next generation fixed broadband access services are expected to serve as driving forces of retail revenue growth of the global telecom market in the coming period.

While the rapid rise in the customer expectations of global telecom players and technological progress both trigger each other, the resulting diversity has led to the emergence of new market players to address these expectations. This is increasing competition in the global arena day by day.

According to Analysys Mason's Global Telecom Market report, it is projected that retail mobile revenues will account for 50% of total telecom and Pay TV revenues in the traditional telecom market by 2022.

It is estimated that increasing smart device penetration, an expanding 4G/LTE coverage area, high demand for media content consumption on mobile, and mobile data plans (plans where the device is bundled with mobile data) will be the most important factors affecting the growth in mobile data usage and mobile revenues worldwide.

On the other hand, differences in network coverage, service usage and service pricing between different regions of the world are expected to continue.

Mobile services are offered at more affordable prices for large segments, and while 3G/4G/LTE mobile network coverage is expanding, mobile penetration rates are predicted to continue increasing more rapidly in developing regions than in developed regions. In the mobile segment, 5G commercial launches started in late 2018 in developed markets such as South Korea, Asia-Pacific, North America and Europe. South Korea was the first country to substantially complete the launch and adaptation of 5G technology.

Next generation access investments and fixed revenue growth are expected to be most vigorous in the regions with high levels of disposable income and high demand



Multiplay strategy

Operators aim to deliver revenue growth with multiplay offerings including high speed in the fixed segment, high volume data packages in the mobile segment, and featured Pay TV services.

for fast fixed broadband internet and where Pay TV web applications also encouraging the usage of mobile data.

As the penetration rate in fixed and mobile services in the European region exceeds the global average, operators are seeking to enter a number of new areas such as financial services and content production. However, there is no clear projection of how much these initiatives can compensate for the stagnation in key products for European operators. On the other hand, higher rates of revenue growth are projected in emerging markets such as Latin America, the Middle East and Africa than in developed markets such as the Asia-Pacific.

Telecom revenue growth in Central and South Africa is predominantly proportional to economic growth.

High growth is expected in telecom revenues due to the rapid increase in the number of subscribers in the developing Asia-Pacific region, especially in the mobile sector.

Revenue growth is expected to follow a stable course in the coming period in the Western Europe, North America and developed Asia-Pacific regions, which are characterized by high penetration rates in fixed and mobile services.

In Central and Eastern Europe, the Middle East and North Africa regions, mobile data usage, expanding 4G/LTE coverage and increased fixed broadband revenues will ensure revenue growth.

Fixed broadband penetration rates continues to increase globally

Fixed telecom services revenue growth and fixed network investments will be driven by the transformation to fiber internet, high speed internet and increased broadband penetration among households.

Fixed broadband penetration growth rates are increasing worldwide. Developed markets characterized by high levels of income and widespread availability of next generation access networks offering high speed internet have the highest broadband household penetration.

With fixed broadband household penetration of over 100%, Hong Kong, Singapore and South Korea are expected to continue to stand out as the world leaders in this area in the coming period.

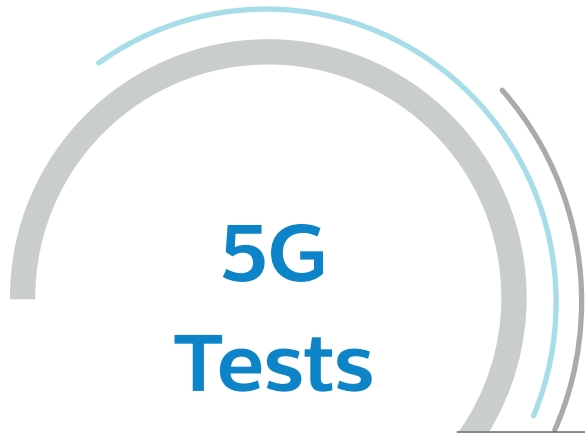
According to the European Union Digital Agenda published under the European Union 2020 targets, 100% of the population using broadband internet will be able to access a minimum speed of 30Mbps and 50% of the population will reach a minimum speed of 100Mbps. Next generation access investments being undertaken by telecoms operators in Europe are supported by government strategies and EU funding under the 2020 targets.

This provides operators in the EU with the opportunity to increase connection speeds and expand revenue in the fixed broadband segment. FTTP/B (Fiber to the Premise & Building) is expected to be the most common technology in the Central and Eastern Europe and Asia-Pacific regions. It is estimated that G-fast and VDSL technologies, which are widely used in DSL network renewals, will be rolled out more widely in Western Europe, especially in Germany and the UK. In the USA, cable broadband technologies are expected to remain the dominant access technology.

While the level of competition in most broadband markets around the world is considered to be high, operators are carrying out infrastructure investments and increasing connection speeds in some regions faster than consumer demand. The gradual decrease in mobile broadband prices leads to even higher competition in the fixed broadband market.

Integrated operators are shaping competition rules of multiplay strategies in the mobile segment

With integrated operators expanding their portfolios and increasing their partnerships in other business areas, many operators across the globe are providing bundled offerings and fixed broadband cross-bundles. Integrated operators are able to compete in the mobile segment with multiplay offerings. Operators are expected to record some slowdown in mobile revenue growth rates by 2023, but they are expected to mitigate this by reducing churn as well as through the migration from prepaid to postpaid lines, which is targeted to increase the share of higher ARPU customers.



5G tests and launches are being carried out rapidly by numerous operators across the globe.

In addition to fixed-mobile convergence offers, operators aim to deliver revenue growth with multiplay offerings including high speed in the fixed segment, high volume data packages in the mobile segment, and featured Pay TV services.

Operators target the sustainability of revenue growth through data use and value-added services, while expecting growth in the mobile subscriber numbers

With the number of mobile subscribers expected to increase worldwide, the high demand for data services and the migration from prepaid lines to postpaid lines are expected to have a positive impact on mobile ARPU levels.

Mobile operators are expected to focus on maintaining their existing customer bases while seeking new sources of revenue to expand their revenues.

Mobile operators are expected to expand the growth in subscriber numbers and revenues on the back of the expansion of 4G / LTE coverage, the rollout of new services (such as TV, games, music) and reasonably priced smartphones. According to the GSMA report, more than half of global mobile connections were on 4G technology as of 2019, while this rate is expected to reach at least 60% by 2023.

Services provided with mobile WiFi solutions are expected to accelerate

In regions with insufficient fixed broadband access, operators are expected to offer broadband services to their customers with mobile WiFi solutions. Some operators are forming new partnerships with the aim of delivering high-speed mobile broadband using parts of the LTE spectrum to locations where there is no fixed broadband.

5G technology set to start generating revenue in 2020 and 2021

With 5G technology, the digital transformation will begin in cities, industries and homes. The next generation technologies, connecting billions of objects to the internet, along with big data, virtual reality, augmented reality, artificial intelligence, machine learning and next generation technologies such as the block chain are expected to enter the daily life systematically, with the production and supply chain becoming entirely digitalized in the business world.

5G tests and launches are being carried out rapidly by numerous operators across the globe. Operators are generally preparing to commercialize 5G services between 2020 and 2021.

Due to the high level of mobile penetration in the European region, shrinking revenue growth areas are expected to be mobilized especially in the corporate segment with solutions to be offered on different platforms along with 5G.

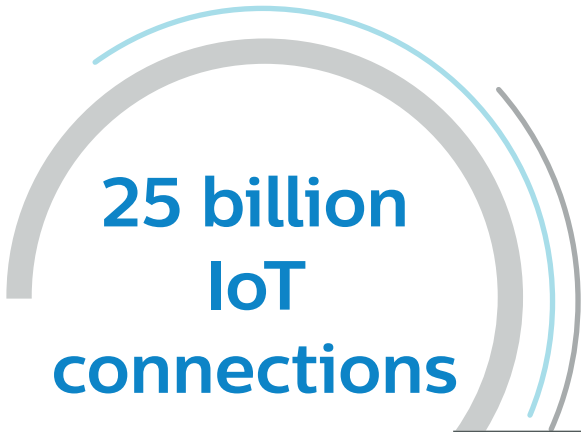
One of the fastest advancing countries in this area is South Korea, where the rollout of 5G, which got underway in 2019, is expected to be completed across the country by 2020. The commercial expansion of 5G started in North America in 2019. On the other hand, North American operators whose customers are already on high-speed 4G and LTE tariffs may struggle to derive a significant marginal benefit from 5G.

IPTV and OTT Video segments are expected to lead the growth of the Pay TV market

Satellite and cable access technologies stand out as the most common technologies in Pay TV services.

Global OTT players are expected to continue to invest more in local content in regions with growth potential, thereby increasing their share of the Pay TV market.

By 2023, the IPTV and OTT Video segments are predicted to be the main growth area in the Pay TV market. While



25 billion IoT connections

The number of IoT connections is projected at 25 billion in 2025.

telecom players in many countries have raised their penetration with IPTV technology, the growth in OTT Video service revenues is expected to be primarily driven by Video Subscription Services (Subscription Video on Demand – SVoD).

Growth opportunities emerge in the corporate segment with new technologies

While revenues from corporate data within the core services of telecom operators around the world are following a level course, revenues from other corporate services (co-location, hosting, cloud, security, SaaS and IaaS) are expected to post rapid growth. The leading operators are expected to carry their corporate services to cloud services, more widely offering access to small and medium-sized enterprises.

Co-location, hosting, cloud, and security services which are dominated by global technology companies present growth opportunities for telecom operators. By 2023, these segments are expected to account for the bulk of the other corporate services revenues of telecom operators.

Telecom operators playing a leading role in digital transformation for customer satisfaction

The digital transformation is being designed to increase efficiency and provide faster access in all areas of business processes. In order to provide an integrated, advanced and next generation customer experience in all aspects, operators are engaged in expanding their relevant infrastructure, rapidly implementing the digital transformation, improving technology systems and user interfaces and enriching their portfolios with products that support them.

Services for the automotive sector and smart buildings are expected to be the strongest growth areas for the Internet of Things

Services for the automotive sector and smart buildings are expected to be the largest growth fields within the Internet of Things (IoT) segment revenues.

Operators around the world are investing in a variety of the IoT solutions, while the majority of the revenues can only be derived from a number of areas.

The GSMA report predicts that the number of IoT connections will triple between 2018 and 2025 to reach 25 billion, with the relevant revenues to quadruple.

Mobile operators aim to increase their ecosystem partnerships as well as network improvements in order to become an end-to-end solution providers for their customers in the IoT.

The areas such as cars, fleet management, smart buildings and health are expected to be the segments generating the highest revenues until 2023. Service revenues in the health sector are also set to surge in line with the rapidly expanding usage of monitoring devices and emergency response systems offered for the elderly and those in need of care.

Demand for next generation communication, technological products and services, alongside traditional telecom services, is gaining pace in Turkey.



Sustainable penetration increase

Fixed broadband household penetration reached 58% in the third quarter of 2019, thanks to investments and customer-focused campaigns.

Strong growth dynamics set the stage for high growth potential in all segments

Turkey remains an attractive market for the telecommunications sector due to its young population, increasing internet literacy, developing technology and positive demographics. Turkey, which has the youngest population in Europe, is also home to Europe's second highest population. The telecom sector continues to grow strongly in all areas, especially in the fixed and mobile segments, with infrastructure investments, expanding coverage, increased data usage and new revenue areas.

Demand for next generation communication, technological products and services, alongside traditional telecom services, is gaining pace in Turkey. Work is intensively being carried out to meet the expectations and needs of customers with a strong fiber cable infrastructure, fully equipped data centers, LTE investments, preparation for the rollout of 5G, infrastructure virtualization projects, innovative products and services in the country.

The place and scope of communication and technological products in daily life in Turkey is expanding rapidly day by day. The target audience of the telecommunications sector is growing each year thanks to an increasing number of households and the growing population, given Turkey's positive demographics. The monthly average data consumption per subscriber, one of the most important indicators of the telecommunications sector in the digitized world, is growing rapidly. In the third quarter of 2019, monthly data consumption per subscriber in fixed broadband increased by 21% year on year to reach 113GB and in mobile segment increased by a 36% year on year to 6.4GB per subscriber. Data usage among LTE subscribers with LTE compatible SIM cards was 8.3GB per month. In addition to the high technology adaptation and consumption trend, the high proportion of young people in the population when compared to European countries offers continued opportunities in the sector in the coming years.



Integrated player Türk Telekom

Türk Telekom stands out from its competitors with its 48% mobile, 24% fixed broadband, 21% fixed voice and 7% TV subscriber distribution.

Even though penetration nationwide has started to increase more rapidly in recent years with penetration campaigns, in contrast to most developed markets, Turkey still has tremendous growth opportunities in its core telecommunications activities, given its low fixed broadband and mobile penetration rates compared to European countries.

Thanks to the advantages of LTE technology, consumers have the privilege of being able to use all mobile applications that require a fast internet connection and data usage wherever and whenever they want. The digital transformation leads the agenda of the players in the telecommunications industry as they move to provide a next generation of customer experience.

The most important priorities of the digital transformation for telecommunication companies are improving their infrastructure, technology systems and user interface and adding supplementary products to their portfolios. As operators need to adapt to the digital transformation quickly for an integrated, advanced and all-around real customer experience, they are taking important steps in this direction.

Apart from telecom players, OTT service providers are also important players of content distribution over the internet. Many service providers are turning to OTT content distribution, taking into account the widespread internet usage and increasing internet connection methods. In the Turkish market, telecommunications companies have started to launch their own content, messaging and social media applications or collaborate with OTT companies to turn this development into an opportunity.

With a plan to bring technology and financial services under one roof, operators offer personalized and flexible payment plans to provide their customers with one-stop services for their telecom, device and financing needs. These actions are aimed at financing the device and equipment related needs of consumer and corporate customers in the telecom sector. On the other hand, restrictions on the number of instalments imposed on mobile handsets, exchange rate movements and increases in special consumption tax (ÖTV) rates suggest the risk of some slowdown in the sector's growth.

Türk Telekom continues to expand its revenue and subscriber market share as part of its goal to maintain its leading position in the sector with its strong infrastructure

As Turkey's first integrated communication provider, Türk Telekom is the sector leader in terms of total revenue and subscriber market share with its convergent and multiplay offerings, innovative products and the services it has developed. Türk Telekom maintains its leadership position in the market with its strong subscriber base in fixed voice and broadband.

With the strength it draws from its efforts to build synergies, Türk Telekom presents its multi-product offers including mobile, internet, telephone, TV and innovative digital services in a way which will generate value for its customers. The Company stands out with its strong positioning in multi-product offers with its strong integrated structure. Türk Telekom operates with a more balanced distribution in all services in terms of the customer base when compared to other players. Türk Telekom stands out from its competitors with its 48% mobile, 24% fixed broadband, 21% fixed voice and 7% TV subscriber distribution as of the fourth quarter of 2019.

Türk Telekom aims to increase internet penetration through its strategy of expanding the fixed broadband market. In the mobile market, it aims to increase its subscriber and revenue market share with its synergy-offerings through its strong fiber cable infrastructure and its range of mobile frequencies, and its wireless household synergy offers. The Company also aims to increase the penetration rate in the Pay TV market with its extensive investments in fixed broadband, extensive platform options such as IPTV, satellite and Web/Smart TV, and an extensive range of content.

In addition to these steps, Türk Telekom continues to work on fixed and mobile infrastructure sharing models. Given that network density is expected to increase with the rollout of 5G, the widespread use of infrastructure sharing models will pave the way for a decrease in investment costs and provide better quality and appropriate service to the end user. Türk Telekom also aims to be the preferred fixed infrastructure provider for mobile operators before the rollout of 5G.



Unlimited fixed broadband era

In 2019, Fair Usage Quota offers were removed in Turkey, and were replaced by unlimited and high capacity offers.

Increasing internet access in Turkey is one of the key priorities. Since 2005, fixed broadband usage in Turkey has increased significantly on the back of Türk Telekom's investments and initiatives aimed at increasing penetration and as such Turkey has been improving its position among OECD countries. In terms of the ratio of fiber infrastructure brought to households, Turkey has outperformed many important European countries.

Fiber technology, with 3.1 million subscribers as of the third quarter of 2019, has demonstrated double-digit growth over the last 3 years. There are 9.7 million xDSL Technology subscribers and 1.0 million cable internet users in the market (Source: ICTA). In Turkey, fixed broadband users consumed an average of around 30GB of data per month in 2013, while consumption exceeded 113GB in the third quarter of 2019. In 2013, about 20% of fixed broadband users received speeds above 10Mbps, while this ratio increased to about 75% in the third quarter of 2019.

The number of Türk Telekom's fixed broadband subscribers had reached 11.3 million by the end of the third quarter of 2019 (Q4'19: 11.4 million). The market's net subscriber growth and penetration growth continued with the support of Türk Telekom's entry-level offers. Revenue and ARPU increase continued with unlimited offers.

Fixed broadband household penetration exhibited a strong growth in the past two years

Backed by Türk Telekom's initiatives, broadband household penetration in Turkey has increased from 48% to 58% in the last two years as of Q3'19. Türk Telekom maintains its goal of increasing penetration to 70%. In the fixed broadband segment, new steps are planned to be taken with updated speed and capacity options in penetration-oriented offerings, especially in "Internet Bizden (Internet on Us)".

In line with its strategy of increasing the fixed broadband penetration through the use of diversified distribution channels, with its partnerships with electricity companies Türk Telekom covers 70% of all households in Turkey through this channel.

High-capacity, low-speed and affordable internet offers are provided to increase penetration and enable potential customers to start using the internet. The "Internet Bizden (Internet on Us)" campaign, initiated by Türk Telekom at a wholesale level, was launched in April 2017. The total number of subscribers in the Internet Bizden campaign, launched by Türk Telekom with the aim of raising internet usage in Turkey and closing the digital gap in the country, has exceeded 1 million.

Türk Telekom has continued to offer regional campaigns to meet the needs of customers, taking into account Turkey's socioeconomic differences. In order to increase penetration, regional fixed broadband tariffs are offered at discounted prices specifically for regions with low penetration. With the launch of the "Internet Festivali (Internet Festival)", customized high-speed and unlimited internet offers have been the driving force of growth in these regions.

Unlimited fixed broadband era started in Turkey

In 2019, Fair Usage Quota offers were removed in Turkey, and were replaced by unlimited and high capacity offers.

In this period, Türk Telekom renewed its unlimited package portfolio in line with customer needs and also started to roll out high capacity offers. In 2019, excluding Internet Bizden subscribers, around 90% of our new subscribers preferred unlimited packages and more than 60% of customers preferred unlimited packages during the recontracting period. In 2019, a tariff balancing was carried out to provide the best value to Türk Telekom customers and increase the share of high-speed offers,



A strong fiber cable network covering 81 provinces and all towns

In 2019, Türk Telekom added 22 thousand kms to its fiber network, bolstering its lead with a total fiber cable network length of 304 thousand kms.

ensuring it was easier for subscribers to reach higher-speed unlimited packages.

While the number of internet users in Turkey has increased rapidly year by year, demand for social media use and domestic entertainment content has also grown, as well as the demand for high internet speed and data usage. This has served as a catalyst for internet users to migrate to fiber-speed internet packages.

Türk Telekom is preparing for 5G by leading the fiber transformation in the sector

Investments in the fixed broadband market have increased in the fiber infrastructure area in recent years. With a fiber cable network stretching 304 thousand kilometers as of the end of the fourth quarter of 2019, Türk Telekom has the longest fiber infrastructure in the country. The total fiber cable length of alternative operators was 76 thousand kilometers as of the third quarter of 2019, while Türk Telekom provides approximately 80% of the fiber network infrastructure in Turkey. With its extensive fiber cable infrastructure, Türk Telekom brings ultra-high-speed internet to its customers in 81 provinces and all towns of Turkey.

When the fiber rate of countries is analyzed by including only FTTB / FTTH technology, this ratio is 26% in OECD countries. Turkey ranked 21st on this measure among OECD member countries and 12th among Western and Central European countries with a 21% rate. (Source: *Analysys Mason*).

With its strong fiber infrastructure, Türk Telekom is the most ready operator for 5G. While strengthening its position as Turkey's leading integrated operator with new subscriber additions, the company continues to focus on the country's technological and digital transformation. Türk Telekom continues 5G preparations and expands rapidly the fiber infrastructure to support 5G. In 2019, the number of fiber homepass in line with the focus on the fiber transformation had increased by 3.2 million to 21.9 million, the highest annual growth.

In the coming period, the corporate data market is expected to grow on the back of increasing demand for next generation access services and uninterrupted secure bandwidth requirements.

A rising number of fixed voice subscribers with the multiplay strategy established in fixed broadband penetration

In Turkey, there were 11.5 million fixed voice subscribers as of the end of the third quarter of 2019, with a household penetration in fixed voice lines of 48%.

In parallel with global trends, the fixed voice market in Turkey had entered a declining trend in previous years due to the shift in the subscriber base from fixed to mobile in voice communication preferences. However, in the recent period, with the support of Türk Telekom's integrated structure and fixed broadband offerings, the fixed voice market has expanded in contrast with global trends. In the coming period, the fixed voice market in Turkey is expected to follow a broadly level course.

Türk Telekom continues to post growth in the number of mobile subscribers and revenues, with its focus on this market with high revenue potential

As of the third quarter of 2019, there were a total of 82.9 million subscribers in the mobile market in Turkey. Three operators in the mobile market – Türk Telekom, Turkcell and Vodafone – provide services, while population penetration has exceeded 101%. (Source: *ICTA Q3'19 Market Report*)

As of the fourth quarter of 2019, Türk Telekom's subscriber market share was 29%, compared to 41% for Turkcell and 29% for Vodafone. As of 4Q'19, the ratio of postpaid subscribers in the market increased by 5pp year on year to 61% on the back of the strategy of operators aimed at increasing the share of postpaid subscribers with high ARPU in the total subscriber base. (Source: *Other operators' data are from their own publications as of Q4'19*). Given that this rate is around 70% in European countries, there is still considerable growth potential to build Turkey's postpaid subscriber base, which commands higher ARPU levels.

Having established a balanced positioning in ARPU and subscriber growth after its frequency and infrastructure investments, Türk Telekom is expanding its mobile subscriber base day by day.



Competitive LTE experience

Türk Telekom offers its mobile subscribers a competitive LTE experience with its nationwide fiber infrastructure, strong spectrum portfolio and 92% LTE coverage.

Some mobile subscriptions have been cancelled as part of the ICTA's decision to cancel subscriptions without a Turkish or foreign identity number. Excluding approximately 450 thousand mobile subscriptions cancelled within the scope of the decision, Türk Telekom recorded a net subscriber gain of 1.9 million in 2019.

Türk Telekom gained the highest share in mobile subscriber acquisitions among mobile operators in 2019 by supporting smart choice positioning in the market with its proactive pricing strategy and abundant internet options.

Türk Telekom develops active and passive sharing and leasing projects with mobile operators to evaluate investment and cost improvement opportunities related to coverage and capacity growth in the mobile market.

Türk Telekom offers its mobile subscribers a competitive LTE experience with its nationwide fiber infrastructure, strong spectrum portfolio and 92% LTE coverage

Strengthening its position in the 900 MHz band after the tender for IMT Services and Infrastructures held on 26 August 2015, Türk Telekom stands out as the only operator with a higher spectrum market share than its subscriber market share.

As of the third quarter of 2019, the ratio of active LTE subscribers among total mobile subscribers was 55%. (ICTA 3rd Quarter Report taking into account the number of subscribers with LTE compatible SIM cards and LTE compatible devices).

With its successful offerings in 2019, Türk Telekom also maintained the strong position in smartphone penetration which it has commanded since 2011. LTE-compatible smartphone penetration among smartphone users was 82% at the end of 2019 year end, marking an increase of 5pp year on year.

With the increase in the number of smart devices and the LTE effect, the increase in mobile data usage is expected to continue over the next period. With a growing number of connected devices, M2M revenues are expected to growth, especially given the proliferation of devices and applications for health, home security, fleet and vehicle tracking.

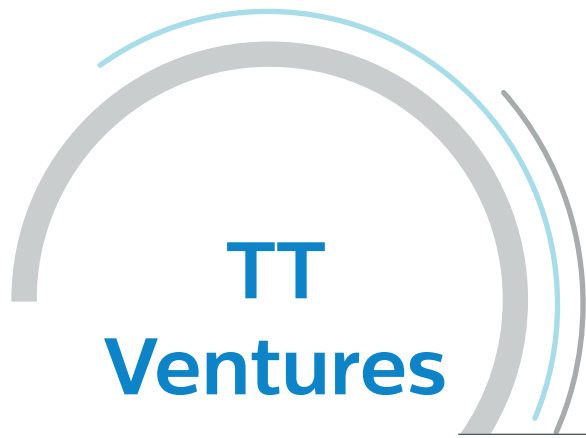
Türk Telekom maintains its second position in the Pay TV market

The leading players in the Pay TV market in Turkey are Türk Telekom Tivibu, Digiturk, D-Smart, Turkcell TV+ and TÜRKSAT.

As of the third quarter of 2019, the number of subscribers in the Pay TV market, consisting of cable, IPTV and DTH reached 6.9 million (excluding Web TV and Smart TV figures; Source: ICTA and Company disclosures). Pay TV household penetration in Turkey stands at 29% and offers significant growth potential, given the 91% rate for European countries (Source: Turkey data ICTA and European Countries Analysys Mason Pay TV Quarterly Metrics 3Q 2019).

DTH is the most common TV technology in the Pay TV market in Turkey. IPTV services in the Pay TV market are offered by Türk Telekom Tivibu and Turkcell TV+, while Türk Telekom maintains its position as the only telecom operator providing satellite platform services. Türksat is the only operator actively offering cable TV in Turkey.

Türk Telekom, the first IPTV provider in Turkey, started to provide broadcasting services on its satellite platform in order to reach wireless households in 2015. Both platforms are broadcasting high definition (HD) services. Türk Telekom aims to increase penetration of the Pay TV product. The market share of Türk Telekom was 24% in the Pay TV market as of the third quarter of 2019.



TT Ventures, the first Corporate Venture Capital Company in the Turkish telecommunications sector, was established by Türk Telekom.

The Pay TV market is expected to continue to grow amid the rise in ultra-high definition TV usage with affordable Pay TV bundle offers from telecom operators.

Türk Telekom leads Turkey's technological transformation with its focus on innovation and digital transformation

The high level of digital literacy and smartphone penetration in Turkey offers a promising base for the use and expansion of digital services. Operators in Turkey offer OTT services with their own developed applications and content in many segments. In the OTT area, content is presented in the Music, Game, VoIP and Entertainment segments.

"Online Transactions", Türk Telekom's customer-oriented self-service application, has been downloaded 36 million times since its launch with the number of Türk Telekom unique mobile subscribers using the application reaching 15.2 million. 86% of customers using smartphones use the application.

The Internet of Things segment offers opportunities for differentiation and promises new growth areas for telecom operators. In this field, operators in Turkey offer not only connectivity products, but also Internet of Things solutions.

Transforming itself from a telecommunications company into a technology group, Türk Telekom also broke new ground in this field by establishing its Corporate Venture Capital Company

To create value from their growth by investing in early and/or mid-stage companies, Türk Telekom established TT Ventures, the first Corporate Venture Capital Company in the Turkish telecommunications sector in 2018. Within this framework, the Türk Telekom Group plans to contribute to the growth of scalable target ventures with its cash and/or internal resources and in return, to acquire a share ownership in the ventures based on the value of the resources it contributes. The aim is to take advantage of potential synergies in the ecosystem where the Group operates, where possible, and to participate in new business models, accelerate innovation and increase equity value at the end of the investment period.

Türk Telekom aims to achieve digital transformation throughout the entire value chain while increasing its growth ambitions in new income areas

Türk Telekom offers innovative services and enhances the scope of its existing services to build stronger relationships with customers and increase the time customers spend on the mobile network. In this context, it offers rich solutions that will add value to the lives of retail customers, including Muud, a free music streaming experience which plays tracks depending on the mood of the user; Tambu, the smart keyboard application which has a commanding position in the market with its domestic identity; the leading digital game platform Playstore; and the online reading platform, e-dergi.

On the other hand, the innovative services offered by Türk Telekom are not limited to mobile applications. Providing an infrastructure which is the best in Turkey and its surrounding region, Türk Telekom also aims to contribute to the digital transformation being taken by its own customers and its corporate customers with the support of its subsidiaries positioned in the right areas.

In the coming period, the data center, health campuses, Smart Cities, and manageable service segments in the ICT market are projected to be the main drivers of the growth. The increasing need for connectivity and mobility combined with an increased understanding of effective budget management in companies will trigger a wave of data consumption and cloud transformation projects.

Türk Telekom's Strategic Focus Areas

In line with Türk Telekom Group's vision of reinforcing its leading communication infrastructure and solution provider status, strategic focus areas have been identified.

Türk Telekom's Strategic Focus Areas

GROWTH

Core Telco Operations

- Increase the number of access lines and strengthen the footprint at households
- Strengthen the preferred fixed and mobile infrastructure provider position in wholesale operations
- Achieve a fair market share in the mobile market
- Increase corporate service revenue growth by increasing segment penetration

Non-Core Telco Operations

- Capture a share in new revenue areas for sustainable growth
- Create value from opportunistic ventures on top of core
- Create value via subsidiaries

EFFICIENCY

Core Telco Operations

- Improvement in operational expenses with strict cost control
- Disciplined capex spending
- Ensure the organizational transformation
- Provide a competitive customer experience

Non-Core Telco Operations

- Change business models and processes with internal digitalization
- Be prepared for the technology transformation-5G readiness



Türk Telekom defined its strategic goals on focus areas in terms of growth and efficiency in core and non-core telco activities.

In line with its vision of enriching the business and lives of its customers and strengthening its position of being Turkey's leading communication infrastructure and solution provider by doing the best in every field, Türk Telekom defined its strategic goals around two main focus areas in terms of growth and efficiency in core and non-core telco activities.

Growth: Within the scope of its growth focus on core telco products, Türk Telekom aims to increase the number of access lines and strengthen the footprint at households, and to strengthen its position of being the preferred fixed and mobile infrastructure provider in wholesale products and services. In addition, achieving a fair market share in mobile and increasing revenue growth in corporate services by increasing segment penetration are defined within the scope of the growth goal in core telco activities.

In non-core telco products, the goal is set of gaining share from new revenue areas for sustainable growth and creating value from opportunistic ventures and subsidiaries on top of core.

Efficiency: Within the scope of the efficiency focus on core telco products, Türk Telekom plans to deliver improvement in operational expenses with strict cost control, along with supporting efficiency gains with disciplined management of capital expenses. In addition, achieving organizational transformation and provision of a competitive customer experience are expected to contribute significantly to the goal. In non-core telco activities, Türk Telekom aims to change business models and processes and prepare for the technological transformation through internal digitalization.

GROWTH

The Türk Telekom Group gathered its growth focus under two groups: growth in core telco and non-core telco activities.

Growth in Core Telco Operations

Within the scope of this priority, Türk Telekom aims to own the in-home experience end-to-end and continue to achieve growth in its number of mobile subscribers. Türk Telekom will continue to strive to reach households that lack basic communication services, offering them the full range of services in its portfolio and supporting these households use the services, while realizing this in line with its profitability targets. In the mobile market, Türk Telekom will continue to grow with the support of its strong mobile infrastructure supported by its fiber network and its mobile frequencies.

Increase the number of access lines and strengthen the footprint at households

With the growth of the fixed broadband service, Türk Telekom aims to maintain the number of access lines and increase in the long term. Türk Telekom aims to maintain access lines, increase fixed broadband household access and the connection speeds that can be offered, and present enriched offers. With fixed broadband services, Türk Telekom aims to prevent the decline in the number of access lines in the fixed voice area.

Türk Telekom's total number of access lines is increasing on the back of naked DSL, fixed voice and fixed broadband offers. Türk Telekom increased the total number of fixed voice subscribers annually to 10 million as of the end of 2019, bucking the trend in the world. When naked DSL lines are included, the total number of access lines increased to 14.6 million.

With the revenue growth goal, contract periods and prices have been differentiated by customer groups and the risk of cancellation has been reduced by improving customer loyalty. In addition, revenue growth is targeted through the continuation of migration to premium tariffs and price adjustments.

- *Ensure the growth of fixed broadband subscriber numbers and revenue through increasing penetration and sectorial collaborations*

Fixed broadband household penetration in Turkey offers growth potential compared to European countries. Accordingly, fixed broadband household penetration is expected to increase to 70% in the medium term, placing this as one of the main pillars of Türk Telekom's revenue growth.

Türk Telekom will continue to steadily increase its number of retail and wholesale broadband subscribers by capturing a share of the growing broadband market. Through retail and wholesale offers, penetration targeted campaigns, regional offers and similar initiatives, Türk

Record increase in fiber homepass

In 2019, number of fiber homepass posted a record high annual increase of 3.2 million, reaching 21.9 million as of year-end 2019.

Telekom aims the expand and increase the penetration of fixed broadband segment.

Launched in April 2017 in a bid to attract first time customers seeking to access the Internet at Home at affordable tariffs, and to increase the fixed broadband penetration in Turkey, Türk Telekom continued its "İnternet Bizden (Internet on Us)" campaign at the wholesale level and the "İnternetsiz Ev Kalmasın (No Home without internet)" campaign at the retail level. As of the end of 2019, these campaigns had reached more than one million subscribers. The migration of the broadband customers acquired through the penetration campaigns,



to more premium packages exceeded expectations, providing a significant contribution to growth.

In 2019, Fair Usage tariffs were discontinued. In accordance with customer needs, the unlimited internet portfolio was renewed and packages with quotas started to be offered. In 2019, the initial launch prices for the unlimited packages were reassessed, so subscribers could access these packages more easily. In 2019, when excluding the subscribers of the "İnternet Bizden" and the "İnternetsiz Ev Kalmasın" tariffs, about 90% of new subscribers preferred the unlimited packages, and over 60% of them migrated to unlimited tariffs during the recontracting period.

· *Positioning as the only telecom operator capable of offering the DTH services in TV products to set itself apart from the competition*

Instead of being the player providing high-priced exclusive content in the Pay TV market, Türk Telekom focuses on the profitable growth of its main product portfolio through the synergies created by addressing the entry-level gap in the Pay TV market. In Turkey, Pay TV services penetration is around 30%. As the only telecom operator capable of offering DTH services, in Pay TV market Türk Telekom focuses on growth in the entry-level segment with accessible content. It aims to increase the wireless household access by using TV access as a tool to reach homes that cannot be reached through fixed access services. IPTV will continue to be offered with the aim of supporting Türk Telekom's goal of increasing the Pay TV penetration with rich content at affordable prices.

Strengthen the preferred fixed and mobile infrastructure provider position in wholesale operations

Turkey's fixed broadband household penetration reached 58% as of the third quarter of 2019. Türk Telekom continued to expand fixed broadband market in 2019 and reached a total of 11.4 million fixed broadband subscribers, with an annual net subscriber gain of 458 thousand.

With the vision of supporting fixed broadband penetration increase goal with entry-level tariffs in areas with infrastructure, the Company focused on entry-level "İnternet Bizden" campaign in the wholesale broadband market in 2019.

Türk Telekom intensively continued its network investments in 2019 as part of its goals to fiberize the network. With the new investments, the company increased the total length of the fiber network to 304 thousand km by the end of 2019. In 2019, number of fiber



Strong increase in mobile market share

Türk Telekom's mobile subscriber market share increased by 6pp over the last five years to 29%.

homepass posted a record high annual increase of 3.2 million, reaching 21.9 million as of year-end 2019. Thanks to Türk Telekom's widespread fiber infrastructure and its unlimited internet packages offerings, more customers were introduced to high-speed and unlimited internet in 2019. Türk Telekom also maintained its position of being the leading player in the fiber subscriber market.

In the mobile segment, active and passive sharing models are evaluated in order to expand the infrastructure sharing model. The fiber network will be even more critical with the expected increase in data traffic and network density (small cell) that will come with 5G. Türk Telekom is working proactively to provide the most appropriate service to the sector in this area with its competence in delivering fiber connections to the networks of the mobile operators with the FTTS (fiber-to-the-site) solutions.

Achieve a fair market share in the mobile market

Türk Telekom focuses on products and offers that will meet the expectations of mass segments in order to increase its mobile market share. Türk Telekom has strengthened its position in the mobile market by further improving mobile service quality and coverage with its frequencies, strong mobile infrastructure supported by fiber network and new investments in the mobile segment, and continues to increase its number of subscribers. Türk Telekom's mobile subscriber market share increased by 6pp over the last five years, reaching 29% as of the fourth quarter of 2019.

In line with the segment-based approach, the Prime product addresses the high income group, while Selfy

addresses young people and customers in the entry-level segment. Türk Telekom targets further market share gains in the mobile subscriber market with its business partnerships and products in its portfolio that sets itself apart from the competition.

The use of smartphones and data by mobile subscribers continues to increase. As of the end of 2019, the smartphone penetration in Türk Telekom's mobile segment reached 86%, an annual increase of 3pp. In 2019, the share of smartphone users owning an LTE-compatible phone increased by 5pp, reaching 82%.

The LTE population coverage of Türk Telekom's mobile network exceeded 92% at the end of 2019, while 45% of the LTE base stations were connected with fiber.

Increase corporate service revenue growth by increasing segment penetration

In order to increase the value provided to customers, the position of "Sales Assistant General Manager" was structured as "Corporate Sales Assistant General Manager" and "Consumer Sales Assistant General Manager". As such, strengthening the focus in the corporate area is aimed.

Türk Telekom is focused on growth in the Strategic, Public and Large-Scale Customers segments, together with its targeting structure that was re-created in accordance with the segment structure by effectively using the renewed segment databases.

Together with the ICT products led by corporate security products and data center products, next generation products such as WAF (Web Application Firewall), pentest, enterprise email service and the Central Sip Trunk innovations and solutions, which are tailored to customer needs, continued to be offered in the main product categories.

The IP-based applications and value-added services are supported by fixed voice, with a transition to cloud-based voice solutions in parallel to the technological developments that enable better customer experience.

Türk Telekom has continued to work with group companies in order to develop integrated solutions in order to be the only solution partner which meets all of the technological needs of its customers. In this context, effective solutions were developed in terms of Manageable Services, Digital Signature and informatics with Innova. Türk Telekom also continued to produce solutions in order to meet the call center needs of its customers.

Türk Telekom, which carries out large-scale projects with the public, is undertaking solutions that bring ease to the lives of citizens. In this context, carrying out important projects in various cities such as YöneTT free WiFi project, provision of free internet to citizens with the smart pole solution, the "Akıllı OSB (Smart Organized Industrial Zone)" project that enhances the security and efficiency of the area and the electronic monitoring system (EDS), Türk



Cooperation in energy vertical

Türk Telekom offers fixed broadband through five energy companies that cover 70% of the households in Turkey.

Telekom will continue to undertake important projects by maintaining its strong cooperation with the public.

Growth in Non-Core Telco Activities

Growth in non-core telco areas has been identified as one of the main targets in order to support growth targets and sustain growth.

Capture a share in new revenue areas for sustainable growth

In addition to core telco services, Türk Telekom aims to reach a wide customer base by supporting core products and services through scalable projects in the priority verticals such as health, education and energy.

Türk Telekom provides the IT infrastructure services for the Ankara City Hospital and Mersin Integrated Health Campus – two of the health campuses that will strengthen Turkey's position as a leader in the field of healthcare in the region.

Broadband offers were launched for sale through the electricity companies as a result of the cooperations in the energy sector. Türk Telekom is in cooperation with five energy companies (CK Boğaziçi, CK Akdeniz, Limak, Aksa and Enerjisa), covering 70% of households in Turkey.

The ICT product portfolio is diversified, creating new revenue areas and increasing customer loyalty. Offering Turkey's richest solution portfolio with its data center products with a customer-oriented approach, Türk Telekom has continued to further enrich its portfolio. The company has added e-commerce companies with sales across the country to its customer portfolio in the field of data center services.

With the Cyber Security Center, which was opened at the end of 2018, Türk Telekom provides end-to-end solutions meeting all of the cyber security needs of its customers, while providing continuity of uninterrupted and secure access for customers. The Cyber Security Center meets the Group's cyber security needs, as well as providing additional income to the Group by serving other players in the sector.

As a pioneer in the smart cities field, Türk Telekom invests in smart city technologies which will support the building of sustainable, efficient and high quality of life cities. Next-generation urban technologies are covered under the headings of transportation, security, energy, health, the environment and living.

Create value from opportunistic ventures on top of core

Türk Telekom established the "Türk Telekom Ventures Proje Geliştirme" company in 2018 in order to support early mid stage enterprises achieve their long-term business goals, contribute to their growth and develop various projects. With this initiative, Türk Telekom is focused on investments which will generate additional value by supporting the growth of companies which can deliver benefit to large audiences in sectors such as health, energy, education and which support Türk Telekom's main business lines. In early 2019, in education vertical, Türk Telekom acquired a 6.9% stake in MentalUp, a game-based learning platform for K12 elementary school students.

In 2019, Türk Telekom also acquired an 11% stake in Eltemtek in order to create synergies with its main business lines by developing new products and services in the energy sector, which is one of its focus areas, and developing new projects that will benefit the country's economy through digitization. Eltemtek provides engineering, project and consultancy services to private and public institutions in Turkey's critical energy infrastructure projects.

With the goal of supporting entrepreneurship in Turkey and transforming innovative ideas into jobs that will provide added value, Türk Telekom has implemented PILOT, a venture accelerator program. Early-stage



Operational expenses are kept under control with effective cost control and optimization.

technology ventures are supported by PILOT, the first venture acceleration program launched in the private sector.

Create value via subsidiaries

Türk Telekom continues to produce value by offering customized solutions to its customers with Group companies, each positioned in the most suitable fields. The Company has assumed a pioneering role in large-scale Information Communication and Technology projects with Innova, in next generation telecommunication technologies including 5G with Argela, in e-education products with SEBIT, in call center services with AssisTT, in international infrastructure services with Türk Telekom International and in the fields of payment solutions and electronic money with Türk Telekom Ödeme Hizmetleri.

EFFICIENCY

Efficiency in Core Telco Activities

Improvement in operational expenses with strict cost control

Operational expenses are kept under control in line with revenues for effective cost control and optimization.

· Focus on a simple and effective portfolio

Türk Telekom aims to focus on a simple and effective portfolio in order to simplify its product service portfolio and increase the competencies of its core products. Portfolio simplification efforts are ongoing to meet customer needs more effectively and to use resources more efficiently.

· Sales channels and customer service

Türk Telekom aims to achieve an increase efficiency by providing its customers with an excellent end-to-end channel experience through improvements in sales and customer service channels.

Simplification and optimization studies continue in dealer channels, offices and call centers. In addition to the exclusive dealer channel at the retail level, efficiency increases were also achieved in the wholesale channel. Cost optimization initiatives such as improving the use of digital channels in call centers and increasing the automation level of processes have been initiated.

Improvements were made to Türk Telekom's Office Channel, which has a wide network and domain throughout Turkey in 2019. In order for the channel to focus on efficiency by making more sales with lower costs, processes in performance and premium systems are singularized, and employees at all levels in the office channel are directed to the same goals.

The dealer premium system has been restructured to ensure that dealer sales are carried out in accordance with defined rules. In the Türk Telekom Exclusive Sales Channel (TTM), a transition to a performance-oriented premium system was carried out with the aim of increasing efficiency. Within this framework, unconditional earnings paid to dealers were reduced and variable premium amounts were increased.

By optimizing the Sales and Customer Service channels, Türk Telekom aims to reduce customer acquisition and retention costs. Türk Telekom is exploring robotic process automation opportunities to increase the efficiency of its processes, primarily in Finance, Customer Services and the Call Center functions.

· Reduction in doubtful receivables from equipment sales through consumer financing initiatives

Improved risk assessment processes in device sales and changes made to decision trees enabled the prevention of sales with high risk in collections. In order to reduce device costs and minimize risks, activities continue to widen the scope of the consumer financing agreements. A decrease in doubtful receivable expenses was achieved thanks to the system and process improvements.

Disciplined capex spending

With the disciplined capex spending, Türk Telekom aims to utilize its existing assets more efficiently and generate more value with the investments which it undertakes.

With disciplined investment policies, expenditures are managed in line with revenues. The ratio of Capex to sales is expected to decrease over time with the completion of mobile coverage and new fixed access investments.

In terms of fixed access, investments are prioritized in new settlement areas and in areas where competition is intense. With the responsibility that comes with having Turkey's most widespread access network, leading



Competitive customer experience

While Türk Telekom seeks to improve customer experience in all areas by developing services and products that facilitate the lives of its customers, the Company engages in works to maximize customer experience in the digital realm.

the process of Turkey's fiberization remains one of the top priorities on Türk Telekom's investment agenda. Türk Telekom aims to optimize mobile investment requirements through active and passive sharing projects.

Capital expenditures for infrastructure are expected to be in line with revenue growth. Türk Telekom aims to reduce technology and network costs by simplifying IT processes and systems, enabling software-based and virtual transformation of the network.

Synergies are targeted by combining fixed and mobile regional field services. Costs are reduced with the use of power plants and service buildings, which have been fully automated in line with the process of centralization and new technologies, in accordance with the needs of the General Directorate and the region.

Ensure the organizational transformation

With its innovative human resources practices, Türk Telekom aims to have a qualified workforce which is compatible with the corporate culture and the Company's values, and to become the most preferred employer in the telecommunications sector. Organization studies and planning are carried out in order to determine the right number of employees and the distribution of the workforce, which will serve Türk Telekom's strategic goals more effectively and sustain its growth and profitability. Thanks to the redesigned business processes, more efficient business models are implemented.

Ensure a competitive customer experience

Providing its customers with a competitive customer experience is one of Türk Telekom's most important goals. Defining customer processes as one of its priority areas in face-to-face and digital channels, Türk Telekom also undertakes improvements in operational efficiency through the projects carried out in this field.

In the field of customer experience, by prioritizing the competitive customer experience, end-to-end improvements continue to be carried out to the pre-sales and post-sales processes, starting with core services.

While Türk Telekom seeks to improve customer experience in all areas by developing services and products that facilitate the lives of its customers, the Company engages in works to maximize customer experience in the digital realm.

Continuously developing in line with the needs and expectations of its customers, the Online Transactions application became Türk Telekom's most visited channel in 2019 with its new functions, exclusive advantages for

the digital channel, a renewed user-friendly interface and a simplified user login.

The Web Online Transactions continues to implement the customer-oriented approach of sales and customer services in all managed channels, designing user-friendly and innovative services. As of November 2019, "Unified Online Transactions", the first digital common online transactions channel that combines Mobile, Home Internet, Home Phone and TV products under the vision of "Single Channel, Single Login", was made available to customers. In this context, it started to serve all customers through a single digital channel.

The post-sales needs of corporate customers are met with more than 500 customer representatives in the corporate customer service call center channel and approximately 400 corporate customer service personnel in face-to-face channels. The corporate customer services continue to meet call demands from mobile, internet and fixed voice subscribers on an end-to-end basis within the framework of a differentiated service approach focused on customer satisfaction.

Under the Empathy Program, all Türk Telekom employees improve customer processes step by step, with a Customer Experience Representative approach and as a single team. Within the scope of the program, all services, applications and processes that involve contact with customers are reviewed on an end-to-end basis and revised to provide the best customer experience.

The program is being rolled out in two phases; in the first phase, actions for fixed voice, broadband, TV and digital service channels processes were determined and improvements were carried out in the fields of installation, transportation, advertising and malfunction, which are the main customer processes. As of the end of 2019, mobile customer satisfaction was included in the focus areas of the program, and process improvements for the mobile service started to be carried out.

Efficiency in Non-Core Telco Activities

Change business models and processes with internal digitalization

While the way business is conducted is undergoing a rapid process of change, the provision of digital transformation in the entire value chain is targeted by taking into account the changing and digitalizing business world. In this respect, Türk Telekom is diversifying its technology, marketing, branding and communication, sales and customer service processes, and developing them from end-to-end.

Türk Telekom aims to realize the digital transformation in these fields in a bid to digitalize all customer processes, boost operational efficiency and develop and launch innovative digital products which complement core services, thereby contributing to the digital transformation of telecom ecosystems and customers, in addition to providing core services. In addition to the core services for

retail customers, Türk Telekom aims to increase cross-selling and customer loyalty by developing innovative digital services.

· *Online and alternative channel usage*

Various projects are being developed with the aim of increasing the use of alternative and digital channels and to use them efficiently. Alternative channels are developed with collaborations in the energy sector, and core services are provided to large segments of the population through the energy companies which cooperation agreements are made with.

The improvements achieved in digital channels contribute to the customer experience and increase productivity. The end-to-end sales processes of mobile and online transaction centers have been redesigned.

Be prepared for the technology transformation- 5G readiness

· *Enable Lean Technologies - Commercializing SDN and NFV and SEBA Technologies*

Enabling lean technologies and developing SDN (Software Defined Networks) / NFV (Network Function Virtualization) technologies will be carried out in order to provide a faster service and competitive customer experience to customers. In addition, studies on SEBA (SDN Enabled Broadband Access) are continuing extensively. With its automation, convergence and virtualization initiatives, Türk Telekom will improve its technological competencies and transform the network into a more agile and efficient network structure.

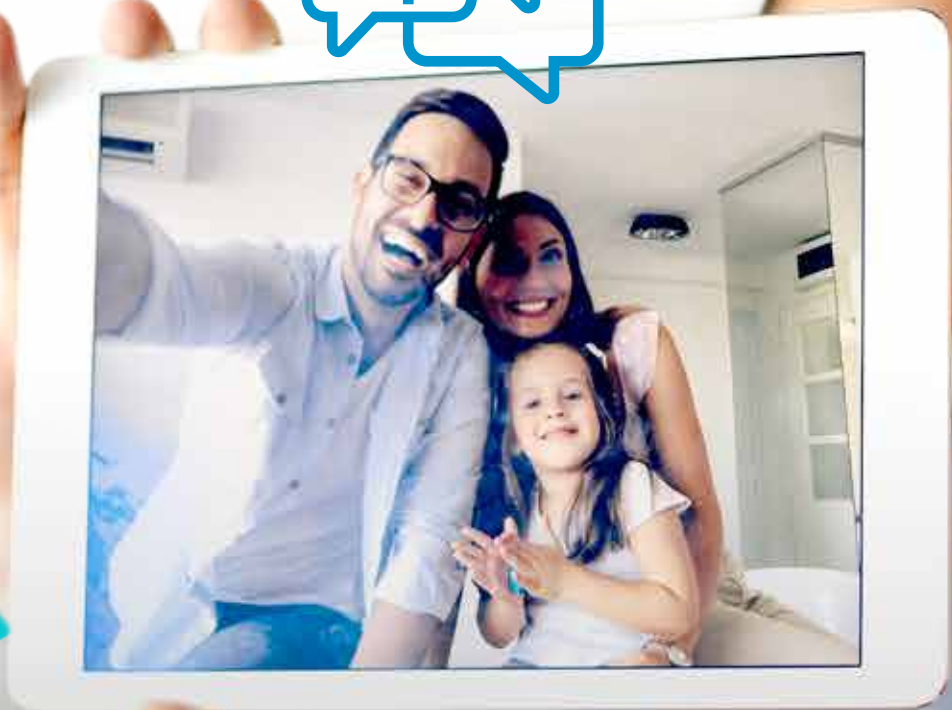
With the virtual architecture approach, Türk Telekom aims to improve revenues by paving the way for low investment and operating costs, a flexible architecture, easy scalability, the advantages of simple installation and improvements on the investment and expense side while offering new services. Software-based network technologies, Virtualization (SDN/NFV) and other next-generation access technologies on the agenda will be followed up and implemented.

· *Prepare for the redesign of fixed and mobile assets*

Preparations for 5G will be stepped up in order to respond most effectively to customers' growing needs for connectivity and to use existing assets more effectively. Türk Telekom works in conjunction with global players with its participation in the 5G PPP and ONF (Open Network Foundation) platforms in order to develop 5G activities and set standards. The Company develops strategic and business plans with new collaborations by contributing to the new generation virtualized cloud network architectures, the Internet of Things and public security.

**We are together
in whatever you
value in life**





Marketing Activities

In line with its “Not just for some, but for everyone” service approach, Türk Telekom strives to provide uniform service quality to all its subscribers; from a single person living in the most remote parts of the country to crowded families; from the smallest companies to the largest enterprises.



Consumer Marketing Activities

Consistent growth in subscriber numbers in parallel with a healthy increase in ARPU

Operating with an integrated structure under the umbrella of a single brand, Türk Telekom met the requirements of various customer groups in 2019 with its strong offers, and continuously improved customer experience.

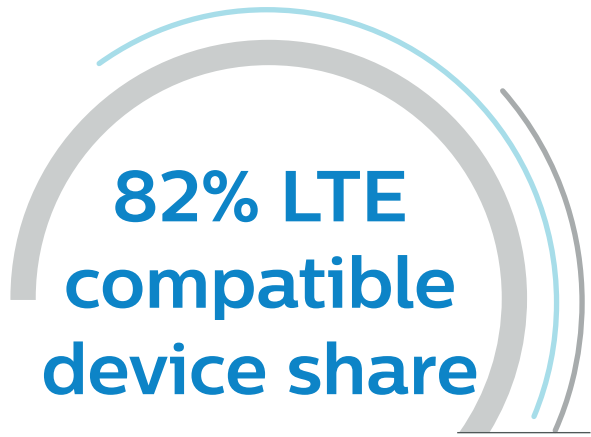
In line with its “Not just for some, but for everyone” service approach, Türk Telekom strives to provide uniform service quality to all its subscribers; from a single person living in the most remote parts of the country to crowded families; from the smallest companies to the largest enterprises.

In line with its healthy ARPU increase and sustainable subscriber growth strategy, Türk Telekom added total 1.8 million net subscribers to its subscriber base in 2019, reaching 47.8 million subscribers.

Compared to the subscriber distribution of the other players in the market, Türk Telekom stands out with its diversified subscriber base, with 48% mobile subscribers, 24% fixed broadband subscribers, 21% fixed voice subscribers and 7% TV subscribers.

The Company obtained consent from 79% of its subscribers to share their information within Group companies in order to offer them more Türk Telekom products proactively, drawing strength from the power of the group's synergy. By the end of 2019, the share of subscribers using multi products was 63%, an increase of 3.2pp (among a constant subscriber sub-universe that had provided consent for the sharing of information by the end of 2018).

Türk Telekom maintained its strong subscriber growth and strong ARPU increase also in the mobile segment. With net 1.4 million subscriber additions in 2019, the total number of mobile subscribers reached 22.9 million. Excluding the impact of the ICTA regulation on cancellation by of the subscription of the customers who do not have a Turkish or Foreign Identity Number, the number of net subscriber additions was 1.9 million in 2019.



Among smartphone users, LTE compatible device ownership increased by 5pp within 2019 to 82%.

Türk Telekom maintained its leadership in net mobile number portability in 2019, while continuing its ARPU growth at the same time.

Smartphone penetration among Türk Telekom mobile subscribers increased by 3pp YoY to 86% by the end of 2019. While 77% of smartphone users had an LTE compatible device by the end of 2018, this share increased to 82% in 2019 with a 5pp increase.

While mobile subscribers' ownership of LTE-enabled SIM cards and devices supporting this technology continued to increase in 2019, the number of active subscribers using the LTE service increased by 28% compared to the previous year.

Türk Telekom's main priorities in the fixed broadband segment in 2019 included reaching out to households without internet with a focus on increasing penetration, and introducing customers seeking high capacity into the world of unlimited internet. Thanks to the actions taken in line with these priorities, as well as attracting millions of new households to Türk Telekom, millions of customers' packages were upsold to unlimited packages. Furthermore, a high number of customers chose fiber internet as they switched to Türk Telekom, and as such Türk Telekom also maintained its leadership position in the provision of fiber internet.

Türk Telekom continued to expand in total fixed broadband market in 2019, and closed the year with a net increase of 458 thousand subscribers. The total number of fixed broadband subscribers reached 11.4 million by the end of 2019. The ARPU in fixed broadband segment recorded an annual growth of 13% in Q4'19, which was the strongest annual increase since 2011. The fiber subscriber base increased by 16% in 2019 to reach 4.2 million.

The number of Türk Telekom's Home TV subscribers was 1.6 million in 2019 while the total TV subscribers was 3.5 million. The Company's Pay TV market share, which was 18% at the end of 2017, reached 24% by the end of the third quarter of 2019 (*Source: ICTA Q3'19 Market Data Report*). The Company maintained its second ranking in Pay TV in 2019, and measures were taken to increase the revenue generated from existing customers.

Diverse customer requirements in mobile postpaid segment met by attractive offers in 2019

Türk Telekom maintained its growth in the postpaid mobile market in 2019 thanks to its attractive offers launched, its constantly improving customer experience and its focus on diverse customer requirements. With a net increase of 1.5 million in its total postpaid mobile subscriber base, the Company delivered an annual growth rate of 12% and the total number of postpaid subscribers reached 13.7 million in 2019. With the market's highest number portability (port-in) figure in 2018, Türk Telekom also maintained its leadership position in 2019.

While mobile data consumption continuously increases in the digitalizing world, differences in data usage among consumers have started to widen. Türk Telekom continues to adhere to its primary purpose of responding to its customer's requirements while designing tariff packages. Considering customer expectations, the Company launched "Cebimde Tarifeler (Tariffs for my Mobile)" campaign at the beginning of 2019. The "Gel Kazan (Come to Win)" Campaign was launched at the end of the second quarter taking into consideration the mobile requirements specific to the summer months. Prices for *Cebimde Tarifeler* were kept constant with this campaign, and additional data benefits valid for 12 months were added to the tariffs' content. All of these actions aimed to increase customer satisfaction via responding to the increasing data requirement of customers.

The "Efsane Portföy (Legendary Portfolio)" was launched in October 2019, offering high data content to customers at affordable prices. The number of postpaid activations reached record levels on the back of this launch, taking customer satisfaction one step further.

A focus on the data requirements of prepaid mobile customers

The prepaid portfolio was diversified further in 2019 in order to respond to the increasing data requirement of customers. Prepaid customers with a price-oriented approach in their choices in to manage their communication budget were not neglected, and as such, the Company continued to offer the most affordable prices in the market.

Packages with different mobile data options such as 2GB, 4GB, 6GB and 10GB were offered in 2019. Considering customer requirements and consumption levels, options of 3GB, 5GB and 7GB were added in the second quarter, and offers were differentiated. The main offers were widely diversified and offered at advantageous rates compared to competitors, aiming to meet all kinds of requirements which customers may have and to maximize their satisfaction. Thus, an increase in the number of activations was achieved when compared to the previous year.

Offers were prepared throughout the year to improve the satisfaction of prepaid customers further and to meet their all requirements.

Mobile Wi-Fi offers enriched with high data content

While “Mobile Wi-Fi” offers aimed at providing mobile internet service at any time and in any place continued to be enriched with high data content in 2019, prepaid offers started to be offered within the scope of Mobile Wi-Fi with a target to meet the data requirements of prepaid customers. In April, postpaid customers were offered packages with 50GB of data content with or without the modem option.

The mobile Wi-Fi service offers customers a choice of offers without a modem to place their SIM cards in their tablets or smartphones and use their devices as a modem, while customers choosing offers with a modem may connect to the internet through as many as 10 smart devices with this service.

A loyalty and customer satisfaction-oriented approach in the mobile segment

In 2019, the focus of the mobile segment was on increasing the number of customers migrating from prepaid to postpaid subscription, data consumption by incentivizing transition to LTE and the number of customers using Online Transactions in parallel with the focus on digitalization; providing flexible, simple and loyalty-based prepaid offers and improving the experience of customers using services abroad.

The strong commercial focus on migrating customers from prepaid tariffs to postpaid tariffs continued. The number of customers migrating from prepaid to postpaid subscription in 2019 increased by around 50% compared to the previous year.

“Aşmayan Tariifeler (Data Stop Tariffs)” were launched in August 2019 targeting customers who hesitate to migrate from prepaid to postpaid due to fear of entering a commitment and bill shock. The tariffs provide customers with the option of stopping data consumption when mobile data quotas are reached. Customers may continue to consume data if they register to an add-on pack. A commitment penalty is not charged to customers in the

[illegible]



first 3 months and customers are free to migrate to other tariffs within the tariff portfolio at advantageous rates.

A special postpaid tariff portfolio was offered in October for customers seeking to migrate from postpaid subscriptions to prepaid services, in a bid to retain them in the postpaid segment.

The tariffs and packages in the prepaid segment were simplified, creating a leaner package portfolio. A competitive advantage was achieved with the flexibility in package-tariff usage, package options up to 20GB and the loyalty campaign “Sil Süpür” offered weekly over Online Transactions.

Türk Telekom maintains its focus on digitalization and LTE

Considering the diverse mobile requirements of LTE users, Türk Telekom continues to offer solutions and special campaigns.

In the first half of 2019, new LTE users were given free internet equal to their existing quotas, valid for the first three months after they migrate to LTE. Since from July, postpaid customers migrating to LTE have been given 30GB of free internet valid for 30 days. In addition, LTE customers were offered various special campaigns throughout the year.

The “Sil Süpür” campaign offered exclusively to LTE customers, provides surprise gifts every week throughout the year. In addition, campaigns were offered in order to incentivize the use of the Online Transactions mobile application in order to support the digitalization of customers.

With real-time processing of complex customer behavior and using a dynamic offer structure, customers were offered packages to meet their requirements at the right time, enabling an increase in customer satisfaction and revenues.

Customers traveling abroad can have peace of mind with Türk Telekom's distinctive offers

Türk Telekom continues to provide an extensive international offer portfolio with different options allowing its customers to stay in touch at affordable rates in various countries across Europe, Asia, the Americas and Russia.

Türk Telekom's postpaid customers can use their tariffs as if they were in Turkey, in return for a daily fee in 86 countries across the specified regions without the need to perform any transaction.

Efficient campaign management continued over the channels

In 2019, the focus increased for packages sales, switches to postpaid subscription and prepaid top-up campaigns in the chain channels. A special tariff portfolio was launched for the dealer channel to encourage the migration from prepaid tariffs to postpaid tariffs. In addition, special top-up campaigns were offered for the dealer channel, and dealer campaigns were introduced to support the package sales.

The “Yükle Kazan (Pay and Win)” campaign was introduced through the bank channel. BAL Packages were launched for the sale of packages through mobile Online Transactions and dealer channels.

Selfy – Türk Telekom's Youth World

Helping young people express themselves in the digital world as they wish, Türk Telekom Selfy continued to offer the youth a world in which they set their own rules in 2019 with offers providing a generous internet allowance.

Selfy provided an internet-only offer with its new “Digital Packages” introduced for young people who do not need SMS or call minutes, but only internet. Selfy users can automatically convert their internet quota in their Digital Packages into SMS or minutes without the need to carry out any other transaction, providing young people with convenience and flexibility.

Besides, within the scope of Selfy, postpaid and prepaid offers were launched with free internet valid on all platforms such as YouTube, Instagram, Facebook and Twitter in addition to their internet quotas to support young people who use social media intensively.

Türk Telekom Prime
tarifeleriyle tanışın
hayatı kat kat yaşayın

10GB
1000DK
1000SMS
49 TL/AY
İlk 3 ay
ek 30 GB hediye

Türk Telekom
PRIME
KAT KAT HAYAT

Faturaya yeni gelene, 12 ay süre
kampanya kapsamında, Türkiye'de faaliyet gösteren abonelerin, 502 yazar 5546 ve 5446 gösterimi gereği Fatura yarı ıçında
gösterimi, soruları düşünme olmaktadır. Abonelerimizden 12 ay süre 30 GB
internet kampanyasına katılmak için, tarifeye geçen abonelerin, tarifeye
gösterimi süreli 30 gün içinde Fatura 502/5546 yazar 5546 ve 5446 gösterimi,
5446 kart ve cihazların 4GB ücretsiz olarak gönderilmektedir. Hediye 30 GB internet ve
tarife kapsamında sunulan diğer internet hizmetleri farklı biletlerde, indirimde
48 TL olmak üzere, ayrı ücretli bir 100 MB için 12 TL ile değiştirilebilir. Ayrıca
sistemde internet hizmetleri, bu özelliği olan abonelerin 256 Kbps hızla deneyim
ederek ve ek ücretlendirme yapılmamaktadır. İhtiyaç halinde ücretli abone alınır.

Additionally, mobile bundle offers with high data allowances were provided for the self-service digital channels that are used frequently by the young, and Tivibu satellite offers were introduced for Internet at Home customers with short-term commitment and prepaid mobile customers.

The prepaid shopping card, “Selfycard”, was introduced for the Selfy users in order to support the daily routines of young people with the target of improving brand loyalty and brand satisfaction. Selfy users may load as much money to this card as they like, and spend it anywhere as they wish. In addition, collaborations continued with brands popular with young people such as Caffè Nero, Idefix and Biletix.

Türk Telekom Prime – A World of Advantages

True to its motto of “*Kat Kat Hayat* (Multiplex Life)”, Türk Telekom Prime’s tariff portfolio with generous data allowances continued to provide its customers with a world where they can enjoy life more freely and to diversify the privileges offered for its customers in 2019.

Thanks to the new tariff portfolio including packages with various call minutes and up to 25GB of mobile internet, the option to switch to the most appropriate tariff for their requirements continued to be offered to the customers. With the “*Gel Kazan* (Come to Win)” campaign launched in May 2019, new Prime customers were given an extra 5GB of mobile internet free for 12 months.

Türk Telekom Prime continued to facilitate the lives of its customers addressing their needs through collaboration with various brands in 2019. Türk Telekom Prime offered its customers various privileges such as flights to Europe, car rental, concert and event tickets, free-of-charge parking, restaurant discounts, market shopping, airport transfers and holidays.

Türk Telekom Prime maintains its brand communication activities through its social media accounts and its mobile application.

Ahlan-Türk Telekom offers special tariff for Arabic migrants

The “Ahlan (Welcome)” tariff portfolio launched for Arab and foreign customers who live in Turkey continue to be preferred by the customers in this segment. Customers are provided with both mobile Internet and Internet at Home services within the scope of “Ahlan” tariff portfolio. New products were designed in 2019 in order to meet customer requirements. The call center service available in Arabic language with the aim of increasing customer satisfaction has contributed to the increase in the number of subscribers.

In terms of field sales, the sponsorship agreement signed with a Syrian sales agency as an alternative sales channel continued. This agency carried out advertisement activities for Ahlan products and Türk Telekom services within the scope of this agreement. The purpose of advertisement activities is not only to introduce new Ahlan products to customers, but also to strengthen the brand image of Türk Telekom and the Ahlan segment in customers’ minds.

In regions with high customer potential, sales and after-sales services are provided for the Ahlan products. Conferences are held in cooperation with the dealers in

Türk Telekom Prime

Türk Telekom Prime continued to facilitate the lives of its customers with privileges addressing their needs, as well as through collaboration with various brands.

various cities and regularly in order to obtain feedback on Ahlan products and Türk Telekom. In addition, various events are held for customers. Information about all Ahlan segment products, Türk Telekom services and the events held is shared on social media.

Türk Telekom aims to continue the developments and to design products for foreigner customers.

Türk Telekom maintained its leading position in the public mobile segment

Türk Telekom continued its growth in the public mobile market, one of the segments where it has the strongest position, and maintained its leadership position among all operators in 2019.

Special mobile offers offering various advantages continued within the scope of the protocols maintained with the General Directorate of Security (EGM) and the Ministry of Interior. New mobile tariffs are provided to employees of the Ministry of Interior with high data allowances and minutes, as well as Prime privileges which can also be enjoyed by the employees' family members. All public officers have the chance to switch to public tariffs offering advantageous rates by visiting Türk Telekom stores and showing the identity card of their institution.

In addition to postpaid mobile offers, the Internet at Home campaign for the Public Sector provides customers in the public sector with internet offers meeting their various speed and usage requirements.

Expanding the scope of the services for the families of disabled, veterans and martyrs

A 25% discount started to be implemented in 2019 for all tariffs and campaigns offered to the families of disabled, veterans and martyrs within the scope of special regulations for Groups That Should Be Socially Supported. The families of disabled, veterans and martyrs are entitled to a 25% discount on both mobile tariffs and Internet at Home and Home Phone tariffs. In addition, the Internet at Home Campaign for Families of the Disabled and Veterans provided these groups with internet offers with different speed options at affordable rates.

Turkey Develops together with Türk Telekom, Turkey's Fiber Powerhouse

At Türk Telekom, increased penetration is the highest priority for efforts focusing on new customer acquisition in the Internet at Home segment, and this continued to be the highest priority in 2019. Providing 80% of Turkey's fiber infrastructure, Türk Telekom not only continued expansion activities for its fiber infrastructure to offer its customers high speed internet, but also renewed its portfolio to offer affordable internet with faster speeds.

Other highlights of the year were the end of the Fair Usage Quota in fixed broadband in 2019 and the unlimited packages offered to customers.

Türk Telekom continues to contribute to increasing fixed broadband penetration in Turkey

Aiming to acquire customers looking for an Internet at Home package at an affordable price and those with limited Internet at Home needs, and to increase penetration in the country, Türk Telekom had launched its "Internet Bizden (Internet on Us)" campaign at the wholesale level and the "Internetsiz Ev Kalmasın (No Home without Internet)" campaign at the retail level in April 2017. The campaigns continued to be highly popular among new customers in their third year. Reaching out to more than one million households in the third year with



this project, Türk Telekom maintains its focus on increasing penetration. With the target of addressing the increased data requirement of new customers to buy internet at home with this campaign, the 60GB package was offered along with the 40GB package in 2019.

In addition to these actions, Türk Telekom also addressed the seasonal requirements of new customers such as Internet for Summer Houses, and supported families and students with the advantages provided, particularly during the back-to-school periods. In addition to the price advantage offered for Internet at Home during the back-to-school period, digital training packages were provided to support student development.

Thanks to the contribution of the efforts and the “İnternet Bizden (İnternetsiz Ev Kalmasın for TTNET at retail)” campaign offered with the aim of increasing fixed broadband penetration, Turkey’s broadband household penetration increased to 58%, according to the 2019 3rd Quarter Market Data Report announced by the ICTA.

Türk Telekom starts unlimited internet era

Contributing to the development of Turkey and its people, Türk Telekom started 2019 with the slogan of “Welcome to the Era of Unlimited Internet”. In new customer acquisitions, unlimited internet packages were put in the spotlight, and new customers were directed to unlimited packages. With priority given to unlimited internet, nearly all new customer acquisitions excluding those who chose the “İnternetsiz Ev Kalmasın” were on unlimited packages.

Thanks to Türk Telekom’s wide fiber infrastructure and the unlimited internet packages offered, more customers were introduced to high speed and unlimited internet in 2019.

Türk Telekom maintained its leadership in fiber internet

Türk Telekom’s fiber structure continued to expand in 2019. The ratio of fiber internet preference among the new customer acquisitions is increasing day by day. This enabled Türk Telekom to maintain its fiber market leadership with 4.2 million subscribers, along with its leading position in terms of total number of subscribers in 2019.

With the strength of its wide fiber infrastructure, Türk Telekom renewed its portfolio for the new customer acquisitions in order to support the use of faster internet and to help make faster speed options affordable following the shift to unlimited internet. Significant advantages were offered, particularly for speeds of 35Mbps or higher. Discounts up to 30% were offered for the new customers wishing to join Türk Telekom’s fiber network.

Türk Telekom welcomes its new customers with digital services

Leading the digital transformation and undertaking numerous investments in this field, with the target of offering digital benefits to Internet at Home customers, Türk Telekom started offering advanced digital services in 2019 in various fields ranging from training, storage space and security to entertainment with its new customer campaigns.



4.2 million fiber subscribers

Türk Telekom maintained its fiber market leadership with 4.2 million subscribers, along with its leading position in terms of total number of fixed broadband subscribers in 2019.

Türk Telekom Muud premium membership, McAfee Antivirus 3 license rights, Türk Telekom WiFi unlimited internet, the TT Depo 10GB storage area and Türk Telekom Digital Training Packages are provided free of charge to customers signing up to the Türk Telekom Internet at Home package with speeds of 8Mbps or higher. Those signing up to Türk Telekom Internet at Home packages with speeds of 24Mbps or higher are also provided with the Türk Telekom Academy Online English education package free of charge.

Revenue maximization achieved with retention activities for fixed voice subscribers

The acquisition of new customers in the fixed voice segment was also one of Türk Telekom's areas of focus in 2019. The Company launched new advantageous customer campaigns for both fixed voice products and other products purchased, especially for new fixed voice customer acquisitions.

New customer acquisitions increased in the fixed voice segment with these campaigns offering customers signing up to the Internet at Home package together with fixed voice subscriptions discounts for both products. In addition, the comfort and convenience of receiving services from a single company increased multi product ownership among Türk Telekom customers. Net customer acquisition reached 96 thousand in the fixed voice segment in 2019 as a result of all measures taken, and

the total fixed voice subscriber base reached 10.0 million. Including naked DSL lines, the total number of access lines increased to 14.6 million.

In 2019, with the new campaigns added to the existing fixed voice customer campaign portfolio, contract periods and prices were differentiated by customer group, helping minimize the risk of churn while maximizing revenues.

The portfolio of offers with discounts on commitment was renewed for all tariffs in order to ensure customer loyalty and prevent subscriber loss in the fixed voice segment.

New benefits were added to non-telecommunication services benefits offered in the fixed voice segment, and "Free-of-Charge White Goods Insurance" was added to the insurance portfolio. These offers addressing various needs targeted an increase in customer satisfaction. Home Insurance and Home Support services continued to be provided in return for contract commitments for Home Phone subscriptions.

Türk Telekom focuses on providing its customers with integrated products and additional benefits by drawing strength from the Group's synergy. In this scope, free mobile internet offers are provided in TT Mobil to Türk Telekom Home Phone subscribers in return for contractual commitment. Türk Telekom aims to diversify the Home Phone offer portfolio and meet all telecommunication needs of customers under a single roof.

Special actions taken to meet various customers' requirements with regional campaigns

Taking into consideration Turkey's socio-economic differences and customer needs, regional campaigns continued to be offered for Internet at Home and mobile products, and communication activities were carried out for these products with a regional focus.

Launched with the goal of increasing Turkey's internet penetration, the "Internet Festivali (Internet Festival)" campaign, including affordable Internet at Home offers in districts with low internet penetration, attracted significant attention from customers in 2018.

In 2019, the campaign continued with expansion in district coverages and revision in package contents according to the customer requirements. The campaign provided a positive contribution to Türk Telekom's sales, subscriber acquisition and upsell performance. In addition to the Internet Festival campaign, the district-based Ekspres (Express) campaign was launched in June 2019. Türk Telekom has become the most popular choice for fiber connections at affordable rates in districts selected based on objective criteria.

*Fiber abone rakamı Eve/Binaya kadar Fiber ve Saha Dolabına kadar Fiber rakamlarını içermektedir.



Similarly, with the target of increasing the rate of Türk Telekom mobile line ownership among Türk Telekom Internet at Home subscribers with a regional approach, the “İnternette Özel İndirim (Special Discounts for Internet Users)” campaign – a postpaid mobile campaign – was launched for Internet at Home customers.

Moreover, the regional Maximum Advantage campaign for the new customers buying postpaid mobile lines offered additional GBs of data as gifts each month in addition to postpaid mobile offers, contributing to subscriber acquisitions.

Affordable prepaid and postpaid “Bonkör (Generous)” packages were offered for sale in July with high data allowances ranging from 4GB to 9GB in a bid to meet regional requirements. As the operator offering the most advantageous rates, Türk Telekom became the first choice for customers.

Various communication activities have been carried out in various provinces for both mobile and Internet at Home products in order to strengthen the brand image and support the regional offers and campaigns.

Successful collaborations in mobile segment expanded with the launch of Vestelcell

Türk Telekom continues to grow with its mobile collaborations which it has developed with the leading companies and institutions of their sectors. The BIMcell, Pttcell, Teknosacell and Vestelcell brands address the mobile communication needs of Türk Telekom customers in different segments.

As part of the ongoing cooperation with BIMcell since 2012, simple and affordable prepaid tariffs and packages continued to be offered to customers in more than 6,000 BIM stores throughout 2019. The number of customers reached 2.1 million in 2019 with an annual growth rate of 24%.

Pttcell, initiated as a collaboration between the PTT and Türk Telekom in 2013, continued its operations at approximately 2,000 PTT locations in 81 provinces. Starting to offer mobile communication services in Arabic to Arab migrants in 2018, Pttcell expanded its subscriber base throughout the year with its postpaid and prepaid tariff portfolios backed by the wide channel coverage of PTT and addressing various customer needs.

Launched in May 2015 in collaboration with the Sabancı Group, Teknosacell is offered to customers in Teknosa stores throughout Turkey. Initially providing only postpaid mobile offers, Teknosacell also launched prepaid offers in April 2018. Teknosacell maintained its subscriber base growth throughout the year with both its postpaid and prepaid product portfolios. The number of subscribers increased by 26% YoY in 2019.

Vestelcell was launched in December as a result of the cooperation between Vestel and Türk Telekom. Vestel customers will be able to access Vestelcell tariffs from more than 1,000 Vestel dealers according to their needs. While buying Vestelcell lines, Vestel customers will be offered Vestel products together with Vestel gift coupons with cross-sell models.



2nd player in the TV market

Türk Telekom Tivibu ranks second in the Pay TV market with a 24% market share.

Türk Telekom built long-term brand cooperation with new sectors and markets in 2019

In 2019, Türk Telekom carried out campaigns in various sectors, principally the food, Cafe-Restaurant, entertainment, car rental, apparel, training, cargo and e-commerce sectors with a special focus on mobile, Internet at Home and home phone subscribers. The Company launched a campaign for the store sections of supermarkets for the first time in 2019, and the campaign carried out in cooperation with the e-commerce giant Hepsiburada.com for the first time attracted significant attention. Türk Telekom launched longer-term cooperation agreements with 58 brands from 22 sectors in 2019 and continued to sign new brand partnership agreements.

Türk Telekom Tivibu maintained its second rank in the Pay TV market

Boasting a strong technological infrastructure, advanced broadcasting technologies and extensive content, Türk Telekom Tivibu continued to provide advantageous offers to its users in 2019.

Providing innovative services in all platforms including satellite TV, IPTV, Smart TV, Mobile TV and Web TV, the number of Tivibu Home TV subscribers was 1.6 million in 2019. The total number of TV subscribers was 3.5 million including Tivibu GO subscribers.

Appealing to all members of the family with channels including sport, films, documentaries and children's television, Tivibu offers a 4-screen experience, bringing a rich and diverse range of content to customers through their mobile phones, tablets or computers, as well as their TV sets with the Tivibu GO application.

In 2019, Tivibu enriched its content with the addition of new cinema channels and offered a total of 135 channels to its audience, including 90 HD channels.

As part of the synergy campaigns, the Tivibu Mobile Discount Campaign continued to offer Türk Telekom mobile postpaid subscribers advantageous rates for the Tivibu Satellite Super Package.

The Tivibu Internet campaign was launched in December 2019. Unlimited internet and state-of-the-art IPTV started to be offered at advantageous prices.

The Basketball Super League broadcasted on Tivibu Spor

Turkey Basketball Super League and Women's Basketball Super League games continued to be broadcasted on Tivibu Sports channels in 2019.

Broadcasting all games of the ING Turkey Basketball Super League, the "Tivibu Spor (Tivibu Sports)" channel organized its broadcast stream and programs around the basketball games, and reinforced its commentator cast with popular figures from the sport of basketball.

Tivibu continues to celebrate the joy of cinema

With 12 new cinema channels added to the platforms, Tivibu continued to offer local and international movies of all genres ranging from family films and action movies to comedies and drama.

Introducing the "Select & Watch" on demand feature to viewers in Turkey, Tivibu maintained its strong content strategy. In 2019, it brought 52 "Special Show" film folders on the platform for customers.





In 2019, 2,600 on demand films (nearly 200 of which are "Rent & Watch") and 4,700 on demand assets (the "Select & Watch" Series, Documentaries, Children's TV programmes, Music and Lifestyle content) were made available for Tivibu viewers.

Tivibu offers the joy of watching TV anytime and anywhere

Digitalization areas were extended in 2018 and users were provided with alternative payment methods for their package acquisition and film rental transactions. Users continued to intensively use online packages on Tivibu GO without any commitment in 2019.

With the application technology and interface renewed in 2019, the "Rewind and Replay" option offered on the Tivibu GO platform was modified in line with modern design trends, and this feature, which has proven highly popular among users, was made even more attractive. The smart control feature accessible through the mobile applications has been one of the mostly-used and mostly-appreciated features as it allows the management of Tivibu Home box over WiFi.

The Human IPTV boxes offered to users from the end of 2019 enabled an even more improved wide screen experience thanks to its high technological capacity. In light of the feedback received from users of the Tivibu Home platform, the Rewind and Replay option was improved upon and the users were given the opportunity to pause and rewind by entering the time to go back to any point in the broadcast.

With the technology to record to Tivibu cloud, Tivibu GO allows a 7-day EPG Catch up streaming service, which can be replayed without recording. This is the first time such a feature has been offered in Turkey. In addition, Tivibu GO offers a rich array of features such as creating customized profiles for family members and a content suggestion system in line with audience habits with the advanced suggestion engine.

Corporate Marketing Activities

Technology playing an increasingly important in the development of companies

Technology has become a driving force for companies to adapt to the local and national competitive environment in areas such as production and service. Determining the necessary technological investments and infrastructure and consultancy needs so companies in Turkey can compete in both the international and domestic arenas is a key priority.

Combining the strength of its past with its R&D efforts, Türk Telekom continues its next generation technology investments that will lead Turkey's telecommunication industry. The 2019 priorities of corporate marketing include the mission of supporting companies in their digitalization journey, which also played an important role in the strategic focus areas in 2018. With this focus, corporate marketing activities were launched in to meet the demands and expectations of the companies 2019.

Türk Telekom's corporate customers are classified as small and medium businesses and strategic and large enterprises, public and local governments. These segments are provided with end-to-end solutions in various areas such as mobile, fixed broadband, fixed voice, ICT, digital products and value-added services to meet their requirements. In addition to the main communication requirements of companies in the small and medium business segment, importance is placed on innovative solutions which will help companies adapt to a digitalizing world. Key examples of these solutions include the business partnership with WiX, one of the world's largest e-commerce platforms, enabling companies to create their own websites, the cloud-based accounting



The mission of supporting companies in their digitalization journey is among Türk Telekom's strategic priorities.

application containing e-business solutions allowing the easy control of accounting records and business management (e-invoice, e-archive, e-delivery note, e-ledger) and the digital fax product allowing users to send and receive faxes everywhere from their mobile phones.

In 2019, the offer documents related to the products and services provided by the sales teams to corporate customers were enriched with next-generation products and services, as well as loyalty campaign additions, and were reorganized for mobile services, the data center, cyber security and TTPVN products in a manner to promote upsells and opportunities for new acquisitions.

The products, services, campaigns and tariffs were supported with special communication campaigns targeting corporate customers in 2019. Throughout the year, information was provided to both sales teams and corporate customers with Türk Telekom product and service catalogues including campaigns, tariffs and products designed to meet special requirements of different segments. Catalogues containing all corporate products were prepared and delivered to customers.

Türk Telekom once again the choice for Turkey's top 500 companies

Türk Telekom is the solution partner behind the success of all companies announced in the list of the 500 largest Turkish companies of the year, determined by Capital magazine according to 2018 figures. Türk Telekom proudly shared this news with comprehensive media coverage.

Türk Telekom adds another trophy to its awards in marketing

The "Cyber Security VR Gamification Project" prepared by Türk Telekom with the aim of raising awareness on cyber security received three awards in the Communicator Awards contest held in the US in 2019 in the category of Digital Works in the "Corporate Training", "Direct Marketing" and "Game & Application" areas. More than 6,000 innovative projects competed with each other on a global arena in the competition.

The Türk Telekom Cyber Security Awareness VR Project is designed as a virtual reality experience with a strong graphic image-ability and entertaining game dynamics, providing examples of significant cyber threats and attacks, while explaining both vocally and in writing how these threats may spread to companies' IT infrastructures and systems and describing which Türk Telekom products can protect against these cyber-attacks. Its outstanding feature that sets itself apart from other VR projects is that two players can play in real time. The project's cyber security awareness experience is planned to be used in a number of areas including relevant corporate events, sponsorship projects and training meetings.

Corporate brand partnerships and Prime Business program continue to grow

Cooperating with a total of 15 brands operating in sectors ranging from car rental and fuel to office supplies and car washing in 2019, Türk Telekom aimed to support its





Türk Telekom is the communication solution partner of the top 500 Turkish companies listed by Capital magazine.

corporate mobile, internet and fixed voice customers for their cost items and provide them with convenient solutions which would meet their requirements at all times.

In addition, the corporate brand partnerships platform was moved to the “Online İşlemler (Online Transactions)” application. The purpose was to ensure that Türk Telekom corporate customers could access the benefits more easily and practically.

The Türk Telekom Prime Business platform, the loyalty program launched exclusively for corporate customers at the end of 2017, attracted great attention, and the number of the customers joining the platform had increased five-fold by the end of 2019 compared to the end of 2018.

Türk Telekom Prime Business world provides Türk Telekom corporate customers with simple and permanent easy-to-understand benefits which are also supported by seasonal and variable campaigns. This platform aims to enrich the customer experience, provide corporate customers with convenient solutions at all times, acquire new customers and increase the potential for new sales and customer loyalty.

In addition to various premium benefits such as Car Park, the Departure Fee Stamp, Car Washing and Dry Cleaning,

a range of new benefits were added to the Türk Telekom Prime Business Program in 2019 such as Taxis, Airport Transfers, Market Shopping and Event Tickets. Demand for premium benefits increased more than ten-fold compared to the previous year.

With these developments, the Prime Business website was revamped and enriched with new visuals to contribute to the perception of a premium brand and customer experience.

Project and marketing activities exclusive for the corporate segment continued

In 2019, marketing activities focused on producing optimum solutions encouraging digital transformation in public institutions and local government, ensuring the secure storage, processing and interpretation of critical data obtained from the digital transformation, and ensuring the efficient use of public resources.

The Techno Check-Up Project was launched at the end of 2018 in order to measure the digitalization index of the strategic and large-scale customers segment. This project sets out to measure the technological index of customers using their internal and external data, and

Türkiye’deki en büyük 500 şirketin başarısının ardında Türk Telekom var!

Capital 500 listesindeki prestijli şirketlerin tamamının çözüm ortağı olmaktan gurur duyuyor, tüm şirketlere teşekkürlerimizi sunuyoruz.





Türk Telekom leads Turkey's largest smart city projects with solutions compatible with next-generation approach to city planning.

reports including sector comparisons were prepared and submitted to the companies. Companies were also provided with new product and solution offers on the basis of the product recommendation algorithm.

Türk Telekom maintains its unwavering momentum in next-generation city activities

Türk Telekom invests in smart city technologies to support the creation of sustainable and efficient cities with a high quality of life, and leads Turkey's largest smart city projects with solutions compatible with next-generation approach to city planning. Next-generation city technologies are assessed under the headings of transportation, security, energy, health, environment and living. While spreading the smart city technologies concept across Turkey, Türk Telekom also supports domestic and national solution partners, improving the ecosystem further.

The services offered within the context of smart city solutions are managed through the city management platform. The Platform ensures the monitoring and management of different city planning applications, as well as their integration with each other. With collected data, city governments are able to make forward-looking decisions.

Having started its next-generation cities project in 2015 with Karaman, Türk Telekom continued this project with Kars and Osmaniye-Kadirli in 2017. The activities in this area were promoted with next-generation city projects for Antalya, Kırşehir, Mersin, Edirne, Diyarbakır and Erzurum-Yakutiye in 2018. The Artvin and Trabzon municipalities were added to the list of Türk Telekom smart city projects

in 2019 with the smart city mobile application in Artvin and smart city furniture in Trabzon.

Türk Telekom renewed its website related to its next-generation city concept, projects and applications in September 2019 with a more user-friendly and enhanced interface with enriched content, in order to improve the communication of public institutions and local governments through this means.

Many firsts achieved in the digital transformation of Organized Industrial Zones

With its applications for smart Organized Industrial Zones (OSB), Türk Telekom not only provides OSBs, which play an important role in Turkey's industrialization, with savings in terms of resources, but also leads Turkey in the areas of communication and technology with its modern, environmentally friendly, innovative and technological solutions.

Insights were obtained into the needs of corporations during the OSB visits across Turkey throughout 2019. In this context, Türk Telekom smart city components were segregated and adapted in line with the requirements of OSBs. Meetings were held with new solution partners in order to expand the product portfolio for OSBs, the smart OSB catalogue was prepared, which provided information on the smart OSB concepts and components, and the relevant sales teams received training in this area.

The first smart OSB agreement was signed with the Malatya 1st OSB in September 2019. At the same time, OSBs have been provided with support in terms of both infrastructure and superstructure, and are offered a holistic end-to-end service within the scope of the infrastructure and revenue sharing protocol signed between Türk Telekom and the OSBs. The second agreement for the smart OSB project was signed with Hasanağa OSB in December 2019.

Türk Telekom introduces its next generation campus applications to universities

With its smart campus project covering universities in Turkey, Türk Telekom aims to lead the technological transformation of universities. Within the scope of these activities, services and projects have been launched which promote the interests of the public and universities and which are focused on raising satisfaction among students, academics and institution executives. The smart campus solutions aim to meet the technological and infrastructure needs of students, raise standards and ensure the digitalization of universities.

Offered in the three main categories of campus planning, security and campus life solutions, Smart Campus solutions were offered to the joint Turkish-German University management in 2019. Within the scope of the collaboration, project milestones were attained for smart building applications for the dormitory building, with work on the building's smart illumination, irrigation and development getting underway.



Special projects developed to meet corporate needs in cooperation with strong solution partners

Within the scope of corporate solutions, additional products and services to complement communication services have been provided with more than 200 solution partners and over 100 producers included in the Türk Telekom system. This has not only led to improved customer satisfaction with the provision of services from a single point, but also generated new sources of revenues for Türk Telekom. In this context, together with the hardware and software complementing the communication infrastructure, services such as installation, maintenance and technical support are also offered. The solution partner pool continues to grow and increase its capacity day by day.

In addition, new production efforts are being carried out to meet high demand from customers, and the Türk Telekom product portfolio has been expanded.

Türk Telekom has increased its share in the ICT product market with its corporate solutions, which grow and advance day by day, and is positioned as one of the largest players in this area.

In Türk Telekom's corporate solutions around 50% annual revenue growth was achieved in 2019, which is

an indicator of the high rate of customer satisfaction rate achieved by the solutions provided.

Corporate events and sponsorships continued to introduce corporate customers to new projects

IDC Security Roadshow

In its Security Roadshow events prepared by the IDC specially on the theme of cyber security, Türk Telekom shared its new-generation security approaches in the digital transformation era with more than 2,000 visitors attending the events from İstanbul and Ankara, as well as tens of participant companies. These events addressed cyber threat trends, and with specific examples highlighted that the increase in the number of devices that are interconnected and connected to the internet increases cyber threat risks.

Türk Telekom Cyber Security Summit

The Türk Telekom Cyber Security Summit was held in Ankara in June 2019. Attracting nearly 500 guests from public institutions and the private sector, information on the cyber security vision of Türk Telekom, global trends and the strategies being undertaken by public institutions and the private sector on the issue of cyber security were shared during the summit. The summit was attended by Ömer Fatih Sayan, the Chairman of the Board of Directors of Türk Telekom, Ümit Önal, the CEO of Türk Telekom (at the time of the summit, he was serving as the Marketing and Customer Care Assistant General Manager and Sales (Acting) Assistant General Manager) and Yusuf Kırac, Technology Assistant General Manager, with the event receiving extensive media coverage.

Türk Telekom Technology Event

In June 2019, the Türk Telekom Technology Event was held to specifically address the requirements of the ESBAŞ (Ege Serbest Bölge A.Ş.) region. The event addressed the areas of cyber security solutions, information security, details of the Cyber Incident Response Team (SOME), the real-time penetration test application and Türk Telekom data center services, which is one of the holistic solutions for cyber security and mobile solutions.

Türk Telekom Smart OSB Event

With a view to contributing to the secure digital transformation of OSBs, the Türk Telekom data center and cyber security services were promoted in addition to the smart OSB components. The "Türk Telekom New-Generation OSB" event was held in October 2019 with the participation of Turkey's leading OSBs from the province



Most secure data center

Türk Telekom provides various services together, including cyber security services, through Turkey's most secure data center.

of Bursa and surrounding provinces. As part of the event, the audience was given general information about the importance of the digital transformation era for public agencies and institutions, the concept of next-generation smart OSB and the benefits of smart OSB components, as well as the cyber security solutions and data center, which are important requirements for connected devices.

Customer-oriented integrated communication solutions along with conventional services

Türk Telekom maintains its leadership in the fixed voice market by increasing customer satisfaction with the traditional fixed voice services, its value-added holistic communication solutions and next-generation voice services. With office phone tariffs and different tariff packages allowing all directional calls, Türk Telekom continues to meet the main fixed voice needs of its customers.

Within the scope of next-generation voice services, end-to-end holistic communication services are provided to all customer segments with value-added solutions such as the TT Cloud PBX, IP Multiple Line products, Call Forwarding, Local Access Redundancy, Interactive Voice Response (IVR), Fax Over IP, Voice Recording and Advanced Reporting (CDR). Value-added solutions are planned to be enriched with VoIP (Voice over Internet Protocol), Central Call Management, Advanced Video Conference, Global 0800 and Call Center Management services.

The diversity of infrastructure allowing the provision of fixed voice services increased further, with a number of sector, equipment, usage and volume campaigns

launched and advantageous offers were made for new acquisitions and subscriber retention.

Within the scope of the Metro Ethernet Internet product, an asymmetric tariff portfolio was launched in order to expand the market. Campaigns were rolled out, providing advantageous conditions for both new customers and existing customers, improving the speed and sustainability of services and meeting access redundancy requirements.

Activities and campaigns continue for Strategic and Large-Scale Customers with the aim of promoting sales in Metro Ethernet Internet services. Special campaigns allowed customers to benefit from the Metro Ethernet Internet service at affordable monthly rates.

e-CALL era starts in vehicles

The three main characteristics of new-generation passenger cars consist of telemetry allowing the provision of additional services such as breakdown reporting, e-CALL, which is now mandatory for new-generation passenger cars, and onboard internet, turning vehicles into an internet hub. Türk Telekom completed its portfolio studies addressing all communication requirements of vehicles following its collaborative efforts with manufacturers.

Türk Telekom is now ready to provide e-CALL technology with the completion of these activities. The e-SIM technology, which is expected to contribute significantly to the spread of connected vehicles in the future with its benefits for consumers and IoT systems, is planned to be implemented in the first half of 2020.

Turkey's most secure data center

Türk Telekom provides various services such as server hosting, server rental, virtual server, storage, load balancing, cloud-based redundancy and replication services, data center internet access, customer management office and cyber security services.

With their quality certified by the Tier III certificate provided by the Uptime Institute, the international data center authority, Telekom data centers allow their customers to access their servers at any time with uninterrupted energy, a suitable air-conditioning environment, infrastructure redundancy and high-capacity connection speeds. Türk Telekom also offers customers receiving the data center service with security services such as Firewall, IPS and DDoS. As part of these efforts, the capacity of the Türk Telekom Ümitköy data center was increased in order to ensure both sustainability of geographical redundancy service and the fulfillment of the requirements of public customers in Ankara.

Providing data center services with high security and technological standards, Türk Telekom continues to be preferred choice of companies requiring redundant fiber access infrastructure, energy redundancy, and fast and uninterrupted data traffic with Tier III standards. In addition to Turkey's largest finance, training, health and media companies, hepsiburada.com and n11.com



Türk Telekom continues to introduce innovations within the scope of WiFi services. Türk Telekom provides WiFi services through ~7,000 access terminals at ~3,000 points across Turkey.

also started to use the data center services of Türk Telekom, following major e-commerce platforms such as Sahibinden.com, Trendyol and GittiGidiyor. Relocating both the servers which the companies use for their own operations and the servers they position for customers to its data center, Türk Telekom provides secure and uninterrupted services.

In 2019, the Cloud-Based Türk Telekom E-mail product was launched. In accordance with the New Presidency Circular and the decisions of the Protection of Personal Data Commission, with this product Türk Telekom not only ensures that data is kept in the country, but also plays a leading role in the digital transformation of corporate customers.

New product launches continue within scope of Fixed Data and Manageable Services

The Eco VPN service was launched in October 2018 in order to meet the data requirements of customers such as retail chains with high price sensitivity. Efforts continued in 2019 with the aim of increasing the awareness of the service in the market.

A product development process was initiated for the production of the SD WAN (Software Defined WAN) technology allowing corporate customers to create their

own IPsec tunnels on any kind of access platform (VPN, Internet, LTE, etc.) for data transfer.

Türk Telekom continues to introduce innovations within the scope of WiFi services. Türk Telekom provides WiFi services through around 7,000 access terminals at around 3,000 points across Turkey. This service aims to expand the WiFi network across the country. Türk Telekom's current mobile and broadband customers can enjoy the WiFi service free of charge.

In addition, corporate customers can provide a high-quality WiFi service for their own customers and employees through the YöneTT WiFi service, free of charge and in accordance with the law. New projects have been launched for this service, and most recently this service has been provided together with IGA, the operator of İstanbul Airport. The new functions and improvements not only increase revenue, but also provide a competitive advantage and ensure that the products are kept up-to-date.

Türk Telekom entered collaboration with TAB Gıda, which includes well-known restaurant chains such as Burger King, Popeyes, Arby's, Sbarro, Usta Dönerci and Usta Pideci under its umbrella, for internet connection sharing through the WiFi network. Starting with the Burger King and Popeyes brands in the initial phase, unlimited and high-capacity WiFi services started to be provided to a total of 376 points in 59 provinces across Turkey.

The first telecommunications operator to provide cyber security services in Turkey

With new information technologies rapidly becoming more widespread, cyber security risks have increased for all customer groups. According to Türk Telekom figures, 1,608 attacks of 1Gbps or more were made in 2018, and the number of attacks tripled in 2019. All these attacks were successfully prevented by the competent cyber security team.

The Türk Telekom Cyber Security Center, which opened at the end of 2018, monitors the critical infrastructure of both public institutions and private sector companies on a 24/7 basis with its specialist technical staff, and provides assistance to its customers with its incident response and consultancy services in all of their cyber security requirements. The Türk Telekom Cyber Security Center has the largest monitoring facility and DDoS protection infrastructure in Turkey with the highest capacity. In this connection, Türk Telekom protects Turkey's data as the country's largest cyber security services provider, ensuring national security.



The Türk Telekom Cyber Security Center joined Trusted Introducer, which is acknowledged and supported by the European CET/CSIRT communities, and received accreditation in August 2019. This accreditation ensured standardization of processes such as planning and operation of corporate security systems, protection/reporting of critical data by the response teams in line with the regulations, and the creation of assets.

The cyber security services provided by Türk Telekom are addressed under three headings: Shared Services, Dedicated Security Solutions and Cyber Security Center Management Services.

The Web Application Firewall (WAF) was included into the Shared Security Services portfolio as a new product in 2019. The Web Application Firewall ensures protection against malicious content and vulnerabilities in websites which may pose a security threat in web applications of critical institutions and compromise their accessibility. With two different solution alternatives for the domestic and global markets, the product built on the geographical redundancy structure offers managed WAF services.

In order to provide solutions which meet its customers' demands for determination of their maturity levels against L3, L4, and L7 DDoS attacks, Türk Telekom has created its own DDoS attack simulation platform, drawing strength from its experience in cyber security. This platform allows institutions to measure their maturity levels by determining DDoS attacks and identifying their response capabilities.

Türk Telekom carried out work in 2019 to also offer its Firewall, Intrusion Prevention System, Content Filtering and Antivirus services, which were provided on a shared network within the scope of corporate security services, to DSL customers. As such, the Company aims to become the first service provider to provide services at the backbone level in order to meet the cyber security requirements of DSL subscribers.

Digital Products and Services

Targeting a better user experience with digital applications

The digital transformation remained a cornerstone of Türk Telekom's vision in 2019. Studies took place of digital transformation projects that would enhance the customer experience, create new areas of revenues and increase operational efficiency.

Türk Telekom has taken important steps towards further improving the customer experience by offering fast and innovative services. In 2019, interaction with the customer base further increased through digital channels. In 2020, digital channels will be one of the core channels to be used to maximize customer experience as well.

Online Transactions – Türk Telekom's most visited channel

The Online Transactions application, which is constantly being developed in accordance with customers' needs and expectations, was Türk Telekom's most visited channel and the channel with the highest transaction volume since 2018.

With its new functions, digital channel exclusive opportunities, renewed user-friendly interface and simplified user access, the Online Transactions platform attracted 130 million visits per month from around 18 million unique customers.

The Online Transactions platform, which offers the opportunity to perform mobile, Internet at Home and home phone transactions all from the same app, serves customers with more than 100 types of transactions. The application has been downloaded 36 million times so far and won 11 awards in international competitions.

The number of Türk Telekom mobile users using the app almost doubled in 2019 compared to 2018, with an 86% penetration rate among smartphone users, reaching



Digital keyboard platform Tambu, industry leader in terms of penetration, boasts a brand awareness score that is triple that of its closest competitor.

15.2 million. The average usage frequency of the active customer base exceeded 14 visits per month.

Special lines and menu sequences have been designed for users who have a Revenue Sharing Partnership (BİMcell, PTTcell, Teknosacell) and MVNO (Fenercell and GSMobile) line. Design and experiential arrangements have been made in the menu of international packages, tailoring them for the user experience.

In order to contribute to Türk Telekom's digital products, the promotion and sales of all other applications have been rolled out on the Online Transactions mobile application. Over the application, the Muud Premium membership sale was added for Internet at Home customers.

In order to make the usage of the application more practical, card information used during Turkish Lira top up and Invoice Payment transactions is recorded, while transactions with a registered card can be performed without the need to enter the information again in the next transaction. At the same time, customers with prepaid lines may purchase packages with their credit cards.

The Online Transactions application remained one of the top-rated applications in the Turkish telecommunications

industry, outperforming its competitors in the 2019 list of Best Applications published by Apple's App Store in Turkey.

Tambu – Turkey's most downloaded digital keyboard platform

Designed for smartphones as an entry point for messaging applications, search engines, social media platforms and internet browsers, Tambu is Turkey's most downloaded digital keyboard platform.

The digital keyboard, Tambu, which was introduced to the Google Play and the Apple App Store free of charge for all mobile operators in 2017, was downloaded over 10 million times by the end of 2019. Tambu, industry leader in terms of penetration, boasts a brand awareness score that is triple that of its closest competitor.

Original domestic stickers, instant translation features and themes that can be designed are among the features offered by Tambu 1.0. Tambu 2.0 includes an improved language engine, local guides for eating and drinking venues and a web search engine, a gamification module which increases efficiency and interaction, and keyword search systems for discovering and sharing domestic and national content. With all of these features, Tambu offers its users the ability to discover a wide array of content which can be shared easily on all platforms.

Tivibu GO – With technological features which enhance television viewing pleasure, and hundreds of channels, thousands of movies, the basketball league and more

Tivibu GO continued to bring its users many firsts in the field of television broadcasting, leading the sector in 2019 with its strong technological infrastructure, advanced broadcasting features and rich content.





Ushering in a much more interactive and secure online TV viewing experience with Tivibu Go's Rewind and Watch, Record and Watch and Parental Controls.

In 2019, the digitalization area of Tivibu GO was expanded with users offered alternative payment methods for the purchase of packages and movie rentals, independent of the operator.

With the renewal of the application technology and interface in 2019, the Rewind and Watch experience on the Tivibu GO platform was revamped to bring it in line with today's design trends. This feature, which gained wide appreciation among users, has been made much more enjoyable with the change.

The smart remote control feature, which can be accessed through mobile applications, has become one of the most popular and favorite features, allowing users to manage their Tivibu Home box over the WiFi connection.

For the first time in Turkey, Tivibu Go offers users the ability to retrieve all content in the broadcast stream for seven days without the need to save it, by using cloud recording technology. In addition, Tivibu Go offers a wide gamut of features such as creating profiles specific to family members, an advanced suggestion engine and a content suggestion system suitable for audience habits.

Tivibu Sports, which exclusively broadcasts all ING Turkey Basketball Super League matches, organized its broadcast stream and programs around the basketball matches, and has strengthened its commentator cast with the popular faces of basketball.

Providing innovative services on all platforms including Satellite TV, IPTV, Smart TV, Mobile TV and Web TV, Tivibu

had 1.6 million Home TV subscribers at the end of 2019. With the inclusion of Tivibu GO subscribers, the total number of TV subscribers was 3.5 million.

Muud - Turkey's domestic digital music platform

Muud, the digital music platform offers music lovers 'freedom of music based on their Muud (mood)', with an extensive musical archive that is continuously enriched with additions, comprising nearly 5 million local and foreign tracks. With the exclusive content added to the platform, which was renewed and relaunched by developing its technological infrastructure, users may listen to relevant songs and albums for the first time exclusively through Muud. Muud has developed further with numerous innovations and has become one of Turkey's biggest and most popular digital music platforms as it reaches new users.

With the Digital Package campaign prepared for the customers who receive Türk Telekom's Internet at Home service, Muud started to offer Türk Telekom Security, Türk Telekom Academy English Package and Digital Warehouse services in a bundle. This enabled an increase in the number of Premium members and active users.

With the Accompany feature added in 2019, users can simultaneously see the lyrics of their favorite tracks. This feature, which adds enjoyment to the music listening experience, has encouraged users to spend more time in the Muud application.

Muud is a platform open for all to use, regardless of their operator. As well as providing users with the opportunity to listen to music while offline, Muud offers all paid or unpaid members the chance to listen to 1,000 tracks per month without any advertising or limits - a very important advantage, which is not available on other digital music platforms.

Türk Telekom mobile subscribers who use Muud may listen to millions of tracks wherever they are, without limitations, and free of charge without using their usage quotas on their internet packages.

Muud Premium subscribers enjoy access to unlimited local and foreign tracks and can enjoy various features while offline. Other users are offered a one-month free trial premium subscription under a promotion campaign.

The Muud Premium memberships offered with the Sil Süpür campaign have proven to be highly popular with users. Muud Premium subscriptions started to be sold through the Online Transactions application during the year.

In addition to these features, the digital music platform Muud, which has a comprehensive range of music to serve a 360 degree range of tastes, made a mark for itself with a series of collaborations and projects in 2019.

Focusing on projects to create alternative sales channels in the physical field as well as digital collaborations, Muud started physical sales of Muud Premium subscription



Muud offers music lovers ‘freedom of music based on their Muud (mood)’, with an extensive musical archive that is continuously enriched with additions, comprising nearly 5 million local and foreign tracks.

codes at contracted workplaces. Customer satisfaction is increased by awarding a one-month Muud Premium membership to those using the Türk Telekom Mobile Payment service.

e-dergi - Turkey's digital magazine and newspaper reading platform

Turkey's digital magazine and newspaper reading platform, the Türk Telekom e-dergi, was launched in November 2017 and customers of all mobile operators can subscribe. The application started to be offered free of charge to Türk Telekom mobile customers from the beginning of 2018 under special tariffs and packages.

e-dergi includes hundreds of magazines and newspaper content, renewed on a daily basis, in areas ranging from fashion to the economy, from technology to magazine articles.

With a user base of more than 1 million in 2019, the e-dergi continues to design and technologically offer its users a unique reading experience with its array of new features. With the development and improvement project carried out in November 2019, the design of the e-dergi application has been revamped, with new technological

features being added to the application. Performance studies have been carried out to improve the reading experience for users, and the resolution quality has been enhanced.

With the preview feature, users are able to read the first five pages of content without purchasing a subscription. The discover page highlights the most important headlines while the “continue reading” feature allows users to bookmark what they have been reading. The ability to take screenshots allows users to trim and save content and share it over e-dergi.

With the improvements carried out in 2019, users have started to create a profile within the e-dergi and manage their reading experience in their personal accounts.

Playstore - Turkey's first and leading digital gaming platform

Offering a user-friendly purchasing experience for gamers, Playstore has focused on expanding the product portfolio in the field of gaming in 2019, developing infrastructure technology and creating an alternative sales channel. Nearly 600 new games were added to the platform, along with new supplier agreements signed during 2019.

Focusing on meeting all the needs of gamers, Playstore expanded its portfolio of player accessories (keyboard, mouse, etc.) and its physical console game portfolio as





Nearly 600 new games were added to Playstore product portfolio, along with new supplier agreements signed during 2019.

well as its PC game catalogues in 2019. In addition to its periodic campaigns, its campaign at the end of 2019 offered gamers the chance to buy games at the best discounts. With the bonus system launched in 2019, customers have been able to win while they shop. At the same time, Playstore became the most secure gaming platform in Turkey with the security measures developed in the purchasing systems.

Vitamin- Turkey's largest education platform and Raunt - the next generation university entry preparation platform

Türk Telekom, which has played a key role in the digitization of education in Turkey, continued to increase the penetration of its products in this field in 2019. Vitamin, Turkey's largest education platform, and Raunt, the next generation university entry preparation platform, are examples that embody contribution Türk Telekom has made to education.



Vitamin, which is compatible with the Ministry of Education curriculum, is the most comprehensive and diverse educational platform in Turkey. The Vitamin platform, which provides online support for elementary and high school students for homework and exam preparation, comes with bundled offers attached to segment tariffs. The Raunt application aims to assist those students preparing for the entrance examination for Higher Education Institutions (Yüksek Öğretim Kurumları Sınavı - YKS) and help them gain entrance to the department and university of their dreams.

The content of the training packages offered on the Raunt platform in 2019 was enriched by adding subclass (9-10-11th grade) packages and a great increase in usage rates was achieved.

Türk Telekom Security ensures the safe use of all devices connected to the internet

Within the scope of the strategic partnership with McAfee, the content of Türk Telekom Security solutions was expanded in 2019.

With the launch of Total Protection, Türk Telekom Security has started to provide physical and software security for mobile devices, as well as PCs and laptops.

With the Safe Family Package, Türk Telekom has provided parents who are fixed internet customers with the opportunity to monitor and control their children's actions in applications and digital media.

Türk Telekom Akademi - Turkey's digital personal training platform

Türk Telekom Akademi, which is the training platform for Türk Telekom employees, has expanded to offer its education portfolio to all Internet at Home customers. The platform, which includes thousands of training programs along with a micro MBA, foreign language and career packages, offers preferential rates to Türk Telekom customers.

Dijital Depo-Integrated Cloud Service

Türk Telekom has implemented the cloud service, Digital Storage, which enables users to safely store their photos, videos, music and files. All users are given 2GB of cloud storage free of charge in the Dijital Depo application, which can be downloaded from Türk Telekom, the App Store and the Google Play Store.

Dijital Depo, a modern-designed and operator-Independent cloud storage application, features automatic backup. This feature allows instant storage of photos taken with the smartphone camera, so that even if the smartphone is corrupted or lost, there is no difficulty in accessing the photos.



TT Ödeme ve Elektronik Para Hizmetleri A.Ş., aims to reinforce its position in the sector with new licenses received from the BRSA in 2019.

Senin Zamanın- solutions specific to women

The “Senin Zamanın (Your Time)” mobile application was launched in 2018 in order to provide women with specific communication solutions as well as content that will bring more value and color to their daily lives. The application offers women free activities, mother-child content and a life guide.

The efforts to improve and update the Senin Zamanın application continued throughout 2019. Special activities have been added for users on a monthly basis, and useful information for users has been provided on practical recipes, Pilates, make-up and skin work, and even child development.

Türk Telekom aims to strengthen its position in the digital payment industry

TT Ödeme ve Elektronik Para Hizmetleri A.Ş. (TT Payment Services) was established in April 2013 to provide fast, safe and easy solutions to meet the daily payment needs of its customers in the rapidly growing digital payment market and to add innovative payment methods to the Türk Telekom product portfolio. The Company, which received the payment license in January 2017, continues its activities with the Türk Telekom Mobile Payment product.

In order to strengthen its position in the high-potential digital payments sector, the number of services offered through products in the portfolio was expanded and diversified in 2019.

In order to bring customers safe and high quality content, priority was given to collaborations with member businesses providing products and services in this area. The integration with Tramer (the Traffic Insurance Information Center) belonging to the SBM (Insurance Information and Surveillance Center) enabled vehicle damage inquiries to be carried out with Türk Telekom Mobile Payment. In addition to the Apple agreement, which was reached in 2018, an agreement was signed with Samsung, and Türk Telekom Mobile Payment was added to the Galaxy Appstore as an alternative payment tool in September 2019.

Every interaction point with the user is examined with a customer-oriented approach, with service standards and flows periodically revised and the customer experience improved. Within the framework of its better service policy, improvements were carried out on the customer services platform and at the Call Center in order to extend support to customers to meet their needs, and thus offer faster solutions.

The license application made by TT Ödeme ve Elektronik Para Hizmetleri was approved by the Banking Regulation and Supervision Agency (BRSA) on 7 March 2019. As well as the existing products, the license in question includes intermediation in the payment of bills for electricity, water, natural gas and similar utilities, and is not limited to Türk Telekom customers. In this context, in order to enable the payment of corporate bills from Türk Telekom’s exclusive dealers, integration with the dealer management system has been realized and pilot work has got underway.

In addition, the necessary infrastructure work has been completed with the aim of strengthening Türk Telekom in the area of financial services and a license was received from the BRSA to conduct “all transactions related to electronic money issuance, payment account operation and money transfer transactions” on 20 December 2019. Within the scope of this activity permit, TT Ödeme ve Elektronik Para Hizmetleri A.Ş. aims to strengthen its position in the digital payment sector as an “electronic money institution”, in addition to offering the products and activities under its existing payment services activity license.

Real customer experience at Türk Telekom stores is measured with a three-dimensional approach: employee knowledgeability about the products; physical store evaluation; and employee assessment.



Consumer & SME Sales Activities

Sales channels optimization

Actions were taken on the field within the year in line with the location-based optimization project completed in early 2019 in order to ensure a more effective, lower-cost and dynamic sales channel structure. Store planning will continue in 2020 in accordance with the projections to be generated by the output of the project.

On the other hand, the field planning of exclusive and semi-exclusive channels is supported by the office transformation project, aiming to ensure a more effective use of offices. Thus, while the revenues of Türk Telekom Group sales channels increases, these channels are positioned in such a way as to ensure there is no increase in the associated costs.

Türk Telekom Office Channel posting an increasing sales performance

The Office Channel, which has a wide network and high area of influence throughout Turkey, underwent improvements and updates in 2019.

In order to ensure that the channel works in harmony with the Company's strategy in an agile manner and focuses on efficiency by increasing the sales volume

while lowering costs, the processes in performance and premium structures were singularized and the employees at all levels of the Office Channel were directed to the same targets. As a result of the new structures established in the channel and the strong performance, sales volumes of the Office Channel increased in 2019.

Türk Telekom Customer Centers (TTMM) becoming widespread

Within the scope of the Office Transformation Project launched in 2017 in order to renovate the commercial areas in Türk Telekom Offices in accordance with the modern retailing approach and the evolving customer expectations, Türk Telekom Customer Centers were established with a target to:

- expand the product portfolio of offices to include all fixed and mobile products of Türk Telekom Group,
- enrich the device and accessory portfolio in offices,
- renew the sales and after-sales service processes in order to create and improve customer experience areas.

Office Transformation Project

Within the scope of the project, 14 offices were transformed to TTMM centers in 2019, and the transformation of 21 offices in total was completed by the end of 2019.

Within this framework, the offices were redesigned, taking into account customer expectations and global retailing practices, and updates have been made in parallel to the necessary competencies in human resources, auxiliary systems and operational processes.

Within the scope of the project, 14 offices were transformed to TTMM centers in 2019, and the transformation of 21 offices in total was completed by the end of 2019. The transformation of 20 more offices to TTMM centers are planned in 2020.

Proactive Sales Channels established at Türk Telekom Offices

Under the office channel, Proactive Sales Channel was established in 2019, and door to door (D2D) sales activities started for the consumer segment. The main purpose is to ensure that all communication requirements of a household (fixed voice, broadband, mobile, TV) are met through a single contact in line with a customer-oriented approach. The D2D structure aims to increase efficiency by increasing sales and lowering costs. In addition, higher customer satisfaction is targeted through individual performances and bonus systems established for sales employees.

Türk Telekom yepyeni ofislerinde yeniden hizmetinizde

Yenilenen Türk Telekom Müşteri Merkezleri, tüm iletişim ihtiyaçlarınıza anında çözüm üretmek için yepyeni ürün yelpazesıyla hizmetinizde.





Alemdar Müşteri Merkezi
Ömeraga Mh.
Alemdar Cd.
No: 43
Kocaeli

Türk Telekom



Increasing performance focus

Performance focus was enhanced in channel, premium and earnings systems.

Türk Telekom IGA Mini Office and Cevahir Mini Office established

As within the office channel, the IGA Mini Office started to provide uninterrupted (24/7) services to customers at Istanbul Airport in 2019, selling mobile prepaid subscriptions, devices and accessory products.

The Cevahir Mini Office, another member of the office channel, started its activities at the Istanbul Cevahir Shopping Mall in 2019. The products sold at the Mini Office include fixed voice, broadband, mobile, TV products, devices and accessories.

Türk Telekom Active Sales Channel to focus on corporate products

As of February 2019, the Active Sales Channel (ASK) dealer structure was repositioned with responsibility solely for corporate products, in order to increase the focus on these products. Within this framework, premium systems were designed with a focus on customer acquisition and high revenue generation. The organizational structure of the dealers was also designed in line with these strategies.

Field studies were carried out for corporate mobile multi-line customer acquisitions, and a focus was established

in this regard; additionally actions were taken to increase sales to legal entity corporate customers in order to support multi-line sales. In this channel, with a focus on smart device sales, customer loyalty and higher dealer profitability were targeted through device contracting, and successful results were achieved in this area. The ASK channel focused on the sale of ICT products in line with the Company strategies. Changes were made in the premium system to increase the sales of NGN Sip Trunk, 444, PRI, BRI and ME products, paving the way for increased sales of complex products with high revenues and increased revenues for dealers.

A bonus system for sales personnel in charge of dealers was established in accordance with the key performance indicators of the premium system designed for ASK dealers, and campaigns were organized for dealer staff in order to increase employee loyalty. Thus 360 degree performance management approach aimed not only an increase in the sales volume, but also acquisition of customers using complex products of higher revenue.

Performance focus enhanced in retail channel premium system

In the Türk Telekom Exclusive Sales Channel (TTM), a transition took place to a more performance-oriented premium system in order to increase efficiency.

Within this framework, the fixed fees paid to dealers were reduced while the variable premium payments were increased.

In activations carried out through sales channels, the focus was on “Internet at Home” contracting and the migration of customers from prepaid to postpaid services in order to further increase customer loyalty and revenue. These transactions were addressed in a separate category, and were highlighted with a more attractive and efficient earning model.

In addition, a new bonus item was added to the compensation system in order to allow the branching of Türk Telekom’s successful business partners and managing good locations with better investors. Investor profitability was consolidated with this new compensation scheme supporting investors with three or more sales branches.



Focus was placed on value-added services, such as Mobile Promotion, Intellimap and Talents Platform, with particular emphasis on SMS; while studies for the eSIM product also got underway.

Growth realized at airports with alternative channel sales

The implementation of an alternative model with the establishment of a business partnership with the NJOY Company at Istanbul New Airport (IGA), which has the potential of being rolled out to other airports. This collaboration, based on the win-win principle and allowing the provision of services in a fast manner and on a seasonal basis, enables an increase in the acquisition of foreign customers.

Transition made to a more target-oriented structure in the wholesale channel premium system

Some premiums calculated on a norm-referenced basis were eliminated in the Türk Telekom wholesale channel (EDM), and a transition was made to a simpler and leaner premium model, ensuring that dealers receive less compensation if their realizations fall short of their targets and more compensation if they exceed their targets. Türk Telekom prepared the scheme in a manner which would encourage business partners and contribute to their expenses, and premium schemes were updated in line with changes in the conditions and requirements throughout the year.

Increased focus on product penetration in the sub-channel

In order to adapt faster to the change in regional structures, premium systems were updated in a manner to foster sub-channel efficiency and product sales penetration. Transactions performed by the sub-points of main wholesale dealers (TTBN) using the new transaction authorizations (DSL engagement, fixed invoice collection) granted for the semi-exclusive channel were added to the premium system.

Live device management system established in the retail channel

The project for the central monitoring and managing of all live devices available at Türk Telekom stores was launched using the Retail Mode System (RMS) software developed in cooperation with Innova. Within the scope of this project, infrastructure was installed at Türk Telekom stores to replace the printed device labels aimed at improving the customer experience.

The infrastructure installed allows centrally-managed video and campaign content to be sent to the device screens and device prices and technical specifications can be viewed from the touchscreen. In addition, video and visual content displayed on the screen may be differentiated between stores and devices. The total duration of device reviews, duration of time spent online and desk layouts may also be reported centrally.

Türk Telekom stores started to measure real customer experience with digital applications

Türk Telekom's one of the most important strategic priorities is to offer a better customer experience. Within this framework, Türk Telekom stores started to measure real customer experience with an agreement concluded with a third party business partner.

These studies are performed by sending a centrally-designed scenario consisting of a set of questions about the product or service to be measured to the phones of real customers who have already downloaded the application, as a task. These inquiries measure on three axes of the employees' level of knowledge concerning the products, the physical store assessment and employee assessment. The strengths and development areas defined in a manner which constitutes an important input for the continuous improvement of the customer experience.



As the first operator among the three major operators to provide a WAF service, Türk Telekom has enabled enhanced protection to its customers against attacks leveled at their websites and web services.

Corporate Sales Activities

Growth gains momentum in the Strategic, Public and Large-Scale customer segments

Segment databases were renewed within the scope of the segmentation process in 2019. Annual growth in corporate revenue was achieved in 2019 thanks to the targeting structure re-established in line with the Company's strategies and segments.

Furthermore, the share of ICT products in Türk Telekom's overall revenues increased due to the segregation of ICT products, which also include corporate security products and data center products, on the target cards of sales managers, and the incentive campaigns held for these products.

In 2019, the level of penetration in large-scale companies and revenues generated from VPN packages increased thanks to the focus on volume targets.

Next-generation and flagship products enhanced further in 2019 in parallel with technological developments

In the main product categories and in next-generation products, innovations addressing customer needs and a broader range of products and solutions were offered in 2019.

In fixed voice telephony, traditional solutions were enriched with IP-based solutions in parallel to the technological developments and value-added services. Cloud-based voice solutions, which increase customers' flexibility in service usage, started to be rolled out.

In the fixed data segment, Türk Telekom's wide fiber infrastructure addressing the increasing bandwidth requirement of Türk Telekom customers continued to be an important factor in ensuring customer loyalty in contract renewals. The product range was enriched in product groups such as Eco VPN and Asymmetrical Metro Ethernet. For fixed voice and other fixed data products facing fierce competition, in order to improve the customer experience, an SMC (Service Management Center) service model was designed via monitoring real-time usage traffic of customers with strategic importance and related test studies were completed for the model.

The "Share Your Invoice" model on the mobile side enabled further growth in revenues. Focus was placed on value-added services, such as Mobile Promotion, Intellimap and Talents Platform, with particular emphasis on SMS; while studies for the eSIM product also got underway.

Offering Turkey's richest solution portfolio in the data center area with a customer-oriented approach, Türk Telekom enriched its product range further in 2019 following the establishment of the Esenyurt Data Center in 2018. With a focus on customer acquisition e-commerce segment, four of Turkey's large e-commerce companies were added to the customer portfolio in data center services. Working in collaboration with global business partners in data center solutions, Türk Telekom also plans cloud investments in line with customer requirements.

With the aim of protecting its customers from cyber-attacks, Türk Telekom opened Turkey's largest Cyber Security Center (SGM) in an event held in Ankara in December 2018 with the participation of its customers. As Turkey's largest Anti-DDoS provider, Türk Telekom commissioned its Web Application Filter ("WAF") service in addition to Turkey's first Cloud APT infrastructure. Various complementary services were launched at the Cyber Security Center such as Monitoring, Analysis, End Device Management, Security Consultancy and Penetration Tests.

Focusing on the development of solutions for customers with its own resources backed by its diverse product range, Türk Telekom develops alternative and end-to-end (service-device) solutions in cooperation with its solution partners. The investments started in 2018 continued at a rapid pace in 2019. As the first operator among the three major operators to provide a WAF service, Türk Telekom has enabled enhanced protection to its customers against attacks leveled at their websites and web services.

In line with its strategy of becoming the single solution provider to meet all of the technological requirements of its customers, Türk Telekom continued its efforts to develop integrated solutions with the Group companies. Solutions were offered for Manageable Services, Digital Signage, Financial Solutions, Legal Solutions, Software Solutions and Kiosk and Hardware Supply in collaboration with Innova. Türk Telekom also develops solutions to meet the customers' technological training and call center requirements in cooperation with its Group companies.

The company focuses on the promotion and sales activities for its digital product range with the aim of leading the digital transformation and digitalization process in Turkey. In this context, business development activities continued in the area of Programmatic, Digital Payment and Digital Communication products, and new products were offered to customers.

In addition, services are provided at 67 points with the Mersin YöneTT WiFi project, the internet project for Turkey's longest coast line developed for the Mersin Metropolitan Municipality. Secure and free internet access is provided to citizens on this long coastline in cooperation with the Mersin Metropolitan Municipality.

With the mobile application launched at Kars, Antalya and Artvin, a communication and solution bridge was established between citizens and local governments. Supplementary Information about the city such as which pharmacies are open, taxi ranks, the latest news, announcements and city guides and events were made available for customers through a single mobile application.

With the smart pole solution offered to the Trabzon Metropolitan Municipality, all citizens are offered secure and free internet access. At the same time, these mentioned local governments were provided with a platform where mobile devices and vehicles of disabled citizens could be charged, and where the temperature, humidity and noise levels at parks can be monitored by the internal sensors.

An agreement was signed with the Malatya Organized Industrial Zone (OSB) for the Security Project within the scope of Smart OSB initiative, one of the sub-sets of smart cities, addressing the requirements of OSBs. Within the scope of the solution, security and efficiency within the OSB was increased through checking, registering, central monitoring and management the entries/exits of the OSB at 31 points.

Public Projects

Bilkent City Hospital

Inaugurated in February 2019, Bilkent City Hospital started partial acceptance of patients and Ankara's five large hospitals moved to Bilkent Health Campus. Once work on the project, which is almost 95% complete, is finalized, Bilkent City Hospital will become Turkey's largest hospital. All IT infrastructure consisting of Hospital Information Management System (HBYS) software, the data center, peripheral units, hardware and other software was delivered by Innova, a Türk Telekom Group Company. Innova will operate the Hospital Information Management System for 5 years.



The project, which provides Video Referee Infrastructure for the TFF, ensures fast and safe video content transfer.

KYK/GSB Wi-Fi Project

Türk Telekom established Turkey's largest wireless internet network to provide students residing in the dormitories of the Credit and Dormitories Institution (KYK) and Youth Centers administered by the Ministry of Youth and Sports (GSB) access a fast, uninterrupted and secure internet

connection. A total of 650 thousand students have been provided with uninterrupted services in 1,200 locations within the scope of the project. A record was achieved with a total 158 million internet entry since 2013.

TFF VAR (Video Assistant Referee)

The project, which provides Video Referee Infrastructure for the Turkish Football Federation, ensures fast and safe video content transfer. The service, provided at a total 20 locations in various parts of Turkey, sets an unprecedented example in the world considering the high number of locations.

MEB Secure School Project

Within the scope of the Secure School Project carried out by the Ministry of National Education (MEB), a 6-year agreement was signed in 2018 for the provision of Mobese, point-to-point Metro Ethernet (NN ME) products to 762 schools in Phase 1 and 1,000 schools in Phase 2. Connections of 762 schools were completed in 2019 within the scope of Phase 1.

The Istanbul Metropolitan Municipality

Within the scope of EDS Electronic Monitoring System (EDS) and city security, additional agreements were signed into existing agreements with the Istanbul Metropolitan Municipality and its subsidiaries on NN ME and security camera systems. Within the scope of the EDS, 1,250 circuits were brought live in 2019, while five existing circuits were activated within the scope of NN ME.



Türk Telekom provides high quality communication services with customer oriented, reliable and most convenient solutions in line with the principle of equality, without discrimination at the “Wholesale Level”, to operators authorized by the Information and Communication Technologies Authority.



The discounted “Internet on Us Continues” campaign was launched in 2019 in order to allow those subscribers that used entry level package to continue using it for another 24 months.

Wholesale Broadband Services

Entry level internet offers for new subscribers reached more than one million households

Considering the pioneering role of broadband internet in the development of Turkey, with the aim to increase internet penetration, the “*Internet Bizden* (Internet on Us)” campaign was launched in 2017 exclusively for the resale model. The campaign continued with the extension to the bit-stream access model in 2019.

The campaign had brought internet access to more than 1 million households as of the end of 2019. In 2019, the free packages offered at the wholesale level within the scope of the Internet Bizden campaign were changed; packages with high discounts and quotas were offered to the operators. In addition, the discounted “*Internet Bizden Devam* (Internet on Us Continues)” campaign was launched in 2019 in order to allow those subscribers that used entry level package to continue using it for another 24 months.

Having Turkey’s largest and highest-quality infrastructure, Türk Telekom increased the number of customers receiving fixed broadband services through its infrastructure to 11.4 million as of the end of 2019.

The support for the market continued with the Fiber Upsell Campaign addressing customers’ higher internet usage and expectations for faster internet speeds, and the campaigns offered to operators at the wholesale level to facilitate the initial acquisition of broadband services (ADSL, VDSL, Fiber Sales Support).

Diversity was enhanced in wholesale broadband internet service models. Türk Telekom launched its PTS (PPP Transport Termination) product at the wholesale level, which provides operational convenience to operators



Turkey's data in Turkey

In order to bring internet content to Turkey, Türk Telekom signed contracts with global OTTs for hosting their cache servers on Türk Telekom networks.

with a lower investment requirement. In addition, the naked broadband service started to be offered, allowing the operators in the resale model to provide services to households who do not use fixed voice products.

Services launched to increase end-to-end customer satisfaction

- With the aim of improving customer experience, a system was launched to complete the simultaneous transfer of both voice and internet services with a single appointment for services provided over copper lines. This development will not only shorten transfer times but also simplify field operations.
- With the project carried out in FTTH services, in the event of any problems related to the applications for appointments in first connection of new customers, transfer transactions in address changes and when installing modems, a resolution of the application was ensured through the completion of inaccurate and insufficient information.
- xDSL portal screens were launched with the aim of implementing the xDSL system processes with an easier-to-use and simple interface.

Discussions with potential customers continued to gain pace in the broadband market

Initiatives were taken to enable players in different sectors (energy, media, etc.) to play an active role at the wholesale level to make Türk Telekom's infrastructure available to a wider range of end users. Within this scope, information about the wholesale services was provided, while these companies are expected to receive operator licenses granted by the ICTA (The Information and Communication Technologies Authority). The initiatives target the provision of services at the wholesale level to these players, following the completion of the licensing process.

Free WiFi provided to increase use of the service

Offering wireless internet service at around 3,000 points across the country, Türk Telekom undertakes efforts to expand the use of WiFi services by end users. Within this scope, for users who have fixed in-house internet service, the use of internet services also out-of-home was enabled, adding mobility to in-house packages. Within the scope of the pool designated for these subscribers in common WiFi points across the country, the operators are provided the data usage right for Türk Telekom's WiFi services free of charge.

Wholesale Data Services

New products and campaigns are designed with a focus on expanding the market for data services

With its high-capacity and extensive data services portfolio for data transfer at the wholesale level, Türk Telekom supports the infrastructure of operators and addresses the requirements of end users.

Türk Telekom's high-capacity data services consist mainly of point-to-point data transfer products and internet products. A wide range of campaigns and new product configurations have been launched on these products.

Within that scope, the tariff portfolio was enriched, with the addition of new speed options to the Asymmetric Metro Ethernet service for the operators wishing to provide internet service with resale method to the customers who seek competitive prices and do not require symmetric services.



Operators benefit from SSG (Service Selection Gateway) Internet/ SSG Fırsat (SSG Opportunity) campaigns at the wholesale level to provide internet access to end users. In these, a free-charge capacity offer was launched, leading to increase in capacity and revenue in wholesale level.

Within the scope of the Metro Ethernet Internet Service, the duration for applications was extended for the Existing Customer/New Sales Campaigns held for incentivizing new sales and retaining the existing customers.

Local Access Back-up Campaign was launched in order to increase the service quality of operators using Metro Ethernet Internet and Asymmetric ME Internet Services.

Türk Telekom networks start hosting global OTT's servers

Türk Telekom worked with global OTTs in order to bring internet content to Turkey, and signed contracts for hosting their cache servers on Türk Telekom networks.

This aims to:

- Enrich the user experience by ensuring that users in Turkey can access content fast,
- Use the resources of the Company and country efficiently through savings in the cost of bringing traffic from abroad.

Cooperation will continue with different global OTTs in order to increase the content hosted in the country, ensuring an improvement in the internet experience.

Continued efforts to support data centers

For customers with servers at data centers, the Data Center Connection (VMB) service is provided at the wholesale level to provide them with internet access. Within this scope,

- The tariff portfolio was enriched with new speed options in order to meet the increasing capacity requirements of operators and address diverse requirements on an operator basis.
- A discount campaign was launched for the VMB service designed for data transfer to data centers at affordable rates in a manner to encourage the data center hosting service. In addition, the existing discount campaign was also expanded for the VMB service with the target of encouraging the use of the VMB service by new operators and retaining existing operators.

According to the data center access provider independent service contract, the operators willing to connect to the systems/devices in Türk Telekom data center buildings through their own fiber optic cable infrastructure were granted fiber access and the end user device hosting in the "Meet me Room" areas. The data center system provides operators access through the data center, which provides carrier neutral services to international standards with an uptime rate of 99.995%

Customer satisfaction

Wholesale Customer Services Regional Structuring was launched in a bid to ensure more effective management of customer service processes.

Studies performed for the provision of the Mobile Transport Service

In order to meet the differentiated data requirements of mobile operators within the scope of 5G preparations and to reduce Türk Telekom's Capex requirement, work was carried out on the new Mobile Transport data service, and an application to the ICTA was filed following the completion of preparations for adding this service to the product portfolio. With this product, the transmission data of operators will be transferred in the shortest time, delay times will be improved and the "Pay-As-You-Use" model will support reductions in operation costs.

Wholesale Voice Services

Fixed voice and broadband markets were supported with Wholesale Line Rental service and Call Initiation Discount Campaigns

The number of WLR (Wholesale Line Rental) subscribers increased by 22% year on year by the end of 2019, reaching 4.8 million with to the contribution of "Connection Fee" and "New Sales Support" campaigns carried out in WLR services in order to support the fixed voice and broadband markets.

Activities aimed at increasing customer satisfaction

Regional structuring of wholesale customer services

Wholesale work processes, which had previously been carried out together with the other segments, were launched in three regions (Ankara, Istanbul and İzmir) within the scope of the Regional Structuring of Wholesale Customer Services in order to increase customer service quality and ensure more effective management of customer service procedures in line with regulations.

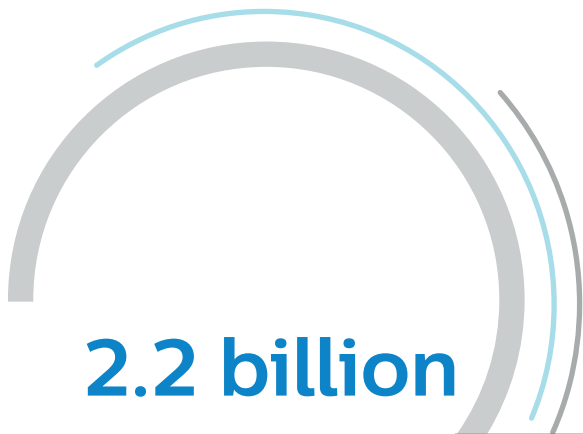
With proactive notifications, increase in customer satisfaction is targeted

With proactive notifications sent to the operators, the customer experience and service quality increased by ensuring that operators have detailed information on failures without onsite visits for the failure response.

In addition, planned and emergency operation notifications to the operators over the automation system started to be implemented. This allows the operator to receive detailed information on interruptions in its circuits.



Türk Telekom structured its Customer Services business processes and organizations in line with its **vision of being “the solution center to provide the best customer experience in all channels”**.



In 2019, Türk Telekom communicated nearly 2.2 billion times with its customers through all channels.

Consumer Customer Care Services

Türk Telekom focuses on offering the best customer experience

Türk Telekom structured its Consumer Customer Services business processes and organizations in line with its vision of being “the solution center to provide the best customer experience in all channels”.

Türk Telekom’s Customer Care Services offers its services for all products including mobile, broadband, fixed voice and TV through the call center, accessible from the 444 1 444 number.

Consumer Customer Care Services offer a 24/7 uninterrupted service

Türk Telekom provides an uninterrupted service for its retail customers nationwide on a 24/7 basis with its extensive staff. Türk Telekom’s consumer customer care service structure consists of around 1,000 face-to-face customer care employees across widespread office and dealer network in Turkey, around 9,000 call center customer representatives providing services 24/7 in 20 provinces and strong self-service channels.

Consumer Customer Care Services’ customer satisfaction scores continue to improve

In 2019, Türk Telekom communicated nearly 2.2 billion times with its customers through all channels. The customer satisfaction scores of the Consumer Customer Care Services continued to improve in 2019 when compared to the previous year.

Activities aiming to retain retail and corporate customers were carried out through joint retention projects, leading to an improvement in retention rates.



In 2019, Consumer Customer Care carried out 96% of customer interactions through the self-service channels.

Growth in revenues was achieved on the back of the migration of prepaid customers to postpaid subscriptions, and the retention activities carried out for customers wishing to migrate to the prepaid segment increased by 9% compared to the previous year, ensuring a significant contribution to the mobile postpaid segment.

Consumer Customer Care Services delivered the ICTA obligations again in 2019, with an average response time of 20 seconds.

Customer requests and complaints were segregated by customer segment, and were addressed by specialist teams in order to provide solutions as quickly as possible.

Thanks to the process improvement and activities aimed at reducing the number of complaints, customer complaints in the Internet at Home segment were reduced by 21%, and requests/complaints received from the mobile web segment fell by 59% YoY in 2019. As a result of the improvement efforts within the scope of social media integration activities, a 7-hour improvement was ensured in the complaint handling times in this channel.

The Prime onsite support services offered to mobile and internet customers were unified under one roof in 2019, and area support services started to be provided to special customers through a single team. Product and on-the-job trainings enhanced the teams' technical knowledge, ensuring an increase in efficiency and resource optimization.

While aiming to offer the best customer experience, Türk Telekom also takes advantage of cost optimization opportunities. Despite the growth in the subscriber base in 2019, optimization was ensured in the number of outsourced employees in the customer care department thanks to the increasing efficiency in all operations.

The projects launched at Türk Telekom in 2018 aimed at offering an excellent customer experience in all channels, and to standardize the services provided through the face to face channels, continued to deliver significant benefits in 2019.

Dealer Customer Services Project

Türk Telekom provided face-to-face customer services only at Türk Telekom offices before the launch of the Dealer Customer Services Project. With the project, the Company started providing customer services at 80 dealers starting from November 2019.

Within the scope of the project, more than 286 thousand customer requests were addressed between June 2018 and October 2019, and the improvement in retention rates of the face-to-face channel enabled the retention of more than 40 thousand customers. The project is planned to be expanded to 140 points in 2020, with the target of excellence in the customer experience.

TT Office Mobile Customer Care Services Project

Within the scope of the project, the mobile customer care services offered at Türk Telekom offices were integrated in a manner to meet all after-sales requirements of mobile customers. The mobile authorization designation and training processes were completed for all customer services employees. At the end of the project, the volume of transactions performed with customers visiting the offices increased five-fold when compared to the beginning of the project.



Online Transactions

Sales revenues of the Online Transactions application, the Company's most popular channel, doubled in 2019 compared to the previous year.

Consumer Customer Care Services create added value with outgoing call activities

Taking significant steps towards ensuring customer satisfaction, Consumer Customer Care Services also continue to create added value with revenue-generation activities.

In the mobile segment, the share of the channel in upsells in the consumer postpaid segment increased by 68% compared to the previous year to reach 1.2 million, while there was a 20% increase in recontracting to 3.2 million.

In the outgoing calls channel, mobile customer acquisitions through leads (forwarded by the online channel) gained significant momentum, increasing 100% compared to the previous year. The call center's channel share in postpaid sales increased from 1.4% to 2.9%.

In the fixed broadband segment, the share of xDSL sales performed by the call center channel was 17%.

The retention performance in all products (Mobile, Fixed Voice, Broadband and TV) increased by 7%, and the share of contracted customers increased by 12% compared to 2018.

As a result of the proactive collection calls in all segments, collection revenues increased by 19% compared to the previous year.

Consumer Customer Care Services becoming stronger every day with alternative channels

The Web Online Transactions continue to implement a customer-oriented approach in all managed channels, designing user-friendly and innovative services.

In the rapidly evolving digital world, Web Online Transaction channels providing uninterrupted 24/7 services to customers using mobile, broadband and fixed voice products were integrated under a single roof in 2019 in order to make customers' life easier, and a holistic service started to be provided through single entry access.

A new self-service world was created allowing potential customers to complete their subscription on an end-to-end basis and manage appointments through digital channels. In this period, all digital channels operate with the support of artificial intelligence applications.

Allowing users to perform mobile, Internet at Home and fixed voice subscription transactions through a single application, Turkey's leading Online Transactions application was downloaded 36 million times in 2019. The number of transactions performed within the year doubled, reaching a record level. The sales revenue of the Online Transactions application, the Company's most popular channel doubled in 2019 compared to the previous year.

Corporate Customer Care

Continuing to offer the best customer experience

Corporate Customer Care Services work with the aim of offering the best customer experience in all frontline business processes in line with Türk Telekom's vision and strategy with its various projects, and maximizing service quality.

Türk Telekom Customer Care Services provides uninterrupted services for all its products from Türk Telekom offices in 81 provinces on a 24/7 basis, from the call center number, 444 5 444, and over e-mail at kmh@turktelekom.com.tr.

Corporate Customer Care Services is structured to meet various requirements of customers in different segments. In this context, customers of key strategic importance are provided with customized solutions over the phone or via e-mail by customer representatives who are experts in their fields.

In March 2019, Türk Telekom Customer Care Services commissioned the new request system (Serdoo System) allowing instant management of requests referred to kmh@turktelekom.com.tr for fixed voice and broadband products.

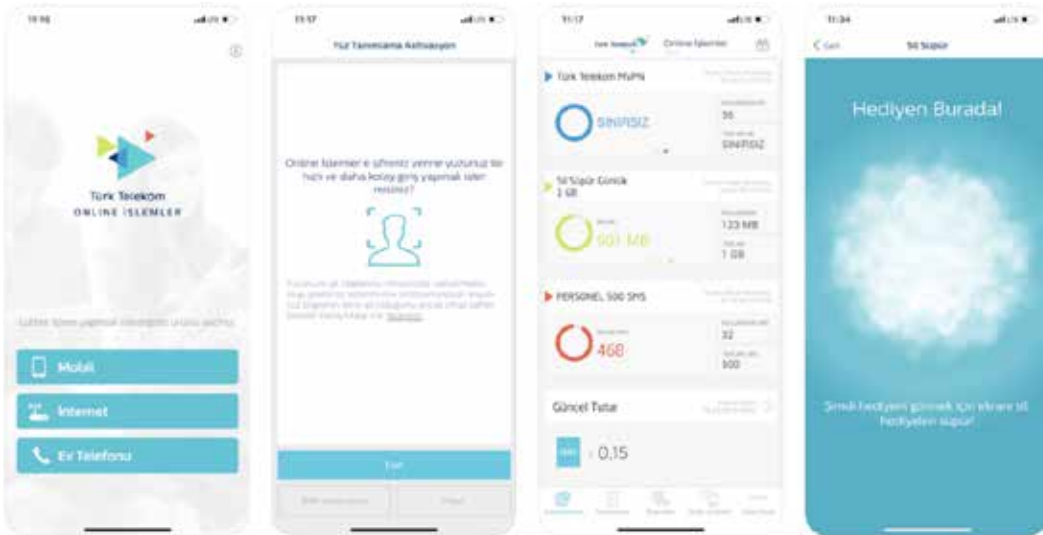
Dedicated Corporate Customer Representatives provide end-to-end services

After-sales requirements of corporate customers are met with 570 customer representatives in the call center and 400 corporate customer care services' employees in face-to-face channels. Corporate Customer Care Services respond to 4.1 million calls and 2 million e-mails received from the mobile, broadband and fixed voice subscribers per year, with a differentiated customer satisfaction-oriented approach.

Corporate Customer Care Services has now evolved into an operation adding value to the Company with its sales operations. In this context, nearly 75 thousand customers were upsold in 2019, and 140 thousand customers were contracted, ensuring an increase in their loyalty.

With a view to increasing the loyalty of corporate customers in the premium segment and improving customer experience, nearly 20 thousand customers are provided with the end-to-end Dedicated Corporate Customer Representative" service.

Türk Telekom serves its corporate customers of key strategic importance through its "Corporate Special Services Team" with the aim of managing and coordinating all after-sales activities. The Corporate Special Services Team provides services to customers through onsite visits conducted by its "Onsite Customer Representatives". This service provides fast and effective solutions for all requests and complaints related to mobile, fixed voice and broadband products.



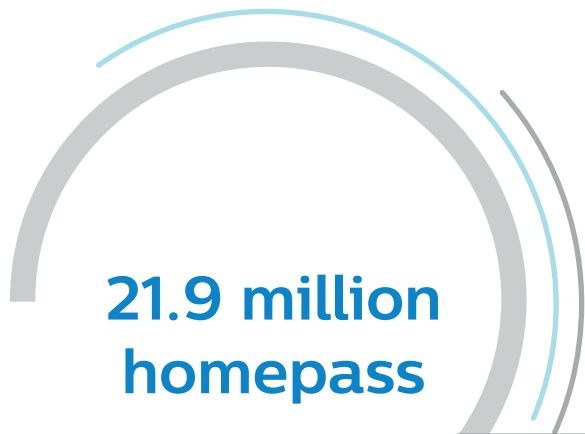
Our investments extend to even the most remote parts of Turkey, consistent with our “Not just for some, but for everyone” service approach





Investments and Infrastructure Projects

Focused on maximizing service quality and customer satisfaction, Türk Telekom relentlessly undertakes new investments and infrastructure development projects.



Number of fiber homepass reached 21.9 million in 2019, marking an annual increase of 3.2 million.

Türk Telekom accelerates its fiber network investments

Türk Telekom continued to invest in its fiber network, which is one of its key investment priorities. With the new investments the length of fiber network reached 304 thousand km by the end of 2019.

In 2019, the number of sites where customers can access high-speed broadband increased, and work on the FiberkenTT projects, which enable the transformation of existing copper infrastructure to fiber infrastructure continued.

In 2019, the fiber infrastructure transformation of 436 thousand broadband subscribers was completed, and the number of FTTC/B/H homepass reached 21.9 million, marking an annual increase of 3.2 million.

With the fiber transformation throughout the year, Türk Telekom customers are offered speed alternatives of 50Mbps, 100Mbps or 1Gbps depending on their tariff selections and their network infrastructure.

In 2019, infrastructure work for newly developed residential areas was prioritized and broadband access was brought to 1.1 million households which previously had no infrastructure.

45% of LTE base stations connected with fiber thanks to investments carried out

In 2019, the LTE population coverage ratio reached 92% in Türk Telekom's mobile network, while the ratio of fiber connected LTE base stations stood at 45%.

In 2019, the total mobile data traffic had reached:

- 68PB in the LTE network (up by 82% YoY)
- 43PB in the 3G network (up by 19% YoY)



21,566 mobile sites

Total number of Türk Telekom mobile sites reached 21,566 as of year-end 2019.

Despite the short space of time since the launch of LTE in Turkey, with the support of the investments in the mobile network, the share data traffic being carried over the LTE network had exceeded 60%. The number of LTE locations increased by 33% YoY as a result of the investments carried out.

Total number of Türk Telekom mobile sites reached 21,566 as of year-end 2019.

Work starts on domestic LTE base station installations

In 2019, Türk Telekom continued to contribute to the ULAK base station project, which is one of the most important components of the localization and nationalization process of high-tech communication infrastructure.

ULAK's LTE Lab tests were completed in 2019 with the new Version 3 trials. Active network test and development work was carried out in Şile and Rize. Trials of the product's new versions and features are being carried out in accordance with product roadmaps, and the development of the domestic LTE base station project is entirely supported through Company resources.

Within the scope of Universal 2.0 project, the installation of 157 base stations was completed.

Additionally, eNodeB base stations for 250 sites were received and the installation process got underway. The base stations are planned to be installed at approximately 300 locations in the first half of 2020.

Transition to faster and more flexible structures in the carrier network with renewed infrastructure

In 2019, Türk Telekom started network installations for the renewal of the backbone DWDM network. Thanks to the renewed DWDM network, the capacities required by new technologies will be provided with more economical and flexible solutions.

TekŞifre platform provides services to over 10 million unique users

The TekŞifre platform allows users to login with a single username and password when using Türk Telekom services.

In 2019, the TekŞifre Central Login Infrastructure Project was completed and Login infrastructure was completely modernized. The project allows customers to connect to Türk Telekom products and services more quickly and securely. Interfaces for the customer service were also renewed and the quality of support for open customer complaints was improved. Performance, security and speed gains were also achieved.

Currently, 10.6 million unique users receive services each month with the TekŞifre integration through five mobile and 14 Web applications, and an average of 14.9 million transactions are performed monthly.

Mobile coverage to expand with Voice over WLAN service

Coverage in Türk Telekom mobile network will be expanded with the Voice over WLAN (WiFi Call) service project kicked-off in the first quarter of 2019. The service is planned to be commissioned in early 2020.

With the WiFi call service, it will be possible to place HD voice quality calls over the TT Mobil network through wireless access points, even in environments where there is no mobile signal. This will help distribute the mobile network load across wireless access points.



Coverage in Türk Telekom mobile network will be expanded with the WiFi Call service project, works for which have been initiated. With the WiFi call service, it will be possible to place HD voice quality calls over the TT Mobil network.

The WiFi call service will pave the way for HD+ voice calls, in-flight voice calls (calls in airplane mode), and voice calls from WiFi hotspots abroad.

A secure and efficient IoT platform launched over shared infrastructure

With the IoT Platform project completed in early 2019, the IoT Platform infrastructure for Türk Telekom's own innovative and smart services was launched. Device management, data processing, intelligent application management and reporting functions will be managed more securely and efficiently through the shared infrastructure, primarily with smart home services and smart city services that will be integrated in 2020.

For the Turkish Football Federation VAR (Video Assistant Referee) system, work on the project for continuous monitoring of the container with the VAR servers of Eryaman Stadium through temperature sensors, fire detectors, flood detectors and door sensors sending data to the IoT Platform was completed.

Mobile Device Management infrastructure running 60 million queries a month renewed

In place of the EoS (End of Service) version of the MDM (Mobile Device Management) platform, which contains information for 22.1 million TT Mobile subscriber devices, installation work on the new CDP (Connected Device Platform), which will allow the management of other M2M/IoT devices in addition to mobile devices, was completed. The platform was launched by the end of 2019.

Device-based services such as LTE, VoLTE and Voice over WLAN are activated through this CDP platform. The platform responds to an average of 45 million queries per month.

Internet service to be provided in places without fiber infrastructure with FWA investments

Mobile and fixed investments continue to provide technology-independent internet access to all customers. Commercial models for this purpose have been studied in the FWA (Fixed Wireless Access) project, where utilization of WiFi technology-based services is planned and point-to-point and point-to-multi-point models have been created with solutions appropriate for these models. The necessary work for product development is being carried out.



In-house WiFi service quality improves with Lifemote Wifix

The Lifemote WiFix product measures the quality of the in-house WiFi service available to customers directly from the data collected across the modem chipsets, enabling the identification of existing problems and advising the modem user of the solution. An artificial intelligence module, which is the main component of the product, aims to enable automatic channel changes and WiFi optimization for Türk Telekom customers in the same building.

The product will enable the following basic features;

- Taking proactive WiFi actions,
- Identification of WiFi coverage problems and presenting solution suggestions to the modem user,
- Detection of customers experiencing Channel Congestion problems and remote resolution of the problem through automatic channel change,
- In calls made to the Call Center, determination of whether the customer problem is related to WiFi and solution support
- Creation of upsell sales request (lead) reports by identifying users with high data usage and with supporting infrastructure.

Türk Telekom connecting İstanbul Airport to the world with its strong communication infrastructure

Türk Telekom, having started its preparations months in advance to establish a strong and high-quality communication infrastructure at the İstanbul New Airport, which opened on 29 October 2018, is providing services with the newest technologies and high-quality infrastructure at fiber-optic speeds.

Guests, employees and visitors from all over Turkey and the world can connect to the world thanks to Türk Telekom's superior technological solutions in fixed and mobile networks and its strong and seamless fiber infrastructure. With a mobile communication infrastructure which will be able to offer 5G services in the coming periods, high speed LTE can be experienced even in the most crowded areas of this massive structure.

Internet service provided at İstanbul Airport with IGA WiFi project

With the IGA WiFi project, a WiFi service is provided to domestic and international passengers coming to İstanbul Airport. Within the scope of the project, users can access the internet via SMS and via passport information access options. Domestic users carry out user creation transactions on the IGA WiFi portal with the SMS option, while foreign users may use their passport number at the kiosks developed for this project.

This service is provided over a network under the supervision of IGA. Central services (portal, payment etc.) are under the responsibility of Türk Telekom.

With the passport reading system, kiosks established together with Innova within the scope of the project, international guests can easily create WiFi access information.

Work continues for wholesale password sales which will allow stores to provide free WiFi to their customers, with one hour free package offers and automatic connection over the IGA mobile application in the coming phases of the project.

Entire IT infrastructure of Ankara City Hospital established by Türk Telekom Group

Türk Telekom undertook the installation of the IT infrastructure of Ankara City Hospital in Bilkent, which is expected to be one of the most important health centers in the world as the largest health care "Public-Private Cooperation" project Turkey.

All of the required software has been integrated by Türk Telekom for the effective operation of Ankara City Hospital. With its expertise, Türk Telekom carried out the installation of the data center required by this software, along with the integration of all hardware, the network and other IT infrastructure at the hospital where the HICAMP Health Solutions platform was implemented.

Investments and Infrastructure Projects

Services provided in Turkey's largest Cyber Security Center continue to expand

Türk Telekom has been expanding its corporate security services provided to its customers for more than ten years with its new Cyber Security Center located in Ankara.

Opened in 2018, Türk Telekom's "Cyber Security Center" was designed in accordance with world standards and built on an area exceeding 1,500 square meters. Providing end-to-end solutions for all the cyber security needs of public institutions and corporations with critical data and infrastructure, the Cyber Security Center protects Turkey from current and imminent cyber-attacks by providing uninterrupted and secure access.

In 2019, the services provided by the Cyber Security Center continued to grow. Offering Turkey's largest portfolio of cyber security services, Türk Telekom added Security Incident Monitoring Services, DDoS Attack Testing services and Web Application Firewall (WAF) services to its portfolio in 2019.

With DDoS Attack Test services, Türk Telekom offers all institutions the opportunity to measure their resistance

and preparedness levels in the face of DDoS attacks. The service was commissioned in September 2019.

The Web Application Firewall (WAF) service, aimed at securing critical web applications, was launched in November 2019.

The virus protection software offered to retail broadband customers will also be used by TT Mobile customers by the end of February 2020.

The family protection service, to protect children from harmful content and sites on the internet is also planned to be launched by the end of Q1 2020.

In addition, with solution partner collaborations, the Cyber Security Center started to offer Security Incident Response, SIEM (Security Incident and Event Management), SIEM Consultancy, Use-case Support, Security Device Management, ISO27001, PCI and KVKK Consultancy to customers in September 2019.





Efforts to expand and automate the scope of Cyber Security Management Services continue. The Company aims to provide all cyber security services and products needed by customers with Türk Telekom's experience, assurance and quality.

Türk Telekom Cyber Security Center accredited by Trusted Introducer organization

Security Testing services (penetration testing, source code analysis and vulnerability testing) was introduced to customers through Türk Telekom's internal resources. Teams performing penetration tests (Pentest teams) during the year completed OSCP and CEH penetration test certifications. The Cyber Security Center's TSE

approved certification process for penetration testing continues.

Türk Telekom Cyber Security Center was accredited in 2019 by Trusted Introducer (TI), an organization recognized and supported the international CERT/CSIRT communities. In this way, the effectiveness of the security incident response services provided by the Cyber Security Center, compliance of the services and operations within an international framework and within the scope of the established standards and thus the quality of the service provided to customers was certified.

Alarms and cyber incident alarms related to security infrastructures that serve internal and external cyber security customers are monitored on a 24/7 basis by the Türk Telekom Cyber Security Center team.

Türk Telekom's proactive security level raised with capacity increase in SIEM structure

The capacity expansion of SIEM (Central Security Monitoring and Analysis Systems) systems, which facilitates the detection and intervention of cyber incidents and violations, has been carried out, and the critical applications and systems within the Türk Telekom Group have been integrated into these systems.

In 2019, within the scope of full compliance with laws, regulations and standards such as Law No. 5651, Electronic Communication Regulation, PCI DSS, ISO 27001 standards and the Türk Telekom Group Information Security Policy, the level of integration of the systems and applications, which contain personal data and bear critical importance for the company, into the central security monitoring and analysis systems was increased.

The capacity increase enables storage of the records of employees' access to incidents and sensitive information, which are required to be kept in Türk Telekom's systems in accordance with the regulations and standards, for a longer period of time. With the project, the traceability of the activities that could pose a risk to information security within Türk Telekom and the Company's proactive security level also increased.



Türk Telekom Cyber Security Center was accredited in 2019 by Trusted Introducer, an organization recognized and supported by international CERT/CSIRT communities.

Information Security Products and Services

Cyber Security Activities

Türk Telekom brought together Corporate Security Services under the roof of Turkey's largest Cyber Security Center which was established in Ankara in 2018.

The Cyber Security Center provides end-to-end solutions at global standards to address all cyber security requirements of Türk Telekom customers, ensuring uninterrupted and secure access for its customers.

Boasting of Turkey's largest cyber security service portfolio, the Center provides Cyber Security Management Services including security event monitoring, analysis and response services and consultancy services that can be offered separately, as well as cyber threat intelligence services in addition to the existing Corporate Security services.

Türk Telekom Cyber Security Services

With the rapid spread of Information Technologies, cyber security risks are also increasing for all customer groups. Potential cyber-attacks on the infrastructure of the Company's corporate and public customers may result in significant consequences such as access to personal information of citizens and customers, abuse of the information obtained, deletion and corruption of the integrity of the information.

As Turkey's first telecom operator that provides cyber security services, Türk Telekom offers the following cyber security services taking strength from its long years of experience and high service quality.

Network Security Services

DDoS Attack Prevention Service: DDoS attack prevention service ensures that the attacks on internet traffic are dealt with before reaching the access point of the institution, protecting the data traffic. This service both prevents the interruption of the access point and the depletion of network infrastructure resources.

Active Defence Service (IPS): When an attack is detected with the Active Defence service, which analyses internet traffic according to digital signature base and traffic anomalies, the attack traffic is cut and is prevented from being transferred to the network. Bandwidth contraction is avoided as threats are blocked before they reach the network.

Content Filtering Service: The Content Filtering service can determine the content of the website to be scanned and the rules of the scan, and any harmful content detected in accordance with the specified rules is prevented from reaching the network.

Firewall Service: The Firewall Service allows easy management of the inflow/outflow of the traffic from the network to the internet, as well as from the internet to the network. The traffic that is not compliant with the specified rules is blocked by Türk Telekom Management Center.

Advanced Threat Prevention Service (Anti-APT): This service identifies unknown cyber-attack types and zero-day attacks, which are described as advanced cyber-attacks. Anti-APT service marks the attack type so that it can be listed among the known attacks the next time. The service analyzes files downloaded over the internet and prevents the download of the files that are detected as harmful.



Antivirus: The Antivirus Service scans the traffic for systemic viruses and worms. If a virus is detected in the traffic, the traffic is blocked by Türk Telekom Management Center. The traffic found to be infected with a virus is prevented from infecting the networks and users.

WAF (Web Application Firewall) Service: Web Application Firewall ensures protection against malicious content and vulnerabilities, which may pose a security threat in web applications and affect their accessibility. Global intelligence is provided specifically for OWASP Top 10 and web applications. The managed WAF solutions allow monitoring customer web applications 7/24, and offer proactive rule-setting service. The added services offer customers various services such as file security and daily license usage. The customer management interface allows users to perform transactions such as analyzing and viewing traffic, or rule setting.

Dedicated Security Services

Dedicated Security Services: Türk Telekom Dedicated Security Services allow using Firewall, Active Defence System, Content Filtering, Antivirus and data storage services in accordance with Law No. 5651 (Regulating Broadcasting in the Internet and Fighting against Crimes Committed through Internet Broadcasting) through the security devices deployed at the desired location.

CyberCastle: The integrated CyberCastle allows security logging in accordance with the standards set out by the Law No. 5651, and benefiting from Firewall, Active Defense, Content Filtering and Antivirus services at the same time.

Cyberlogging: Users connecting to the corporate internet with the Cyber Log device may be logged in accordance with the provisions of the Law No. 5651.

Managed Security Services

Central Monitoring: Alarms generated by cyber security infrastructures of institutions are monitored on a 24/7 basis by Türk Telekom Cyber Security Center, and critical alarms are reported.

Cyber Security Configuration and Infrastructure Management: The necessary configuration and signature definitions are incorporated in the cyber security infrastructure of institutions, and end-to-end cyber security management and support services are provided.

Technical Consultancy: Technical consultancy and support services are provided for Türk Telekom customers during the Cyber Security infrastructure installation, operation and management stages.

Professional Security Services

Vulnerability Analysis and Penetration Tests: Vulnerability Analysis and Penetration Test services are used to identify and report security vulnerabilities of institutions. Information is provided on the necessary security solutions in order to ensure protection against potential cyber-attacks that may be conducted by exploiting vulnerabilities.

Consultancy Services: Information Security Management System Consultancy, ISO 27001 Audit, Compliance and Consultancy, SOME Installation Consultancy and Training Services are provided in order to help institutions ensure data and infrastructure security.

Türk Telekom ranks among the world's leading information and communication companies with its strong infrastructure, increasingly diversified value-added innovative product portfolio, international partnerships and its ability to rapidly amalgamate technology into its services.



Türk Telekom has established a strong ecosystem, which also includes universities, SMEs with intensive R&D activities and international R&D partners.

Türk Telekom is the driving force behind Turkey's digital transformation

Türk Telekom targets the provision of fast, high quality and economic services to its customers with its customer oriented and integrated communication solutions.

Türk Telekom is one of the world's leading information and communication companies with its strong infrastructure, continuously diversifying value-added innovative service portfolio, its international partnerships and its ability to rapidly amalgamate technology to its services.

Türk Telekom plays a driving role in next generation communication services based on its mission to carry communications to the future, in addition to adding value to traditional telecommunication services. In this context, Türk Telekom is also the driving force of Turkey's digital transformation.

Türk Telekom has created a strong R&D ecosystem including its stakeholders

Türk Telekom's extensive R&D and innovation efforts aim to provide innovative solutions to customers through the research of next generation technologies, their development and commercialization. Türk Telekom has established a strong ecosystem, which also includes universities, SMEs with intensive R&D activities and international R&D partners with the aim of utilizing the potential offered by the existing know-how in Turkey to the maximum.

The R&D activities carried out by Türk Telekom are focused on the following technological strategic areas:

- **Big Data technologies:** Data visualization, data analysis, data mining, machine learning technologies and artificial intelligence applications
- **Experience Driven Network and Service Quality Management:** Innovative applications for customer experience and service management, virtualization-oriented technologies (SDN, NFV), 4G, 5G and beyond technologies, Cloud-RAN, visible light communication (VLC / LiFi)

- *Smart digital platforms and services:* Cloud based services, Internet of Things (IoT) based services, smart home/city/life applications

Significant outputs obtained within the scope of R&D Center activities in 2019

In 2019, ten European and TÜBİTAK funded R&D projects were carried out at the Türk Telekom R&D Center. One of these ten projects was successfully completed in 2019 and two of them were recently accepted for TÜBİTAK funding.

By the end of 2019, 125 patent applications including one international application were filed. Seven patent applications filed in previous years and were certified by the Turkish Patent Institution in 2019. During the year, applications to 17 academic publications were made as a result of the academic studies carried out by Türk Telekom employees

EU/TÜBİTAK project studies continued in 2019

In 2019, a total of three European Union projects were undertaken, one being Horizon 2020 and two being Eureka projects. The goal of the Horizon 2020 project, named CLEAR5G, is to design, develop, validate and demonstrate a convergent wireless network integrated with Machine Type and Mission Critical Communication (MTC/MCC) services for Factories of the Future (FoF). In this multinational project, Türk Telekom leads the project partners in determining the requirements and business models of the Factories of the Future, and also works to manage the flexible network infrastructure designed for the Factories of the Future and to develop data-based intelligent systems.

In the Eureka project, named Pulpa, the development of platform identification is carried out with the goal of monitoring, managing and reporting indoor information per user from heterogeneous sensor systems. Another Eureka project is the PAPUD project, in which a platform for analysing call center calls that are converted from voice to text using deep learning techniques, automatically extracting subject and word trees, associating with CRM data, reporting and subscription cancellation prediction is being developed.

In 2019, the project to develop artificial intelligence-based traffic prediction software for Next Generation Mobile Communication Networks was completed within the scope of the TÜBİTAK projects. Within the scope of the project, software was developed for the next generation mobile networks of the Türk Telekom Group's mobile operator, which provides advanced intelligence and data traffic prediction based on artificial intelligence.

In addition, work on the following projects continued.

- *Dronnet:* Studies are being carried out in cooperation with a university in order to explore the use of Unmanned Aerial Vehicles (UAV) in the provision of wireless communication services in different scenarios

(e.g. backup service in case of disasters, solutions for 4G and 5G communication system needs).

- *Visible Light Communication (VLC):* Considering the characteristics of this technology, which is positioned at the intersection of optical and wireless communication, the design and prototype development of high speed and reliable high speed VLC systems are carried out in cooperation with a university.
- *Mobile ECG Project:* The project is based on the development of a health platform in which atrial fibrillation, the most important indicator in diagnosing cardiovascular diseases, will be detected.
- *Location-Based Mobile Operator Speed Comparison Platform:* This platform aims to provide customers with accurate information on mobile data speeds, which is an important factor in operator selection.
- *End-to-End Domestic and National 5G Communication Network Project:* The development of domestic and national 5G communication systems is being carried out within the scope of the project.
- *Advertising Analytics Platform:* The project aims to fully understand the life cycle of Türk Telekom users, develop models to predict their problems and behaviour and to provide effective marketing services for advertisers with value added services.

Project to develop voice and data traffic prediction Software based on Deep Learning and Machine Learning for mobile communication networks started

The aim of this project is to develop open source software that predicts voice and data traffic for mobile networks with low error rates by means of different machine learning and deep learning methods for use within Türk Telekom. With the development of the software, Türk Telekom will be able to plan its investments in its mobile operations in the light of software output indicators, thereby reducing investment costs and increasing customer satisfaction by improving service quality.

Türk Telekom maintains its support for 5G and Beyond Joint Graduate Support Program

Türk Telekom maintains its contributions to the 5G and Beyond Joint Graduate Support Program, which started in the 2018–2019 academic year. The number of students supported under the program increased in 2019. The students positioned as Türk Telekom employees are not only provided with financial support in their 5G and beyond technologies research projects, but also with the shared experience and knowledge, and are prepared in the best possible way for the rapidly developing telecommunication sector.

End-to-End Domestic and National 5G Communication Network project

Türk Telekom continued to support End-to-End Domestic and National 5G Communication Network project in 2019.

Türk Telekom maintains support for End-to-End Domestic and National 5G Communication Network project

Türk Telekom continued to support End-to-End Domestic and National 5G Communication Network project in 2019. During the meetings held under the leadership of the ICTA, Türk Telekom met SMEs that are members of Communication Technologies Cluster and provided information regarding the products offered on the Türk Telekom network. Notes on their products and areas which were in need of improvement were shared with the companies seeking to carry out domestic production. Türk Telekom's sites and laboratories have been opened for domestic product testing in order to contribute to the product development processes of the companies within the scope of the project.

In a workshop held at the Türk Telekom Head Office in December 2019 within the scope of the End-to-End Domestic and National 5G Communication Network Project, work was carried out to provide high value-added products such as critically important hardware and software used in the communication sector with domestic and national means.

Türk Telekom's "100% Domestic" Artificial Intelligence project wins first prize in Machine Learning category

Türk Telekom carries out its maintenance activities utilizing advanced data analytics and artificial intelligence technologies to proactively detect problems in its network and prevent interruptions. With this work, it is possible to minimize the interruption of the services provided and to detect network problems which cannot be detected by conventional methods. The use of artificial intelligence in Türk Telekom's network operations is being commissioned with domestic software developed by Türk Telekom engineers using 100% open source applications without the use of a commercial product.

Using artificial intelligence and machine learning algorithms, possible problems are reported to the operations teams 24 hours in advance by classifying the data collected from the network. With this project, Türk Telekom was ranked first in the Innovation Accelerators (Machine Learning) category in Turkey at the IDC Artificial Intelligence Awards, and additionally, patent applications were submitted for the methods used.

With this project, Türk Telekom aims to reduce investment and operation costs, minimize revenue losses that may occur due to failure, and increase customer satisfaction even further.

Domestic and national software development carried out with the Domestic Net Analysis project

Two different foreign software and four different applications used for the monitoring of the Türk Telekom DSL network service quality have been consolidated and replaced with a single domestic and integrated software suite, Domestic Net Analysis (Yerli Nette Analiz). This means the entire network can be optimized independently of the supplier on a single end-to-end



Industry 4.0 5G

Türk Telekom introduced the low latency, high capacity and speed capabilities of the next generation communication technology in the 5G test network established with Nokia at Ümraniye Teknopark.

software suite, so that failures and speed problems in the DSL network can be effectively monitored. With this project, additional value-added improvements such as FTTH network analysis and speed optimization have been added to the service quality solutions currently in use in the Türk Telekom network. Application development was completed and the project has been commissioned.

Türk Telekom achieved a first in the next generation of educational technologies with 5G

Türk Telekom and Huawei achieved a first in Turkey, joining forces for virtual and augmented reality technologies with 5G, which will be a breakthrough in education. In this context, Türk Telekom successfully

tested cloud-based virtual reality and augmented reality use cases through its 5G test network, established with Huawei at the Ümraniye Teknopark Mobile Network Test Center and which is compatible with international 3GPP standards.

Türk Telekom to manage the 5G network with artificial intelligence technology

Türk Telekom became the first Turkish operator to test artificial intelligence applications in 5G technologies. Türk Telekom successfully tested artificial intelligence technologies based on machine learning on its next generation mobile and fixed networks in tests conducted using Nokia's artificial intelligence-supported digital assistant MIKA and AVA cognitive services platform.

Türk Telekom successfully completed first Industry 4.0 5G test in Turkey

Türk Telekom introduced the low latency, high capacity and speed capabilities of the next generation communication technology in the 5G test network established with Nokia at Ümraniye Teknopark. The most striking aspect of Türk Telekom and Nokia's collaboration, which introduced 5G technology with three different tests, were the tests in the area of Industry 4.0.

Türk Telekom and Nokia, in addition to the Smart Factory test, introduced the benefits and convenience to be provided by next generation communications in the areas of Smart Cities and Public Safety. The test was successfully carried out with the goal of minimizing errors in critical industrial applications, as well as maximizing production and efficiency, using the capabilities of 5G.



World speed record

Türk Telekom broke the world record by reaching speeds of over 2.9Gbps in its test conducted with Huawei on a live 5G test network.

Türk Telekom breaks world speed record with real 5G test

Türk Telekom broke the world record in this area by reaching speeds of over 2.9Gbps in its test conducted with Huawei on a live 5G test network. With this test, Türk Telekom became the first operator in the world to test 5G New Radio Carrier Aggregation Technology with commercial phones.

Türk Telekom carries out Turkey's first WiFi 6 test

Türk Telekom achieved a speed 2.5 times higher than the previous generation 802.11 ac with WiFi 6 (802.11 ax) technology, which it tested for the first time in the test laboratory established at the Acıbadem campus. Türk Telekom became the first operator to successfully test the sixth generation WiFi standard WiFi 6 technology in Turkey.

Thanks to the technological features of the new WiFi 6 supporting modems, Türk Telekom will be able to provide wireless internet access to a wider coverage area at higher speeds. In addition, WiFi 6 offers "longer battery life" for smartphone and portable computers that connect to WiFi, as it offers lower power consumption than previous generations.

Türk Telekom becomes first operator to test Nokia's Wireless PON technology in Turkey

Türk Telekom became the first operator in Turkey to test the WPON (Wireless Passive Optical Network) Technology, which offers fixed internet solutions at fiber speeds over a wireless network.

The new technology test, which will improve the customer experience and save operational costs, delivered 5G and fiber transfer speeds at close range using next generation fixed wireless broadband technology in the 60 GHz millimeter wave frequency.

Türk Telekom's domestic artificial intelligence solutions increase quality in fiber

With the new domestic and national artificial intelligence root cause analysis platform, TT-ON (Türk Telekom Optical Network), developed with its own resources, Türk Telekom carries out real time monitoring of the fiber optic cable network in 81 provinces of Turkey and prevents performance losses by performing automatic root cause analysis.

Türk Telekom uses its own artificial intelligence solutions to maximize fiber quality. The TT-ON platform solution eliminates performance losses by enabling root cause analysis and proactive monitoring of the quality of fiber





400Gbps Ethernet technology

Türk Telekom started to provide faster service with 400Gbps Ethernet technology by making the necessary software and hardware updates on its IP network.

optic cables in DWDM (Dense Wavelength Division Multiplexing) systems.

Preparations for 5G started with Türk Telekom's pilot 5G test networks

Türk Telekom continues to develop, test and implement all next generation technologies, not just 5G, on a live 5G test network in compliance with international 3GPP standards. In this context, work is being carried out on a live test network to simulate the situation of a commercial 5G network being in operation. In addition to general purpose tests, tests of domestic and foreign products developed or under development for 5G application areas are also carried out, utilizing these networks.

Türk Telekom becomes first Turkish operator to use 400Gbps Ethernet technology

Türk Telekom started to provide faster service with 400Gbps Ethernet technology by making the necessary software and hardware updates on its IP network.

With 400Gbps bandwidth, approximately 16 thousand UHD 4K videos can be viewed simultaneously, and the content of a 50 thousand book library can be downloaded in just one second. A 100Gbps bandwidth allows for approximately 4 thousand UHD 4K videos to be viewed simultaneously, while allowing for content equal to a 50 thousand book library to be downloaded in just four seconds.

Türk Telekom leading the development of next generation communication technologies

Türk Telekom continues to work with the Open Networking Foundation (ONF), one of the world's well-known open platforms leading the development of next generation communication technologies.

With the SEBA project, which is closely followed by operators among the ONF platforms, Türk Telekom has taken a leading role in standardizing and building the architecture of the new access platform, which will be fully open-source.

In this context, software improvements compliant with the Türk Telekom network were carried out together with Argela. The VOLTHA-SEBA platform, which provides opportunities for domestic and national software-hardware development, were made operational on the Türk Telekom test network. In the project, which intends to provide an important contribution to the Turkish economy, the first steps have been taken for an ecosystem in which local companies can be chosen as alternatives to foreign companies. Efforts to commercialize the platform continue.

Türk Telekom actively participating in IEEE 1588 Working Group

Türk Telekom actively contributes to the work in the IEEE Synchronization working group (IEEE 1588) and has been selected to host the first working group meeting to be held in 2020.

In 2019, Türk Telekom Group implemented organizational changes to better serve Türk Telekom's sustainable growth strategy, and to ensure strategic cohesion between teams and enhanced synergy, with agile and innovative business models.



The Group provides services with a large family of 32,180 people throughout Turkey, consisting of 17,864 Türk Telekom and 14,316 Türk Telekom subsidiary employees, all experts in their respective fields.

Staff with expertise in their fields across Turkey

Türk Telekom aims to attract highly-qualified employees aligned with the Company's culture and values, and to become the most preferred company in the telecommunications sector with its innovative human resources practices.

The Group provides its services with a large family of 32,180 employees throughout Turkey, consisting of 17,864 Türk Telekom and 14,316 Türk Telekom subsidiary employees, all experts in their respective fields. 36% of Türk Telekom employees are aged between 21-35; 41% between 35 and 45; and 23% 45 and above. At Türk Telekom subsidiaries, 72% of the employees are aged between 21 and 35; 24% are between 35 and 45; and 4% are 45 and above. While the average employee age is 38 at Türk Telekom, the respective figure at Türk Telekom subsidiaries is 36.

20% of Türk Telekom employees are female and 80% are male; while at Türk Telekom subsidiaries, 56% are female, and 44% are male.

10% of Türk Telekom employees have a Master's degree or PhD. 36% have undergraduate and 39% have associate degrees. The corresponding figures at Türk Telekom subsidiaries are 3%, 36% and 27%, respectively.

Labour peace through cooperation and social dialogue

Türk Telekom supports its employees' freedom of association and right to collective bargaining. Labour peace is successfully sustained at workplaces, thanks to effective social dialogue and cooperation with Haber-İş Labour Union.

The number of unionized employees at Türk Telekom Group across Turkey was 10,211 as of December 2019. The 13th Collective Bargaining Agreement, signed

Collective Bargaining right

Türk Telekom supports freedom of association and right to collective bargaining. The number of unionized employees at Türk Telekom Group is 10,211.

between Haber-İş Labour Union and the Company on 5 August 2019, effective between 1 March 2019 and 28 February 2021, determines the wages, other social benefits, and work conditions of unionized employees. There was been no occurrences of strike, suspension of business or work stoppage at Türk Telekom workplaces in 2019.

A human-focused approach

Recognizing its responsibility of being one of the largest employers in Turkey, Türk Telekom adopts pioneering and innovative Human Resources practices in order to manage its human resources effectively.

Türk Telekom Human Rights Policy, which determines the principles and rules governing the management of Türk Telekom's relations with its employees, customers, suppliers, business partners and all stakeholders with due respect for human rights, became effective in 2019, upon approval of Türk Telekom Board of Directors.

Türk Telekom Human Rights Policy has been formulated on the basis of the United Nations Universal Declaration of Human Rights, the Constitution and legislation of the Republic of Turkey and the International Labour Organization (ILO) Conventions ratified by Turkey, in compliance with ethical principles, embodying diversity, respectful of differences, and embracing a participatory approach.

For the Company's staff carried out their activities across Turkey's 81 provinces, this policy ensures a harmonious working environment, where the employees charge work together towards common goals.

Strategy- and growth-focused organizational planning

Organizational efforts and plans are conducted to determine the optimum number and distribution of employees, with a view to serving Türk Telekom's strategic targets more effectively and delivering sustainable growth and profitability. More efficient business models are also implemented thanks to redesigned business processes.

Efforts to expand feedback culture with performance-oriented approach

In order to reinforce the feedback culture at Türk Telekom, improvements in the performance management system have been implemented. In this context, the satisfaction of the employees receiving feedback from their managers with the feedback talks; areas of strength and/or improvement in the feedback talks are determined. These analyses are supported by focus group discussions planned as separate sessions with managers and employees.

In 2019, the assessment of 7,399 employees was completed within the scope of "2018 Year-end Assessment" process, where 5,505 employees received feedback from their managers.

Target Dissemination Meetings, which aim to deploy senior management targets for 2019 to director level, were carried out for each business unit. Cross targets across units were launched at the Target Dissemination Meetings, as a part of the principle of cooperation in a performance culture. Target analyses were performed on the basis of a set of criteria defined for 13 business units and were submitted to the relevant units, in order to increase the quality of performance targets, thereby furnishing the managers with a supporting tool.

2019 Target Setting and Target Review Periods were completed, covering 7,416 employees. Communication activities were carried out throughout all performance periods. Communication activities were enriched by the interim interview questionnaire and monthly feedback mottos upon completion of the Target Review Period, contributing to the dissemination of the feedback culture.

Türk Telekom further fortified with young talent STARTs

Türk Telekom START Young Talent Program aims to support the young talents that will drive the Company into the future with a "young perspective" and an innovative mindset, using developmental methods, and to create a dynamic working environment underpinned by diverse perspectives. 16,087 applications were received in 2019 within the scope of the START program. 68 candidates that successfully completed the assessment process and interviews have started working on a full-time basis.

STARTs who started working at different units underwent a comprehensive development program for 18 months. The START Development Program specially designed for STARTs contributed to the development of their personal and professional skills, thanks to a comprehensive



68 young talents to carry Türk Telekom into the future with a young perspective and innovation, started working on a full-time basis, and were included in an 18-month comprehensive START Development Program.

training program consisting of classroom trainings, project works, field visits, digital learning resources, manager presentations, homeworks, exams, rotation and “Buddy” applications.

STARTs who joined the Company in different functions in previous years came together with Türk Telekom’s senior managers at a breakfast milieu, where they had the opportunity to listen to senior managers’ precious leadership insights, personal experiences and development suggestions. In this framework, a total of 108 young talents came together with 6 Assistant General Managers, which helped to provide the motivation for the STARTs.

The diversification of the communication environments for STARTs in 2019 was aimed at furthering the interactions with them. In this scope, feedbacks were received through regular one-to-one meetings with 68 STARTs that started working in 2019; and their experience in the field of Career Management was monitored, instilling in them a sense of confidence that their development and expectations were supported.

Türk Telekom Academy continues to be a leading corporate school with its “People for technology, development for people” philosophy

In line with the vision and strategies of Türk Telekom, Türk Telekom Academy contributes to the development of employees’ performance in terms of professional knowledge and skills, as well as personal and managerial competencies.

In 2019, Türk Telekom Academy provided training and development services by using current training technologies. A total of 3,531 events were held in this framework. While the training prevalence rate was 81%, 14,424 employees attended classroom trainings at least once. Average training hour per employee was 38 in 2019. Türk Telekom Academy has 278 training classes and 525 active in house trainers in 81 provinces across Turkey.

Türk Telekom Academy making a difference in personal and professional development

Business Schools: Leaders School, Technology School, Marketing School, Sales School, Customer Services School, Human Resources School, Finance School, School of Occupational Health and Safety and Internal Trainers School, designed specifically for the core business functions for employee development have continued their activities.

Personal and Professional Development: Employees’ personal development and professional needs were met by the Personal Development School, business unit-specific schools, vocational catalogue trainings, technical expertise trainings, as well as leadership and talent development programs.

203 group trainings were planned on 26 different topics such as personal development, mind detox, conflict management, telecommunication sector in the big picture, elocution and effective speech, personal leadership, self and stress management, and stretching habitual thinking patterns, with trainings having been assigned to 3,054 employees.

Orientation Program: Organized to ensure that the newly-recruited employees can adapt to their jobs and the corporate culture, this training was held in 7 groups for 155 employees in 2019.



Coaching and Internal Mentoring: Within the scope of the Coaching and Internal Mentoring Program, a total of 42 mentors from different business units shared their experiences with their mentees in 2019, supporting them in their areas of development.

Foreign Language Skill Development: English-speaking clubs were launched to improve the foreign language skills of employees, and additionally trainings such as English writing techniques for business correspondence and presentations were provided. Alongside classroom trainings, employees were also given the opportunity to attend online trainings accessible through Türk Telekom Academy Portal.

Competency Development Schedule: With Competency Development Schedule issued on a monthly basis by Türk Telekom Academy, employees were offered a structured development process, and they were provided with recommendations in the form of videos, articles, e-learning, books, book summaries and individual actions focusing on various competencies such as team development, communication, self-development, business development and customer-orientation. The Competency Development Schedule made a 25% contribution to digital learning hour per person.

Yönetimin
İK PENCERESİ

Türk Telekom Academy Internal Trainers School: In 2019, Türk Telekom Academy had 525 active internal trainers, 90 of whom were trained in 2019.

The trainings developed by the Academy and which started to be delivered by internal trainers in 2019 include Self and Stress Management, Influence & Persuasion, Personal Leadership, Sales Skills, Protocol (Social Behavior) Rules, Emotional Intelligence, Change Management, Understanding Financials, Presentation Skills, Written Communication Techniques, Problem Solving and Decision Making, Manager's HR Framework, Innovative Thinking and Innovation Techniques, English Writing Techniques for Business Correspondence and Presentation Skills Trainings.

Development in Live Broadcast: "Technology Platform" and "Learn Break" live trainings were launched in order to support classroom trainings with state-of-the-art technology; provide all employees from 81 provinces of Turkey with equal training opportunities; ensure smooth access, reliability, interaction with employees and create corporate memory. Within 2019, a total of 32 programs were in 2019, and watched by 24,000 employees.

Excellence in Technology Award goes to Türk Telekom Academy

With its monthly live training programs "Technology Platform" and "Learn Break" aimed at supporting employee development, Türk Telekom Academy received the "Excellence in Technology Award" in "Virtual Classroom and Conference Technology" category by Brandon Hall Awards, the prestigious international business accolade, in 2019.

Türk Telekom develops and expands the leadership culture

Türk Telekom Leaders School: "Türk Telekom Leaders School" was designed in cooperation with Boğaziçi University, one of the pioneering universities in Turkey, to promote the leadership culture to lead the Company into the future. The 6-month, 72-hour program covers 3 different modules. In 2019, 112 Türk Telekom managers participated in the Leaders School.

Manager's HR Framework: "Manager's HR Framework" was launched in 2019 in order to improve team management capabilities of managers; enable them to view HR management from a wider perspective by equipping them with necessary information on HR practices; and promote the development of leadership culture. This program represents "a first" in that, it was drawn up to address the needs of managers at Türk Telekom, and the training related to leadership development was given by internal trainers at Türk Telekom Academy, themselves also managers. The training, which was provided in 55 different groups, was attended by 1,121 managers.

Türk Telekom is ready for the technologies of the future

FTTX Certificate Program: Launched to enhance the knowledge and skills of access technology employees responsible for the operation and maintenance of fiber systems, the “FTTX Systems Certificate Program” held at the Nokia Training Centre in Antwerp, Belgium, was attended by 49 employees in 2019.

Türk Telekom PARS Intranet Certificate Program: As a part of this program, aimed at ensuring that employees at Türk Telekom Regional and Headquarters Offices are fully informed on the infrastructure of Türk Telekom Intranet and that they attain the requisite degree of competence for needed operations, 200 employees were provided with certificates in 2019.

Future Technologies Program: Through “Future Technologies Program” held in Finland and China for one week, information was presented on technologies to shape the future, such as 5G, Internet of Things, and Virtual and Augmented Reality, with theoretical and applied trainings,. The program was attended by 36 managers in 2019.

Cisco Network Expertise Certificate Program: In 2019, 600 employees were included in the program launched with a view to training experts to perform the engineering, installation and management of high-performance network infrastructures, and to perform works to resolve problems before they occur.

Cyber Security School: Cyber Security School was launched with the aim of improving the capabilities of employees working at Cyber Security Department, preparing for cyber threats that the Company may be faced with and reducing external dependency, thereby reducing operational costs.

Mobile Network Operations Certificate Program: The program was designed to provide employees working at Network Management Systems units in Regional Offices and those serving at Mobile Network Operations, with information on mobile network systems, architectural and operational maintenance processes; and to improve their competence in this regard.

5G Certificate Program: Crafted to prepare the employees to 5G, this program includes basic trainings such as general LTE architecture, 5G principles, Understanding 5G, as well as expert trainings for areas such as 5G Core and 5G RAN.

Investment in human resource for 5G: Türk Telekom contributes to developing qualified human resources to work on 5G and beyond next generation communication technologies and digital transformation. In this context, Türk Telekom supports the “5G ve Ötesi Ortak Lisansüstü Destekleme Programı (5G and Beyond Joint Graduate Support Program)” carried out by ICTA. 13 students who graduated from ODTÜ, Bilkent and Hacettepe Universities, Department of Electrics-Electronics, Communication and Computer Engineering with high grades, were determined by interviews and assigned to Türk Telekom R&D department to conduct research on 5G technologies. The students in question, who have enrolled in the graduate programs of the aforementioned universities, prepare their academic theses in the field of 5G technology simultaneously under the roof of Türk Telekom R&D.

“Telecommunication from Masters” Certificate Program: Within the scope of this program, which serves as an epitome for academia-industry collaborations in Turkey, trainings were held at the Telecommunications Laboratories established at Technical Sciences Vocational High Schools in 14 different universities. As a result of the trainings provided, 1,984 students in total were awarded certificates until year-end 2019, with the sector’s qualified labour force requirement thus having been met.

Pioneering approach in training technologies

Türk Telekom maintains its pioneering status in technology in training technologies as well. In 2019, the share of e-learning in total training hours increased to 24% through alternative training technologies.

Training, sales and business development activities of Türk Telekom Akademi

Educational contents and development programs that are reflective of Türk Telekom Academy's training experience, are offered to public and private institutions. In this context, training needs of numerous public and private sector institutions were met by Türk Telekom Academy, with sales of training products realized in 2019. Training programs were organized in personal and professional development areas with institutions such as Türk Hava Yolları, Vakıf Katılım and Presidency of Defense Industries in 2019.

Türk Telekom Academy organized training events at Türk Telekom Regional Offices for Strategic, Major Customers and Public Segments in order to train Cyber Incident Response Teams and provide trainings on Law on the Protection of Personal Data. 19 events were held in 7 different regions and companies in excess of 170 companies were accessed with these trainings.

In addition, foreign language trainings, career and career plus training packages, certified training programs and fast reading programs offered through the website of Türk Telekom Academy were sold to Consumer and SME customers in the form of a supplementary package along with internet products.

The share of e-learning increased to 24%

Türk Telekom maintains its pioneering status in technology in training technologies as well. In 2019, the share of e-learning in total training hours increased to 24% through

alternative training technologies. Around 175 training videos were produced at the Academy Video Shooting Studio. On a weekly basis, employees were assigned a wide range of videos on various topics including next-generation technologies, professional development and an array of current issues, using Mobile Academy products.

Türk Telekom Academy offers training and development opportunities to all with Tivibu

Türk Telekom Academy started offering training and developmental videos on Tivibu platform free of charge, and 62 videos on 13 different topics were uploaded to the platform. The videos, produced together with expert professional trainers, address various topics of interest including Psychology, Learning and Development, Communication in the Family, Stress, Project Management, Agility and Hobbies.

Applications that teach while entertaining

Within Türk Telekom Academy, technological applications are designed with a view to making Türk Telekom employees learn while having fun. Designed to support employees' pre- and post-training learning processes, next-generation training technology applications "Rootie" (reinforcement) and "QuizGame" (interactive Q&A) have enabled the presentation of complex training topics to employees in an engaging manner.

Robotic Coding Project

"Trainings for Coding Trainers" were offered at Robotic Coding Workshops at 3 schools in Keçiören district of Ankara in collaboration with the District Directorate of National Education to ensure that teachers of all branches working across the district were informed on the issue. The trainings dubbed "Keçiören is Coding", conducted with the support of Türk Telekom Academy, have been completed. Türk Telekom Academy continues to support the transformation of education throughout the country.

Orkestra: Integrated Talent Management Process

Türk Telekom's integrated talent management system Orkestra supports the recruitment of right people to right roles; boosting employee motivation for development; achieving sustained progress through emphasis on strengths, as well as areas for development; and bolstering effective employee performance.





360° Competency Assessments, which pave the way for greater personal awareness on the part of employees, providing assessments and feedbacks in terms of their corporate competencies from multiple angles, were completed for nearly 6,803 employees in 2019.

Orkestra consists of three basic phases, namely Performance Management, Talent Management (Potential Evaluation) and Training/Development (Development Planning).

360° Competency Assessments, which pave the way for greater personal awareness on the part of employees, providing assessments and feedbacks in terms of their corporate competencies from multiple angles, were completed for nearly 6,803 employees in 2019. 58 Talent Management Committee Meetings were held, where all employee assessment results were reviewed and development needs were evaluated, on a business unit basis. To ensure organizational continuity, contingency plans have been defined for executive positions above a certain level, and Critical Position Succession Plans were prepared.

“Assessment/Development Center and Development Consultancy Programs” have been developed with a view to bolstering employee self-awareness and development, within the scope of Türk Telekom Leadership Model. In 2019, Assessment/Development Center activities were carried out for 64 employees, while one-to-one development consultancy activities were performed for 62 employees using internal resources. Thanks to these tools, employee development needs are evaluated together

with the employees themselves and their managers, with development actions planned and monitored.

Within the scope of 2019 career movements, 61 managerial and 682 expert level vertical career movements (promotions) were concluded at Regional/ Headquarters offices.

In addition, career paths were designed for business functions, in order to enhance employee awareness on transition opportunities within the Company compatible with their area of expertise, and to map out career movements.

Launched in 2019, Personal Discovery Workshops, which offer an interactive interaction environment allowing personal discoveries by employees, and where learning by experience takes center stage, were attended by 72 employees.

Employer brand communications at Türk Telekom

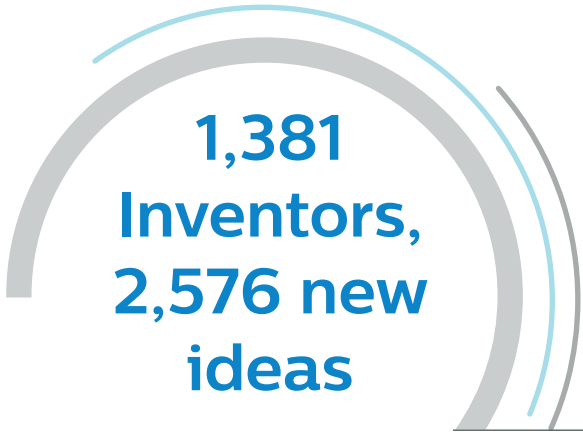
Various employer brand communication activities were executed, in the context of Türk Telekom’s preferred company status.

Campus Communications: Türk Telekom employer brand team attended events held at universities, such as seminars, career days and promotion days, within the scope of its young talent program START. The Company attended 28 events in total at 25 different universities in 2019, reaching more than 3,500 students, and shared information with potential young talents about Türk Telekom and the telecommunication sector.

Presentations addressing the relevant departments of the universities were delivered at career events, and the experience shared by Türk Telekom leaders garnered significant attention from young talents.

University events were made fully compliant with the START process in 2019. Employer brand activities were optimized, also taking into consideration Türk Telekom’s recruitment criteria for the employment of young talents.

Türk Telekom Career Web Site: Those wishing to join Türk Telekom family or receive information on Türk Telekom Human Resources can easily and quickly access information leave their CVs if they wish. Easily viewable on all devices thanks to the “Responsive Web Design” approach, www.turktelekomkariyer.com.tr now features current issues of “Türk Telekom Magazine”, while employee success stories are publicized via a platform smoothly accessible by everyone.



1,381 inventors suggested a total of 2,576 new ideas within the scope of the “Inventor Idea Development System”, allowing all employees to share their innovative ideas. 75 ideas and their inventors were rewarded by the Innovation Committee.

Social Media Communications: Employer brand communications for young talents and professionals are carried out via Türk Telekom Career social media accounts. Türk Telekom is introduced to candidates with an extensive coverage featuring life at Türk Telekom, Human Resources practices, current news, career recommendations, campus events, competitions, with active and continuous social media communication.

Internal Communication Activities

Alternative communication channels such as instant notification application and digital screens were actively used in 2019, within the scope of internal communication activities, ensuring diversity in employee communications. Bulletins such as “Gündem” (Agenda) and “Cuma Postası” (Friday Post) were revamped to enhance readability. New features continued to be added to the internal communication portal Türk Telekom Port, to increase its social impact and allow the employees to interact with each other. Within the framework of integrated communication, announcements made by e-mail were supported by an instant notification application, ensuring that news and announcements were received by every single employee.

The employee contribution in “Türk Telekom Güncel”, the Company’s internal communication magazine, was raised further, and the magazine continued to be published with a rich content. The magazine, also featuring employees’ non-business achievements and hobbies, was made digitally accessible to everyone via Türk Telekom Career web site, with a view to supporting the employer brand as well.

In addition, a campaign titled “Abbreviations Shorten the Route” was launched to facilitate internal communication within the Company. With this campaign, the goal was for diverse units within Türk Telekom to share their own communication codes. Within the scope of the project, each week a different unit shared with the entire Company via e-mail the abbreviations it used in the business world, along with their meanings. The objective of raising awareness for such expressions among the employees working in a distinctly technical telecommunications sector, was observed to have been met.

Employee Motivation and Loyalty Projects

New internal communication projects were launched, and existing projects were further developed, to galvanize employee motivation and loyalty, as well as to uphold employee development.

Inventor Idea Development System: Türk Telekom attaches substantial importance to employees’ contribution to the Company management with innovative ideas. The “Inventor Idea Development System” allowing employees to participate in the Company management was launched in 2016, and a total of 2,576 new ideas were suggested by 1,381 inventors since 2016 until year-end 2019. Ideas that are consistent with the criteria and deemed applicable as a result of an evaluation process are proffered to the Innovation Committee comprised of senior managers. 75 ideas and their inventors were rewarded by the Committee.

As of 2020, Inventor Idea Development System will be proclaimed under a different title and brand as a competition, and transformed into an innovative idea development platform where ideas gathered from a pilot province are selected on the basis of a venture logic and executed. Inventor Idea Development System, which is undergoing revisions including gamification elements, is aimed to be evolved into a more enjoyable and smarter innovation platform for Türk Telekom employees.



Instant Rewarding

102 success stories were shared with the Instant Awards selection committee in 2019. 65 of those were deemed worthy of an award by the committee, and 152 employees were rewarded.

“Instant Awards” appreciating success: Improvements were made in the Instant Awards system that rewards Türk Telekom employees for their innovative works and outstanding achievements. This has made it possible to allocate more time for the assessment of extraordinary ideas. In 2019, communication activities were performed with managers over the Instant Awards process and award criteria, where the rate of approval was extended.

102 success stories were shared with the Instant Awards selection committee in 2019. 65 of those were deemed worthy of an award by the committee, and 152 employees were rewarded.

Motivation activities bolster employee loyalty and team spirit

Türk Telekom Employee Events team organizes team events to increase the motivation and loyalty of employees, as well as augment work efficiency. In this framework, 33 events were held with the participation of 2,240 employees in 2019. A high degree of satisfaction was noted among the employees during the events, which served to boost team synergy and instill a culture of celebrating success together.

Türk Telekom stands by its employees on special days

Türk Telekom stands by its employees with its special day celebrations and gifts. In 2019, employees were emotionally gratified on their special days, where activities were held to motivate them. On March 8th, International Women's Day, all female employees were given specially-designed recyclable cloth bags; and on Mother's Day, specially-designed celebration letters signed by the Chairman of the Board of Directors were sent to the home addresses of those employees that are mothers.

“Children's Theatre Events” were held on April 23rd, where all employees in Ankara had a fun day with their children; and a Board of Directors Meeting video, shot for April 23rd with the participation of employees' children, was shared with all employees as a nice surprise.

Theater plays were performed during lunch breaks in the month of Ramadan under the name of “Türk Telekom Theatrical Troupe”, at the Company's İstanbul and Ankara Head Offices, as well as many other Regional Directorate offices, in a bid to boost employee motivation.

A “Türk Telekom START Onboarding & Orientation Event” was held with the participation of the Chairman of the Board of Directors and CEO, and received favorable feedback from everyone.



Acting on the principle of a transparent and close relationship with its stakeholders, Türk Telekom met over 350 equity and bond investors in various locations, especially in the USA and in the UK during 2019.



**5 times
oversubscription**

Türk Telekom's USD 500 million bond issuance in February 2019 was 5 times oversubscribed, with demand from 264 investors across 39 countries.



Türk Telekom's USD 500 million bond issuance in February 2019 5 times oversubscribed, with interest from 264 investors across 39 countries

Türk Telekom is an integrated telecommunication and technology services provider. Its main shareholders are LYY Telekomünikasyon A.Ş. (LYY) (55% share), the Ministry of Treasury and Finance (25%), and the Turkey Wealth Fund (5%).

15% of the shares in Türk Telekom are publicly traded on the Borsa İstanbul (BIST) under the TTKOM ticker.

As of the end of 2019, the Company's market capitalization was TL 25.8 billion.

On 28 February 2019, Türk Telekom completed issuance of debt instrument with a nominal value of USD 500 million and six-year maturity by selling to qualified investors abroad. The redemption date of the bond is 28 February 2025, with the coupon rate set at 6.875% and re-offer price at 99.396%.

This bond issuance was the first Turkish corporate transaction to take place since April 2018, and was the first Turkish Eurobond issuance to be priced inside its fair value since May 2016. The issuance was 5 times oversubscribed, attracting interest from 264 investors across 39 countries. The debt instrument trades on the Irish Stock Exchange. In addition, Türk Telekom's 10-year bond with a nominal value of USD 500 million, issued in 2014, continues to be traded on the Irish Stock Exchange.

Türk Telekom engaging in a transparent and close communication with stakeholders

Türk Telekom's Investor Relations Department reports directly to General Manager/CEO with respect to the management of relations with existing and potential shareholders and fixed income investors on a regular basis, to answer investor and analyst questions in the most effective manner and to carry out activities with the aim of increasing the value of the Company.

Türk Telekom attended 11 investor conferences and 8 non-deal roadshows in various locations, in particular in the USA and in the UK, throughout 2019. The company also participated in the deal-roadshow in the US and UK within the scope of the bond issued in 2019. With numerous meetings held in Istanbul as well, Türk Telekom met over 350 equity and fixed income investors in 2019.

During 2019, following the release of the quarterly financial and operational results, teleconferences were held to share the assessments of the company's senior management on the relevant quarter and to provide investors and analysts with the opportunity to ask questions to the management. In addition, meetings were held with the aim of bringing together the senior management of Türk Telekom with analysts and enabling effective face-to-face communication.

Türk Telekom takes the utmost care to implement the principles stipulated in the Corporate Governance Principles issued by the Capital Markets Board and monitors the interests of all shareholders and stakeholders at equal distance in a transparent and close relationship.

Türk Telekom's Investor Relations Director also serves as a member of the Corporate Governance Committee.

With its initiatives, Türk Telekom has raised its position in the national and international indices in the areas of Corporate Governance and Sustainability

Türk Telekom has been included in the BIST Corporate Governance Index since 2009 and is the only telecom company to be listed in the Index.

Moreover, Türk Telekom has been included in the BIST Sustainability Index since 2014 when the index was established. The importance that the Company places on environmental, social and corporate governance policies and its exemplary practices have played an important role in Türk Telekom's successful performance in the BIST Sustainability Index.

Türk Telekom is also included in the international FTSE4Good Index, where the performances of companies with strong and exemplary applications in the field of environmental, social and governance (ESG) practices are evaluated.

In 2019, a Human Rights Policy was prepared to ensure that Türk Telekom complies with human rights in its relations with its employees, customers, suppliers, business partners and all of the Company's stakeholders. The United Nations Universal Declaration of Human Rights, the Constitution of the Republic of Turkey, the International Labor Organization (ILO) Conventions and other conventions ratified by the Republic of Turkey, as well as national legislation on human rights and work life formed the basis for this policy.

In addition, within the scope of Article 4.3.9 of the CMB Corporate Governance Principles, the "Women Board Member Policy" was established in order to give priority to women in the election of members to the Board of Directors and to strengthen the position of women in the company's high-level decision-making process.



Türk Telekom takes utmost care to implement the principles stipulated in the Corporate Governance Principles issued by the Capital Markets Board. In this context, an independent corporate governance compliance assessment is carried out annually. A corporate governance rating report was prepared on 12 December 2019 by SAHA Kurumsal Yönetim ve Kredi Derecelendirme Hizmetleri A.Ş. which has permission to operate in Turkey to provide ratings in accordance with the CMB Corporate Governance Principles. As a result of this study, the company's rating was increased from 92.87 in 2018 to 94.00 in 2019.

Türk Telekom takes utmost care to ensure that internal processes function in compliance with CMB legislation. Online training is provided within the company in order to raise awareness regarding CMB legislation. In 2019, approximately 10 thousand employees completed the online training programs held within this scope.

The Company monitors its employees who have access to insider information through the system established for this purpose.

A versatile and effective approach to stakeholder communication

Having adopted a leadership position in Investor Relations, Türk Telekom carries out the most advanced practices.

The content of the Investor Relations website is prepared by taking into account the needs and expectations of retail/institutional investors, analysts and the stakeholders which constitute the company's target audience. The website provides access to important strategic, financial and operational information, as well as Türk Telekom's investment theme.

The content of the website, which enables shareholders and stakeholders to access information in the easiest way, is updated simultaneously in both Turkish and English.

In addition, the Investor Relations website includes a "Contact Form" where shareholders and stakeholders can communicate with Türk Telekom instantly.

Recent announcements such as regulatory disclosures made by Türk Telekom on the Public Disclosure Platform (KAP) are sent simultaneously to the distribution list of the stakeholders, including analysts and investors who opt to receive them. These announcements are also shared on Twitter.

International awards for Türk Telekom's 2018 Annual Report

Türk Telekom won a total of 24 awards in four different categories at the Vision Awards organized each year on an international platform by the League of American Communications Professionals (LACP) with its 2018 Annual Report prepared by the Türk Telekom Investor Relations and including current financial and operational results and information regarding the Company strategy.

In the evaluation made by the jury, the report received 99 points out of 100 in the "First Impression", "Report Cover", "Letter to Shareholders", "Report Narrative", "Report Financials", "Creativity", "Message Clarity" and "Information Access" categories. Türk Telekom's Annual Report, which ranked first in Turkey's Top 10 reports, was ranked 5th in the EMEA region (Europe, Middle East and Africa) and 12th in the Worldwide Top 100 Reports.

Within the scope of the 2018 Vision Awards, Türk Telekom's Annual Report for 2018 was evaluated as the "Annual Report" and "Integrated Report", in the "Telecommunication" main category as well as the "Conglomerates/Holding Companies" category.

The report received Platinum awards in the general classification of the Conglomerates/Integrated Reports category, three Gold awards in other categories, four Platinum awards in Report Financials - EMEA Region and four Gold awards in Report Financials - Worldwide.

In addition to these awards, Türk Telekom's Annual Report received 12 awards with its performance in the Top 100 Reports Worldwide, the Top 50 Reports in the EMEA Region and the Top 10 Reports in Turkey categories. The report was found to be worthy of six awards in each of the four categories it was evaluated in, and received a total of 24 awards.

**Guided by our principle
of “Accessible
communication for all”,
we strive for a
sustainable world**





Sustainability and Corporate Social Responsibility

Türk Telekom espouses a sustainability approach that is focused on creating value for all shareholders and stakeholders, alongside a strong financial performance.



As a participant to the United Nations Global Compact initiative, Türk Telekom has also undertaken a commitment to comply with ten basic universal principles in the areas of Human Rights, Labour, Environment and Anti-Corruption.

Sustainability

Türk Telekom's Sustainability approach

Türk Telekom considers sustainability, which it evaluates from a short, medium and long-term perspective as one of the key elements in generating value for its stakeholders, alongside a strong financial performance.

Based on this approach, Türk Telekom identifies the effects of its activities on sustainability from economic, corporate, environmental and social angles and determines its policies by considering the expectations of all its stakeholders in these areas. The Company shapes these policies in the light of its responsibilities, obligations and duties to the environment, its employees, all stakeholders and the society.

Türk Telekom plans to fully integrate the universal principles of sustainability into its business model, strategies and corporate decisions. The Company implements many projects and initiatives designed in this direction in close cooperation with its stakeholders.

Aiming to touch all segments of society and eliminate the digital gap in society with the principle of "Accessible communication for all", Türk Telekom fulfils its corporate social responsibility by contributing to efforts to promote access of information to all segments which may experience difficulties in participating in social life for economic, social, regional or physical reasons.





Türk Telekom transforms its business processes and office practices in line with sustainable innovation principles with the goal of leaving a habitable world for future generations. Believing in the importance of human and environment-oriented working conditions, the Company sees participation all of its employees, their families, suppliers and customers – in brief, its stakeholders – in this process as part of its strategy.

Going beyond being a telecommunications operator, Türk Telekom, which is one of the main players in the transition into the information society, takes into account the principles and requirements of quality, environment, occupational health and safety, customer satisfaction management systems in all business processes.

With its strong corporate governance perspective, Türk Telekom takes the utmost care to protect stakeholders' rights, which are regulated by relevant legislation and mutual agreements, in its transactions and activities. In cases where the rights of stakeholders cannot be protected by legislation and mutual agreements, the interests of the stakeholders are protected within the framework of good faith rules and Universal Human Rights and to the extent of the Company's capabilities.

Türk Telekom is a member of the FTSE4GOOD index series and the BIST Sustainability Index.

As a party to the United Nations Global Compact, Türk Telekom has also undertaken a commitment to comply with ten basic universal principles in the fields of Human Rights, Labour, Environment and Anti-Corruption.

Efficient use of resources increasing in Türk Telekom Smart Cities

Türk Telekom has launched many initiatives as a part of its efforts to attain sustainability goals. One of these initiatives is Türk Telekom Smart Cities, which aims to develop integrated solutions tailored to the needs of each city, thanks to next generation urbanism approach and next generation urban technologies. The initiative aims of a sustainable society by achieving savings in resources.

The Türk Telekom Smart Cities initiative, which has been implemented to permanently facilitate the lives of citizens and public authorities by using information and communication technologies, enables forward-looking decision making by processing data collected from different channels such as sensors and vehicles on the Company's IoT platform.

The initiative aims to achieve increased efficiency, savings and interaction with citizens and energy savings in all public services related to smart life, from traffic and health to irrigation and lighting. In the projects, 50 different solutions can be monitored and managed in the areas of next generation transportation, the environment, health, safety, life and energy through a single interface from the operation center with the Next Generation City Management Platform.

The next generation city applications have paved the way for savings of approximately 40% in electricity and 30% in irrigation. Smart transportation applications have managed to reduce the amount of time spent in traffic by approximately 35% and brought fuel savings of 30%, reducing carbon emissions by 25% during the time spent in traffic. In addition, city life is facilitated by next generation applications offered under the headings of smart energy and smart management.



Leading role in smart city applications

Türk Telekom leads Turkey's largest smart city projects with its solutions suitable for the next-generation approach to city planning.

With smart health practices, the health status of over 400 chronic patients is monitored and periodic checks are carried out. With its smart environment practices, over 700 thousand people can benefit from open area WiFi services free of charge.

Modern, innovative and technological OSB solutions (Smart Organized Industrial Zones solutions) that provide substantial savings in terms of resources to the economy also offers important contributions in areas such as production quality, efficiency, safety, and environmental awareness.

Smart OSB applications aim to make production output more efficient by offering more effective solutions for the production lines of businesses and manufacturers. Organized Industrial Zones, which produce and distribute energy, are able to monitor information instantly with the SCADA (Supervisory Control and Data Acquisition System) and Automatic Meter Reading System, and provide savings through the effective use of systems such as next generation lighting and irrigation.

The applications aim to eliminate risk factors by integrating next generation security solutions components with the existing systems of the Organized Industrial Zones, by making security elements traceable and manageable in each operation. Temperature, humidity,

noise, smoke, flooding, air / water quality monitoring, pressure, gas and waste material measurements are performed to ensure reporting and control, while next generation waste management systems serve to prevent environmental pollution.

Within the scope of the Türk Telekom Smart Cities initiative, Turkey's first integrated next generation city project was implemented in Karaman, with the Antalya and Kars Smart City projects then being commissioned. With these projects, smart applications developed by Group companies and domestic solution partners under the leadership of Türk Telekom were integrated into public services and urban life.

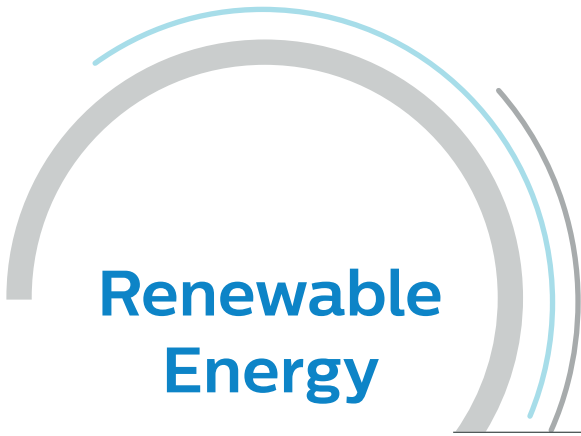
Türk Telekom carries out efforts to expand Smart City projects in all the 81 provinces and continues introductory activities in numerous municipalities.

As well as the Smart City projects, Türk Telekom implemented Smart City Furniture solutions in the Bayburt Demirözü, Osmaniye, Giresun and Trabzon Municipalities; City Information Display solutions in the Yakutiye, Diyarbakır and Edirne Municipalities; Home Health Solutions in the Kadirli Municipality and the Smart City Mobile Application solution in the Artvin Metropolitan Municipality

Türk Telekom takes measures to promote productivity and human health at its base stations

The measures taken and the solutions developed by Türk Telekom in order to achieve higher productivity at base stations and to protect human health are summarized below:

- Equipment with a high level of energy consumption in use at Türk Telekom is replaced with lower energy consuming models in line with the objective of increasing energy savings. This project, which is currently being carried out in the İzmir and Bursa regions, is planned to be completed in 2020.
- DC Inverter energy sources, with high energy losses, have been replaced with models that operate at high efficiency. The old type DC Inverter backup units, which later became redundant, have been recycled in an environmentally friendly manner at the recycling facilities.
- In order to reduce greenhouse gas emissions at the base stations, environmentally friendly air conditioning gas is used. Air conditioning units in the field were dismantled in 2019 and old-type free-cooling devices were installed in the fields for trial purposes following



Thanks to Türk Telekom's solar power systems in 1,700 locations, its renewable energy generation capacity has reached 2.3 MW.

the software updates. Their energy consumption has been monitored; the project is planned to be expanded in 2020, depending on the results.

- Energy losses are minimized thanks to regular maintenance and repair of the base stations.
- Electromagnetic field measurements are carried out before and after installation of base stations, ensuring that they work safely, both for the public and for the environment.
- During the planning, design, installation and operation stages, attention is placed on minimizing the human and environmental intervention factors at base stations and all necessary precautions are taken.
- In the interests of human health and environmental safety, which is considered as a primary priority, all necessary safety equipment is used and necessary updates are performed to prevent base stations from being affected by natural disasters and endangering the environment and public health. In 2019, 750 base station towers underwent detailed inspection and updates were made in line with requirements.
- Base stations are monitored 24 hours a day with the highest level of operational capability achieved by ensuring the fastest response to the site in emergency situations and natural disasters.

Türk Telekom stepping up work in the field of energy efficiency

Aware of the impact of high energy consumption on society and the environment, Türk Telekom attaches importance to investments and work in the area of energy efficiency and renewable energy. The activities carried out and achievements obtained in this context are summarized below:

- Türk Telekom systematically reduces carbon emissions through its efforts to use renewable energy and through efficiency projects. The solar energy system is used in approximately 1,700 Türk Telekom locations. This system has a total installed capacity of around 2.3 MW.
- The Company's low-efficiency cooling and voice communication systems are being replaced with high efficiency equipment. Air conditioning units used in the system rooms are replaced with next generation, low energy consumption free-cooling air conditioners, thus helping to lower carbon emissions. With the Smart Metering project, energy consumption can be monitored real-time and in detail when necessary.
- Services in older generation systems that have completed their technological useful life are transferred to next generation transmission systems, thus providing ease of maintenance and operation, energy savings and enhanced service quality.
- In Türk Telekom offices, space is being saved through building / system hall optimization projects, bringing about a significant reduction in energy consumption in cooling.
- In addition to recycling and savings, reductions in carbon emissions is achieved with the use of energy saving light bulbs, thermal insulation and sheathing, building automations, an environment friendly fleet of vehicles, paper recycling, the electronic document and documentation system, central printing systems, e-learning, telepresence and video conferencing.

Türk Telekom sets annual targets for reducing electricity consumption and fuel consumption. Senior management and related employees were given targets for reducing annual electricity consumption in 2019. Despite an increasing number of customers, frequency bandwidth and capacity, Türk Telekom succeeded in reducing its electricity consumption in the fixed segment by 3% in last two years and reached 770 MWh in 2019. Türk Telekom is one of the few operators in the world to have succeeded in reducing its electricity consumption for the past four years.

Türk Telekom continues to take part in the Carbon Disclosure Project

In its efforts to reduce greenhouse gas emissions, Türk Telekom supports various sectors with its low carbon emission product and service solutions. The Company considers greenhouse gas management and efforts to



Türk Telekom continues to report to the CDP, the most comprehensive environmental initiative in the world, and to raise its score.

combat climate change as important issues and includes them in its overall strategy. Türk Telekom's goal at this stage is to continue to stand as an example to the sector in combating climate change and to support companies in other sectors.

The Carbon Disclosure Project (CDP) is an international organization with the largest climate change database in the world, reporting globally on how climate change risks are being managed by companies every year. The responses of the companies participating in the project regarding the management of environmental risks are evaluated in accordance with the CDP environmental data rating methodology.

Environmentally sensitive companies share their greenhouse gas emission records, management of water resources and climate change strategies with investors through the CDP in order to set their mitigation targets and enhance their performance.

Türk Telekom participates in the CDP organization, where high performance companies report worldwide. Türk Telekom, which completed its first reporting to the CDP in 2011, was the first Turkish telecommunications company to participate in this global initiative.

In the 2018 CDP reporting, Türk Telekom disclosed projects aimed at increasing energy savings and renewable energy use, reducing fuel consumption and carbon



monoxide emissions, annual energy saving targets, Smart City projects, Cloud Eye technology and projects which positively support the efforts to tackle climate change. With the report prepared in this scope, the Company increased its score by two notches from D+ level to C+ (Awareness).

Within the scope of CDP reporting carried out by Türk Telekom in 2019, calculations of emission resulting from the Company's activities have been verified by the authorized independent organization. The score in the CDP report, prepared in accordance with the 2018 data, improved again to reach B + (Management), thus the Company achieved the highest score among telecom operators in Turkey.

The departments throughout the Türk Telekom organization are all given annual emission reduction targets and their realizations are regularly monitored.

Türk Telekom aims to set strategic emission reduction targets that will cover 5 and 10 year periods until the next reporting, and further reduce the carbon emissions that can be managed across the Company.

Stepping up efforts to expand the occupational health and safety and environmental culture

Türk Telekom is required to take the necessary measures in workplaces as stipulated by the Occupational Health



Zero Waste Project

Türk Telekom takes part in the Zero Waste Project to prevent waste, to use resources more efficiently and to leave a habitable environment for future generations.

and Safety Law and the Environmental Law, and the legislation published in line with these laws. Türk Telekom carries out a wide range of studies in Occupational Health and Safety in order to prevent occupational accidents and to ensure its employees can continue their work in a safe and healthy work environment.

Türk Telekom takes a proactive approach to creating a healthy and safe working environment in its workplaces in order to protect itself from the dangers and risks arising from activities, products and services. The Company carries out work to identify risks, prevent and reduce occupational accidents, occupational diseases and eliminate environmental risks that may occur as a result of existing risks. In this context, risk and environmental impact assessment tables are prepared and reported.

Occupational Health and Safety Boards have been established in the Company's workplaces in order to ensure the health and safety of employees, to identify potential risks and take necessary measures. These Boards ensure that the occupational health and safety activities are planned and evaluated, the risks that may cause occupational accidents and occupational diseases are identified and necessary measures are taken.

These boards, where employee representatives also participate as members, evaluate all kinds of notifications regarding the occupational health and safety of employees.

Audit planning and results, training, information sessions, sub-contractor activities, occupational health and safety activities, risk assessments, work accidents, incident

reports and accident statistics are included in the agenda of the Occupational Health and Safety Boards.

Türk Telekom organizes competitions and events to spread awareness of Occupational Health and Safety and environmental issues.

Türk Telekom's three regional directorates operate under the ISO 14001 Environmental Management System and the OHSAS 18001 Occupational Health and Safety Management System.

The OHSAS 18001 Occupational Health and Safety Management System ensures continuous improvement of occupational health and safety performance, creating a better working environment for employees and minimizing occupational accidents. There were no fatal accidents in 2019.

The company carries out systematic efforts to improve environmental management and reduce environmental damage within the scope of the ISO 14001 Environmental Management System Certificate. Türk Telekom did not suffer any environmental accidents, and was not issued with any environmental fines in 2019.

Trainings are organized for a sustainable world at Türk Telekom

Since December 2011, Türk Telekom provides all employees with online training on climate change, the risks associated with climate change and the simple changes that can be made to mitigate these risks. The company also carries out in-class training and distance learning courses on energy efficiency and occupational health and safety legislation.

In 2019, 17,778 Türk Telekom employees received training on occupational health and safety legislation

On October 5th, World Environment Day, a video prepared by Türk Telekom covering environmental activities such as zero waste, electronic waste and CDP was shared with all employees.

Supporting sustainable development with waste management strategies

Waste management strategies aimed at preventing the rapid consumption of natural resources and transforming waste from being a threat to the environment and human health into an input for the economy form the basis of the sustainable development approach, which is turning into a priority policy target on a global scale.

Türk Telekom carries out extensive work in the area of waste management within the scope of its sustainable environmental policy.

Zero Waste Project

Within the framework of the principles for sustainable development, the Zero Waste Project was launched in Turkey with the aim of protecting the country's resources, curbing waste and leaving a clean and developed Turkey



and a habitable world to future generations. The project is planned to be implemented in phases until 2023.

Türk Telekom also takes part in the Zero Waste Project. 105 tonnes of paper, 30 tonnes of plastic, 10.5 tonnes of glass and 5 tonnes of metal waste were recycled at Türk Telekom as a result of the Zero Waste Project carried between January–July 2019.

Waste recycling

Türk Telekom takes actions for recycling of wastes in a manner that does not harm the environment and is in accordance with the standards and methods determined in the related regulations, and disposal of waste if recycling is not possible.

Highlights from the results of waste management projects carried out in Türk Telekom in 2018:

- 150 liters of oil was saved by recycling 1.5 tonnes of glass waste.
- 1,054 grown pine trees were saved from being cut by recycling 62 tonnes of waste paper.
- A total of 180,928 tonnes of raw materials were saved through the recycling of 1,904 tonnes of waste metal.
- A total of 2,806,164 kW of energy was saved thanks to the recycling of 486 tonnes of waste plastic.
- By recycling 21 liters of waste oil, 21 million liters of water pollution was prevented and contribution was provided to biodiesel production.
- Medical wastes were sent to licensed disposal facilities, contributing to renewable energy production.

Electronic Waste Collection Campaign

According to the Regulation on Waste Electrical and Electronic Goods Control, targets are set for manufacturers to recycle the electrical and electronic devices they put on the market in the amount specified by year. In line with its targets set in accordance with this legislation, Türk Telekom continued its campaign, which it started in 2017, to collect its modems in the market in 2018 and 2019.

With campaigns and organizations such as the Waste Collection Competition carried out within the Company, employees were able to contribute to the process and the revenues generated from the collected wastes are used to fund corporate social responsibility projects.

In order to increase awareness of the damage caused by electronic waste to the environment, to reduce such damage by recycling these wastes in the correct way and

E-invoice and Digital Document

Türk Telekom undertakes initiatives such as E-invoice and Digital Document to contribute to the environment in its sales channels as well.

converting the resources obtained into value for Turkey, “E-atıklarınızı Getirin, Yarınlar Daha Yeşil Bir Dünya Bırakın! (Bring Your E-Waste, Leave a Greener World for Tomorrow)” campaign was initiated. This campaign, organized in the form of a competition for Türk Telekom employees and their families, aims to contribute to Turkey’s future and sustainability. In the third phase of the project carried out in 2019, more than 10 thousand items of e-waste was collected all over Turkey.

In 2017, with the revenue collected as a result of the Electronic Waste Collection Campaign, the Company provided a contribution to the education of 55 children.

The electronic waste revenues generated as a result of the 2018 campaign was donated to the Kızılay (Turkish Red Crescent).

Türk Telekom takes initiatives to contribute to the environment in its sales channels as well

E-invoice application

Türk Telekom takes initiatives to support the sustainability of the world and aims to increase the rate of customers using e-invoices for this purpose. Türk Telekom, which currently has an e-invoice ratio of 75%, organizes new campaigns to increase this rate. In this context, the prerequisite for becoming an SMS e-invoice subscriber has been added as a condition for participation in the existing “Sil Süpür” campaign in the mobile segment, which offers customers a range of significant advantages.

Türk Telekom not only saves money through these efforts, but also provides a key contribution to the environment. Thanks to the use of e-invoices in 2019, Türk Telekom’s contribution to the environment can be summed up as approximately;

- 66 thousand trees,
- 16 million Kwh energy,
- 125,000 m³ water conservation.

Digital document application

With a new application launched in 2019, Türk Telekom has started to receive legal documents from its customers through digital media with tablets and biometric pens, which it distributes to dealers. This new improvement has enabled the following;

- Dealers have been able to focus on customer satisfaction by facilitating paperwork processes,
- Dealers have been able to carry out the paperwork process, which is a legal requirement for recording customer information, in a digital environment much more rapidly and easily, thus increasing customer satisfaction.
- Savings in paper and cargo and courier costs related to the transportation of documents have been achieved.

Afforestation campaign organized within the scope of “Senin de Dikili Bir Ağacın Olsun” the project

In order to demonstrate Türk Telekom’s sensitivity to the environment, an afforestation campaign was organized at the Ankara Central Campus with the slogan of “Senin de Dikili Bir Ağacın Olsun (Leave behind a tree)”.

A total of 220 trees were planted by determining which tree species would be most suitable for the city’s climate. By participating in this campaign, Türk Telekom employees took steps to leave a beautiful world to future generations.

Significant support from Türk Telekom to a “Breath for the Future” with 38,540 saplings

Within the scope of the “Breath for the Future” campaign implemented by the Ministry of Agriculture and Forestry in order to leave a greener Turkey to the future generations, Türk Telekom donated 38,450 saplings on behalf of all employees. Contributing to the country’s digital transformation with numerous projects, investments and cooperation, Türk Telekom stood out with its support for leaving a better and greener Turkey to the future generations with this donation.

Consistent with its goal to be the brand to fulfill the communication needs of all segments, Türk Telekom **undertakes works to ensure equal opportunities in access to information across Turkey.**



Corporate Social Responsibility

Türk Telekom implements projects to address the requirements of the society with its motto of “Accessible communication for all”

Türk Telekom considers contributing to access to information for all segments who cannot participate in society due to economic, social, regional or physical reasons and eliminating the digital gap in the society as its corporate responsibility.

Working with the principle of “accessible communication for all”, Türk Telekom has adopted the Sustainable Development Goals of the United Nations as its guiding principles. The Company carries out particularly corporate social responsibility projects that add value to Turkey within the framework of the “Quality Education” and “Reduced Inequality” goals.



Türk Telekom has implemented numerous projects under “Türkiye’ye Değer” brand

The social responsibility projects Türk Telekom conducted in accordance with its motto of “Türkiye’ye Değer (Even the smallest difference matters, Turkey is worth all our efforts)” include İnternetle Hayat Kolay (Life is Simple with Internet), Telefon Kütüphanesi (Books on The Phone), Günişığı (Sunshine), Sesli Adımlar (Loud Steps), Okulumda Günişığı (Sunshine at Schools), Yeni Nesil Gelecek (The Next- Generation Project), Gelecek Köprüsü (Bridge to Future), Türk Telekom Okulları (Türk Telekom Schools) and Türk Telekom Amatör Spor Kulüpleri (Türk Telekom Amateur Sports Clubs). Local social responsibility activities organized by the Türk Telekom Provincial Directorates are conducted within the scope of “Türkiye’ye Değer” Project.

The Corporate Social Responsibility project “İnternetle Hayat Kolay” completed its 5th year

Türk Telekom launched the “İnternetle Hayat Kolay (Life is Simple with Internet)” project, with the objective of having information technologies accessible for everyone, viewing information technologies as the main driving factor for sustainable economic growth and social development.



The project, initiated in 2014, is carried out in cooperation with Türk Telekom, the Habitat Association and United Nations Development Programme (UNDP).

Targeting people who are not aware of the opportunities offered by the internet and cannot benefit from these opportunities, the “İnternetle Hayat Kolay” project was designed with the aim of enabling these people step into the online world through internet literacy training, and the project completed its 5th year.

The project's target group consists of adults over 25 years of age and who lack or have very limited internet literacy in all of Turkey's 81 provinces, mainly provinces with development priority. Women are given priority in the target group.

The trainings offered within the scope of the project include trainings on internet features facilitating lives such as basic internet literacy, secure internet, e-government, e-pulse, internet banking, online shopping and online sales. Within the scope of the project's 5-year initial phase, 50 thousand people – 61% of whom were women – have been provided with face-to-face internet literacy trainings in Turkey's 81 provinces.



In the second phase of the *İnternetle Hayat Kolay* project based on the principle that women's active participation in the economy and employment are one of the main requirements of development, training programs are held in order to increase women's knowledge on information and communication technologies, e-services and e-commerce, and to encourage their participation in production. The objectives for this new phase have been determined as providing women entrepreneurs or women with an entrepreneurial spirit who are over 18 years of age with digital literacy, digital marketing and design-oriented thinking workshops, and accessing a total of 5,000 women with these objectives.

İnternetle Hayat Kolay in figures

- A total of 50 thousand people were provided with face-to-face internet literacy training. 61% of the project participants were women.
- The rate of satisfaction with the trainings was 89%.
- The most useful content in the trainings were on e-government, knowledge acquisition and online-hospital appointments.



- Following the trainings, among the participants;
 - the usage rate of e-services such as e-government or online health appointments increased to 91%,
 - the usage rate of online banking and online shopping increased to 70%,
 - the rate of social media account usage, having video calls and reading news online increased to 86%,
 - the usage rate of internet on mobile devices increased to 80%.
- 83% of the business owner participants stated that the trainings had helped them do their work to a higher level of quality.
- 57% of the participants selling products noted that the training made it easier for them to make sales.

With the Telefon Kütüphanesi, knowledge is as close as a phone for visually impaired readers

In order to provide equal opportunities in access to information to all segments of society, Türk Telekom launched the first “Telefon Kütüphanesi (Books on the Phone)” of Turkey in 2011 in cooperation with GETEM (Boğaziçi University Visually Impaired Technology and Education Laboratory).

The Telefon Kütüphanesi service allows the visually impaired to access audio books and various content via phone. The library has nearly 1,250 audio books and content in more than 50 categories ranging from poetry, novels and history to self-development, practice exams and documentary films. Users have the opportunity to pause and continue listening to the book later, to rewind or fast forward the book, to listen to the book at a faster or slower pace, and to access the book they are looking for more quickly through an audio menu.

With the Telefon Kütüphanesi project, nearly 1,750 audiobooks are offered to visually impaired Türk Telekom customers through the 0800 219 9191 telephone number. Visually impaired Türk Telekom customers can access the audiobooks free of charge with the passwords they receive after becoming a member of GETEM. It is also possible to reach the library through a free application downloaded over mobile phones.

In order to enrich the Telefon Kütüphanesi content and to provide equal opportunities for access to arts as well to access to knowledge, audio descriptions of 20 world-famous paintings were been added to the library. In addition, the Anadolu Agency's breaking news reports can also be accessed by the visually impaired through the library, allowing them to keep up with the latest news.



With the Currency Recognition Function available, the Telefon Kütüphanesi also allows the visually impaired to securely pay in stores, markets or in taxis at any time without the need for an internet connection.

Since its launch in 2011, Telefon Kütüphanesi has been called a total of 10.8 million minutes. Launched in 2016, the mobile application has been downloaded 35 thousand times and the "Kitaplara Ses (Voice to Books)" application facilitating voluntary books for the visually disabled reading has been downloaded 37 thousand times.

Güneşli project allows children with low vision to actively engage in life

The social responsibility project "*Güneşli (Sunshine)*" launched by Türk Telekom in 2014 in cooperation with Ey-Der (Association for Living without Obstacles) aims to provide the children with low vision with early intervention education so that they can lead their lives without the help of others and continue inclusive education instead of attending the schools for the visually impaired. With the technology and infrastructure of Türk Telekom, the project is the only example in Turkey as it enables distance education.

Within the scope of the *Güneşli* project, the visual acuity of visually impaired children is determined, and these children are made aware of their visual capacities.

Thanks to this project, which had provided education for low vision to around one thousand children from 62 provinces as of 2019, children who used to be considered blind were able to integrate with their peers and receive education in the same schools as them. The project also helps raise awareness of families and teachers on the issue to a great extent.

Within the scope of the *Güneşli* education programs implemented across Turkey, the students of Eskişehir Görsem Solidary Association for the Visually Impaired were provided with low vision education in 2019.

Within the scope of *Güneşli* project, in order to improve the functional visual skills and hand-eye coordination of children with low vision, Türk Telekom designed the *Güneşli Games*, the first and only smartphone application serving this purpose. Having been downloaded nearly 5thousandtimes so far, *Güneşli Games* is an application that can be used not only by children with low vision, but also by the elderly with weakened vision.

The pictures drawn by the children included in the project were converted into holiday greeting cards and used by Türk Telekom; thus these children, who are considered to be visually impaired, were able to share their own success stories with everyone.

Social impact of Güneşli Project measured in accordance with international standards

Türk Telekom has achieved another first in Turkey by measuring the impact of *Güneşli* project with SROI (Social Return on Investment) method in accordance with international standards.

The measurement made using the SROI method revealed the benefits of the project for the society and its impact on parents clearly in figures, and proved that the value of the project's social benefits was almost triple the investment amount.

According to the measurements made on children who participated in *Güneşli* Project,

- the physical activity level of children aged five years and above improved by 32%, while their capacity to maintain their existing visual capacity improved by 12%,



The TahtApp software developed by Türk Telekom R&D team enables children with low vision to follow the lessons more easily.

Detecting the content of the classroom board with a camera, the software transfers it to the tablets provided to the children on a real-time basis.

- their literacy skills improved by 15%,
- their ability to act independently and self-care skills improved by 10%.

With regard to the families of these children,

- awareness of their child's visual capacity increased by 29%,
- awareness of their child's skills increased by 27%,
- confidence that their children could attend mainstream schools increased by 27%.

Additionally, there was a 24% increase in the parents' sense of feeling stronger and a 20% increase in their peace of mind, and the time spent for childcare decreased by 15%.

Thousands of teachers reached through Okulumda Güneşliği

The "Okulumda Güneşliği (Sunshine at Schools)" project was implemented as a result of the Güneşliği project in 2018. Within the scope of this project, students, parents, teachers, and administrators at primary education schools attended by low vision graduates of the Güneşliği are given seminars on Low Vision Education. These seminars were held in the Siirt, Adana and Mersin provinces in 2019.



The Okulumda Güneşliği seminars target the organization of the class environments of students with low vision according to their needs, that these students can receive education of higher quality, as well as the expansion of "low vision" education programs and their systematic implementation.

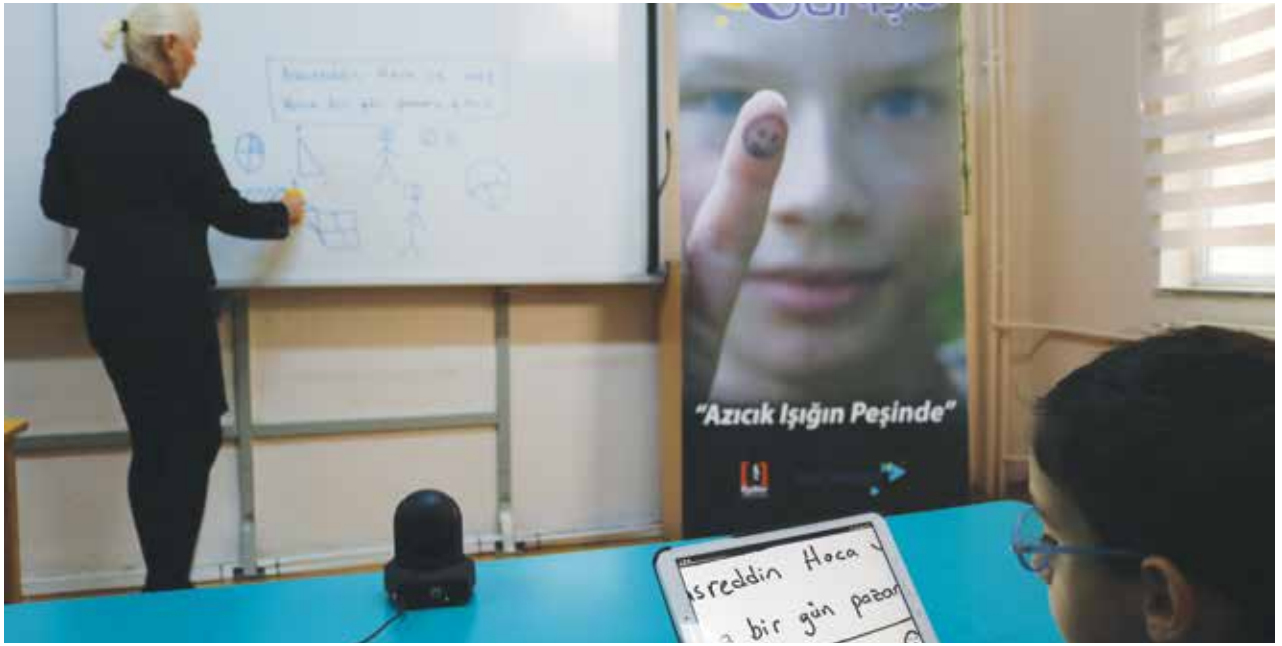
The project which includes 50 schools from 11 provinces aims to continue the education programs for 2 years and 4 academic periods, reaching about 5 thousand teachers during the project period, and report the results to the Ministry of National Education on individual school basis.

TahtApp developed by Türk Telekom offers an innovative solution for classroom education

Together with the Okulumda Güneşliği project at 28 schools in 9 provinces in 2019, the TahtApp application was implemented in order to allow children with low vision to follow-up the lesson more easily, and pilot implementation started at 6 schools.

The TahtApp software developed by Türk Telekom R&D team detects the content of the classroom board with a camera and transfers it to the tablets provided to the children on a real-time basis. These transferred contents are arranged by visual processing techniques on tablets, and transformed into a format through which students can follow-up the lesson.

During this transformation process, actions such as the removal of the teacher standing in front of the board from the vision and increasing the contrast of colors and text sizes are performed. Thanks to the automatic lesson recording feature available in the application, with the transfer of the lectured lessons to the device, students have opportunity to review the lesson subjects later.



Thanks to the TahtApp application, students whose visual field is limited to several centimeters will not only have the chance to actively participate in lessons, but will also be able to continue their education at the same pace as their peers. Thus, the application ensures the standardization required for children who have differences in terms of reading and light detection capacity, while helping to ensure that the students no longer feel separated from their non-disabled peers.

The TahtApp application is planned to be implemented in the 25 primary schools included in the project starting from the next academic year.

Türk Telekom EyeSense program bringing ease to the lives of the visually impaired

Türk Telekom has achieved a first in Turkey with the EyeSense application that has been specially developed for making the lives of the visually-impaired easier. EyeSense is a program that helps users to take photos and identifies the objects and colors shown in the camera with the help of its audio instruction system.

Adopting a different perspective while developing the EyeSense application, Türk Telekom brought together various features such as "Object Recognition," "Color Recognition" and "Taking Photos" to make the lives of the visually impaired individuals easier.

One of these features, the "Object Recognition" includes thousands of objects defined in the app, enables the visually impaired who have difficulty in finding critical objects such as keys and purses to access these objects easily. In order to understand what the objects are and

listen to their description, the users just need to direct their smartphone towards the object.

The audio warning system of "EyeSense" provides audio guidance to users until they reach the correct angle with their front and back cameras of their smartphones, and allows the photos to be taken in the correct sized frame. Thus, EyeSense users can easily and actively use social media applications such as Instagram, and become a strong part of the social life.

Expanding the reach of Sesli Adımlar, the navigation application - providing mobility for the visually and hearing impaired

"Sesli Adımlar (Loud Steps)" is a smartphone application that enables visually and hearing impaired people to navigate in complex buildings such as shopping malls, campuses and airports without assistance.

Launched in 2014 for the visually impaired only, the application enables the visually impaired to find the places they want to go in public spaces without anyone's help or to understand where they are at a given moment.

Providing operator-independent audio guidance through smartphones, the *Sesli Adımlar* application has been geared for the hearing impaired by adding simple icons in 2017.



The “Gelecek Köprüsü (Bridge to Future)” project is aimed at helping Syrian refugees in Turkey adapt to society through linguistic and vocational training, and continue their lives with ease if they return to their country.

The application is offered in 47 different structures, including the Chicago Lighthouse, İstanbul Technical University, the Kars Government Office, the Grand Mosque, the San Francisco Lighthouse and the Ministry of Youth and Sports. The application was launched at the Antalya Metropolitan Municipality Building in 2018 within the scope of Smart Cities.

Sesli Adımlar, which covers an area of over 2 million square meters, has been downloaded by approximately 30 thousand people in 8 countries and 16 different cities, and used 200 thousand times.

The application, which moved to a multilingual structure in 2018, has been used abroad as well as by tourists, migrants and refugees thanks to its English, German and Arabic options.

Youth being supported to prepare for next generation technologies

The “Yeni Nesil Gelecek (Next Generation)” project was launched in 2018 with the cooperation of Türk Telekom, Microsoft Turkey, and the Habitat Association. The main objectives of the project are to contribute to the acceleration of Turkey’s adaption with the Industrial 4.0 process, support the growth of the software sector in Turkey and invest in human resources to produce smart technologies.

Within the scope of the project, 426 young people studying in vocational schools and vocational high schools were given 16 hours face-to-face training using IoT kits by 35 volunteer trainers in 12 provinces in 2019, and the project has been completed. Trainings were also offered free of charge via Microsoft Open Academy and TT Academy.

Türk Telekom’s “Gelecek Köprüsü (Bridge to Future)” project is an indicator of the value attached to people

The “Gelecek Köprüsü (Bridge to Future)” project is aimed at helping Syrian refugees in Turkey adapt to society through linguistic and vocational training, ensuring they can continue leading their lives with ease when they return to their country. The project was launched in 2018 with the cooperation of Türk Telekom, İnsan ve Medeniyet Vakfı (Human and Civilization Foundation) and Sakarya University.

The project attracted 7,000 applications in its first phase from İstanbul alone, and 400 people selected from the participants were offered various training programs. The subjects of these training programs were basic Turkish education, coding and web design, photography and videography, journalism and writing





Türk Telekom contributes to the participation of disabled people in daily life with the Accessible Life mobile application. The application offers concrete solutions to challenges encountered by disabled people in daily life, through services such as Currency Recognition and Voice Readout.

Türk Telekom achieves one of the largest social responsibility projects in the field of education

Within the scope of the Türk Telekom Schools Project, Türk Telekom offers a modern educational environment for students in 78 Türk Telekom education buildings including 54 schools established across Turkey.

Every year, thousands of students graduate from these schools and education buildings, which are located mostly in the Eastern and Southeastern Anatolia regions and which have been transferred to the Ministry of National Education. In addition, every year Türk Telekom provides scholarships to successful students with financial difficulties.

Türk Telekom introduces Turkey's young people to sports

Türk Telekom is well aware of the positive contribution that sports can make to the development of the young. Acting with this awareness, the Company supports amateur athletes from various disciplines all around the country.

Türk Telekom sponsors around 5,600 athletes in 33 branches from 44 provinces, from basketball and fencing to athletics and badminton. Among the participants, there are hundreds of young people who successfully represent Turkey, by being selected to the national team, and became a source of pride for the country. These young people won 83 medals in national and international competitions in 2019.

Türk Telekom introduces its Subscription-based Donation System

Engaging in an unprecedented cooperation with “Türk Kızılay (Turkish Red Crescent)”, Türk Telekom implemented a first in Turkey.

In order to support the continuity of donations made to the Türk Kızılay, which has been providing support to those in need for 151 years without discrimination, Türk Telekom has launched its Subscription-based Donation System making it easy to donate over the phone.

The system automatically renews the donations made to the Türk Kızılay over the phone at certain intervals. The users just need to send an SMS in order to utilize the facilities provided by the system. Users can donate regularly every month throughout their subscription period. The amount of donation made to the Türk Kızılay is reflected to the invoice of users each month, or is deducted from their remaining balance, and users can unsubscribe at any time.

Accessible Life mobile application provides concrete solutions for the challenges people with disabilities face in their daily lives

Türk Telekom contributes to the participation of disabled people in everyday life with the Accessible Life mobile application. The application offers concrete solutions to challenges encountered by the disabled people in daily life, thanks to services such as Currency Recognition and Voice Readout.

The Türk Telekom Accessible Life mobile application, which has received 4 awards in international competitions so far, also won the 2019 Global Business Excellence Award in the category of “Outstanding Customer Service Initiative” and received high praise in the “Best Use of Mobile Within a Loyalty Strategy” in the 2019 The Loyalty Magazine Awards.

Argela and its US-based subsidiary Netsia **conduct research, development and innovation activities for next-generation telecommunication technologies, while developing technology, products and intellectual property for 5G.**



A broad solutions portfolio

Argela provides the solutions and products it has developed to telecom operators in the global market; and to telecom companies, along with public and defense industry organizations in Turkey.



Argela was established in 2004 and joined Türk Telekom in 2007. The company is headquartered in Istanbul, and has an office in Ankara. Argela also has a subsidiary which was established in Sunnyvale in the USA in 2008 and which operates in Silicon Valley. Argela, together with Netsia, conducts R&D and innovation activities for next-generation telecommunications technologies and develops technology, products and intellectual property for 5G.

Argela provides the solutions and products it has developed to telecom operators in the global market and to telecom companies, along with public and defense industry organizations in Turkey.

Argela creates value added both in Turkey and in the world, with patent applications and intellectual property it has developed in the USA regarding next generation telecommunications technologies and 5G technologies in particular.

In 2019, Argela also developed business partnerships in a number of countries such as Japan, Ethiopia, Kazakhstan, Algeria and Azerbaijan in order to increase its awareness abroad and to expand its customer portfolio.

A wide range of solutions for the high-tech needs in the telecommunications sector for today and tomorrow

Argela develops strategic projects in cooperation with defense industry organizations in Turkey. The first phase of the Fourth Generation Communication System Development (ULAK) Project, which was signed between the company and the Presidency of Defence Industries in 2013, was successfully completed. In addition, the company successfully delivered the software defined networks project for public safety networks in December 2017 within the scope of the MILAT Project, signed in 2015. The company also carries out various projects for the defense industry together with other public institutions and defense industry organizations.



Argela is expanding its patented technology, ProgRAN, which has made a worldwide impression, to transform it to vRAN (Virtualization of Radio Access Network for 5G).

Argela's solution portfolio includes programmable base station solutions (ProgRAN, vRAN), software defined networks, network performance monitoring, subscriber analytics, customer satisfaction management, LTE base station solutions and software-defined fixed network access solutions and applications such as SEBA (Software Enabled Broadband Access).

Argela and its subsidiary Netsia take an active role in the ONF (Open Networking Foundation) in Silicon Valley, as well as 3GPP, GSMA and Small Cell Forum, which include the world's leading companies operating worldwide, and plays a leadership role in directing technology and open-source development. In addition to this work, the Company carries out joint projects with many universities and companies within the scope of European Union Horizon 2020 and Celtic projects. Argela, which has contributed to the technological development of Turkey through these efforts, also receives funding for R&D studies with EU support.

Argela's collaboration with a number of universities in Turkey includes next-generation technology projects such as 5G, software-defined networks, virtualization of network functions, cyber security, self-organizing mobile networks and big data processing.

vRAN - Leading solution in next generation RAN technologies

Argela's is expanding its patented technology, ProgRAN, which has made a worldwide impression, to transform it to vRAN (Virtualization of Radio Access Network for 5G). Argela's ProgRAN solution, implemented in the 5G area, enables the next generation of mobile networks to be divided into virtual segments, effectively and dynamically structuring network capacity according to requirements and ensuring maximum flexibility, efficiency, performance and secure management. Argela, with the contribution of its subsidiary, Netsia, has implemented vRAN, including the features of ProgRAN, which was successfully tested by many leading telecom operators in the international arena.

vRAN stands for Software Defined and Slicable Virtualized Radio Access Network. The vRAN technology targets the creation of a Radio Access Network where some main or all baseband functions are separated from the remote radio unit and run as VNFs (virtualized network function) on ready-made hardware.

With this approach, vRAN provides a wide array of operational benefits, including reductions in the total cost of ownership, increased performance and scalability. One common feature of the software-defined systems is the logical centralization of the network intelligence. By targeting this critical area, Argela and Netsia are developing O-RAN compliant RIC (Radio Intelligent Controller) and RAN Network Slice Subsystem Management Functions (RAN NSSMF). Argela and Netsia are taking on an active role in the technology groups formed within the O-RAN consortium and working intensively to ensure the slicing features they specialize



**After being chosen by Ethio Telecom,
Argela is now also the choice of
Azerbaijan's leading operator, Azercell, for
NPM and CEM solutions.**

in are used by stakeholders. To date, the vRAN testing platform has been installed abroad in the laboratories of Telefonica in Spain, Verizon in the United States, Orange in France and KDDI in Japan.

SEBA – Future broadband access technology for fixed networks

In addition to solutions for mobile operators, Argela and its subsidiary Netsia develop solutions for fixed internet providers. On behalf of Türk Telekom (a member of the Board of Directors of ONF – The Open Networking Foundation), Argela and Netsia support the Open Source SEBA (Software Enabled Broadband Access) project, in which companies such as AT&T, Deutsche Telekom, Telefonica and NTT are contributors. Argela and Netsia play an active role within the technology groups established within ONF, and contribute to SEBA's productivity and feature set enrichment.

Argela and Netsia aim to achieve a world-leading commercial product by carrying out their own work on this joint project. The solution, which will carry the name Netsia SEBA, aims to achieve the software-defined management of today's passive optical network (PON), a fixed broadband access technology. The developed management system is based on the frontier cloud data center. This will allow cloud computing, which has been used in information technologies for years, to be used in the central offices of telecom operators.

The main objective of SEBA technology is to enable the management of different vendor infrastructure devices called OLT (Optical Line Terminal) and ONT (Optical Network Unit) with joint software units, eliminating the requirement of operators to procure OLT and ONU devices from the same companies when planning fixed access systems; and thus to reduce the operational costs and investment costs of the operators. This product, which is under development, is aimed at adapting rapidly to new PON network technologies that will support the required capacities.

While many leading operators in their 5G road map and architectural plans believe that the capacity and speed requirements needed for mobile access will be achieved through the fixed access infrastructure on the frontier cloud, Argela and Netsia plan to play a leading role among operators in the first field installations of SEBA in this context and achieve acclaim around the world.

Argela gains a new customer – another international operator with its 100% domestic NPM/CEM solutions

Continuing its efforts to sell NPM (Network Performance Monitoring) and CEM (Customer Experience Management) products abroad, Argela held many discussions and developed partnerships in 2019. Argela, which won the NPM/CEM tender opened last year by Ethio Telecom (Ethiopia), one of Africa's largest mobile operators, has started work on the project. In 2019, the company achieved tremendous success by winning the tender opened by Azercell, Azerbaijan's leading operator, continuing to work at full steam in the installation of products in both countries.

Argela's NPM solution enables wired and wireless service providers to monitor the end-to-end network performance, detailed customer behaviour and service quality and to maintain it at a certain performance level. For this purpose, signal and data probes have been developed for a number of protocols in the mobile, fixed and IP networks.



ULAK Project

Argela locally developed and successfully delivered all hardware and software components of fourth-generation mobile communication technology base stations within the scope of the Fourth Generation (4G/LTE) Communication Systems Development (ULAK) Project of the Presidency of Defense Industries, together with its business partners.

The NPM solution enables efficient use of network resources through end-to-end and real-time monitoring of the network through its real-time running probes. The solution has a broad set of performance metrics and reporting that are easily accessible, while its distributed architecture allows for quick and effective query times. The data generated by the NPM system can be transmitted to CRM systems and regulatory agencies in real time.

The CEM solution provides meaningful analysis and behavioral information regarding customer experience in networks such as voice, data access, data usage, and messaging. This solution, which allows operators to observe their customer activity at an individual level in real time, is used for advanced analysis and to accelerate and improve customer service.

Argela's contributions to the fourth generation of mobile communication technologies continue.

ULAK – Fourth Generation Communication System Development project

For the first time in 2013, Argela moved to a sector outside of telecommunication, and was selected to conduct the Fourth Generation (4G / LTE) Communication Systems Development (ULAK) Project, the project idea of which it had developed, of the Presidency of Defence Industries (SSB). Within the scope of the project, Argela locally developed and successfully delivered all hardware and software components of fourth generation mobile communication technology base stations together with its business partners, Netaş and Aselsan. The first series of the LTE technology base stations developed within the scope of the project were commissioned in Kars in May 2018. A total of 834 ULAK base stations have been installed within the scope of Phase 1 and Phase 2, 665 of which are active and serve as part of the Universal project. The number of stations is increasing day by day.

Following the successful operation of the ULAK project in the field, Argela is continuing to work towards the development of additional features required by the operators within the scope of Phase 2.

Next generation projects

Argela is developing technologies that will play a key role in the world of the future through its work with a number of universities in Turkey as well as the world's leading institutions. These include next-generation technology projects such as 5G, software defined networks, virtualization of network functions, cybersecurity, self-organizing mobile networks and big data processing.

Argela continuing its investments to expand domestic and national solutions

Argela continues to contribute to the localization of technologies used in Turkey. At the beginning of 2019, Argela became a shareholder of Otak A.Ş., established by Turkish companies, with a 20% stake, and aims to take an active role in the company's technologies and global sales activities. Otak, established with the aim of carrying out research, development and innovation activities for the next generation of cyber security and telecommunications technologies, as well as creating added value with the next generation of cyber security technologies with the intellectual property developed, has started its activities.

With the vision of shaping the requirements of the sector and customers, Innova aims to **maximize customer experience by offering end-to-end IT solutions.**



Playing a pivotal role in IT exports with its products and services that create value for its customers, employees and society, Innova exports its products and services to 37 countries across 4 continents.



Innova sets itself apart in the digital transformation of corporations with its end-to-end solutions

Since the very first day of its foundation in 1999, Innova Bilişim Çözümleri A.Ş. has been the leading IT solutions company in Turkey with its innovative solutions offering competitive, cost and profitability advantages to support corporations in their digital transformation journey.

With the vision of shaping the requirements of the sector and customers, Innova aims to maximize customer experience by offering end-to-end IT solutions. Having been incorporated into Türk Telekom in 2007, Innova carries out its activities with more than 1,200 highly experienced employees in its Istanbul and Ankara head offices, as well as its support offices located in 12 cities.

Innova provides end-to-end solutions to meet the IT requirements of various corporates mainly operating in the telecommunication, finance, banking, insurance, retail, energy, automotive, manufacturing, public and service sectors.

With its competence in the fields of big data, data analytics and artificial intelligence technologies, Innova carries out its operations with its PayFlex Innova brand in the field of FinTech solutions such as payment, loyalty and collection, the SkywaveloT brand in the field of the Internet of Things, the Lega brand for administrative and legal receivables follow-up operations, the HICAMP brand for hospital IT and hospital management and the AvioFlex brand for aviation technologies.

With its domestic and national solutions, Innova contributes to Turkey's technological move

With its 100% domestic and national engineered technology solutions, Innova contributes significantly to Turkey's national technological move and the country's achievement of its export goals. Playing a pivotal role in IT exports with its products and services that create value to its customers, employees and society, Innova exports its products and services to 37 countries across 4 continents.

Innova is a member to Turkish Cyber Security Cluster Platform established under the leadership of the Presidency of Defence Industries with the objective of improving the cyber security ecosystem in Turkey. Innova continues to contribute to the country's cyber security



Artificial Intelligence

The “Artificial Intelligence in Operations” project developed by Innova for Türk Telekom won the first prize at IDC Artificial Intelligence Awards, in the category of Innovation Accelerator (Machine Learning).

with its domestic and national solutions while cyber security becomes more important with each passing day in an era where technological developments and use of the internet are increasing at a spectacular pace.

Awards won in 2019

Innova’s “Artificial Intelligence in Operations” project wins first place award from the IDC

The “Artificial Intelligence in Operations” project developed by Innova for Türk Telekom won the first prize at IDC Artificial Intelligence Awards in the category of Innovation Accelerator (Machine Learning). With the “Predictive Maintenance” application developed by Innova using open source software, state-of-the-art technology and its own resources, network systems are monitored on a live basis and historical data and machine learning are used to ensure that necessary interventions are made before any breakdown or service interruption occurs.

The project, which is a first in its sector in Turkey, aims to reduce investment and operation costs, minimize profit losses that may arise because of breakdowns and improve customer satisfaction further.

Payflex OBP wins top awards at Sardis Awards recognizing the best companies of the Finance Industry

Innova’s PayFlex OBP solution won the first place and received the golden award in the category of “FinTech Companies” at the Sardis Awards, where the best companies of the finance industry compete.

Innova returns with stunning awards from the Bilişim 500

Innova was awarded first prize in the Bilişim 500 (Informatics 500) held for the 20th time this year in the field of System Integrator and Business Partner area in the categories of CRM, ERP and Consultancy.

Innova’s PayFlex Common Bank Platform solution wins first prize in IDC Turkey

The PayFlex Common Bank Platform solution created in collaboration with Türk Telekom won first prize in the IDC Turkey Cloud Computing Awards in the SaaS category.

Innova wins the grand prize from Huawei

In recognition of its high and increasing sales performance in 2017 and 2018, Innova won Huawei’s “Consistent Leading Partner” award.

Innova wins special prize in the 55th year of ASO

In the event held by the Ankara Chamber of Industry (ASO) to mark its 55th anniversary, recognizing the 55 companies that stand out with their activities in the field of industry, technology and R&D in Turkey, Innova was found worthy of the special prize in the “55th Anniversary Awards of Ankara Chamber of Industry” for its achievements in TEYDEB (TUBITAK Technology and Innovation Grant Programs) projects.

Innova wins “Big Star” award in Deloitte Technology Fast 50

Innova participated in the Deloitte Technology Fast 50 Turkey program for the 13th time in a row. Becoming the only company to succeed in being included in the program without interruption since 2006, Innova won the Big Star award in the “Big Star” category, also known as the “Big League”.

Highlight projects

Türk Telekom Artificial Intelligence in Operations - Predictive Maintenance Project

This project developed by Innova aims to improve the efficiency of the field teams at Türk Telekom, reduce general breakdowns through early intervention and thus improve customer satisfaction even further. The project intends to predict potential breakdowns that may occur in network equipment used in Türk Telekom’s infrastructure. The possible reason and location of breakdown, the device-port where the breakdown may occur, breakdown probability percentage and estimate ranges are provided through web interfaces and the control panel. The project won the first place award in the “Innovation Accelerators” category in 2019 IDC.

Turkish Airlines - BOSS Software Development Project

This project conducted by Innova develops process management applications integrated into the THY (Turkish Airlines) Red Hat Process Automation Manager platform (an open source platform used for developing services and applications automatizing business processes and decisions). Processes are defined in the Red Hat PAM application and the user interfaces, data entry and reporting procedures are provided through the



applications within the scope of the project. It is targeted that all Turkish Airlines processes will be executed through this application by the end of the project. While the responsibility for project development rests with Innova, the analyses are carried out by THY.

Vodafone Cyprus - Biometric Signature

Subscription procedures with no paperwork started to be carried out on 5,000 tablets at 1,300 dealers in 2018 with the Biometric Signature project conducted for Vodafone Turkey. Following this successful project, Innova developed a similar solution at Vodafone Cyprus in 2019 and carried its achievements to the international arena.

İçtaş-Kalyon-Astaldi (ICA) Legal Proceedings and Collection System Project

In ICA Legal Proceedings and Collection System Project, Innova's third significant project in the field of private highway management, Innova made use of its domestic product Lega (legal automation product), PayFlex Collection (collection interface) and VPOS products developed with own resources.

The project ensures central and reliable monitoring of the lifecycle of all missed tolls on the İzmir-Menemen Highway and carries out the necessary collections. In the project, data enrichment was performed through integrations such as KGM (General Directorate of Highways)/EGM (General Directorate of Security) and UYAP (National Judiciary Informatics System) to enable easier process monitoring.

Türk Telekom Virtual POS Singularization Project

The Virtual POS Client applications used at Türk Telekom, TTNET and Avea (currently TT Mobil) before the integration were unified under the umbrella of Türk Telekom, and were commissioned in a manner to serve all

channels with a central structure. TT Mobil PayFlex vPOS Switch, Türk Telekom TTS vPOS Client and TT Broadband PayFlex vPOS Switch solutions were all unified under the PayFlex vPOS Switch product with the project, and the product was made available for use by all channels of the 3 companies.

STP (Health Tourism Portal) Project

The Health Tourism Portal project was conducted for the Ministry of Health by Innova as the subcontractor of Türksat. The project aims to contribute to Turkey's development in the field of health tourism, promote the organizations operating in the international health tourism sector and conduct their customer relations activities, and offer alternatives which will be convenient for all international patients and their relatives when in Turkey.

The STP project intends to provide information on health and tourism services such as the health institutions engaged in health tourism, the price tariffs of health institutions and accommodation and transportation alternatives.

In this area, the analysis, design, software development, testing, education, commissioning, maintenance and guarantee services will be provided for STP Web application and mobile application.

North Marmara Highway Project

Information on missed tolls at turnstiles and free passes on North Marmara (Third Bridge access roads) Highway will be transferred from Aselsan to the Lega system, and the PayFlex Collection application will allow the drivers with missed tolls to inquire and pay their debts through the banks and the web channel. It will be possible, through Lega, to initiate administrative and legal proceedings for overdue missed tolls.



PayFlex Mobile Wallet

Developed by Innova on the back of its experience in financial technologies, the PayFlex Mobile Wallet solution brings all payment instruments such as debit cards, credit cards and gift cards together in a single platform. The solution offers its users a strong and secure infrastructure for payments and money transfers.

Selfycard

Selfy Platform, known as Türk Telekom's new youth platform, offers subscriptions with various tariffs and opportunities customized according to areas of interest. Having been developed and brought online by Innova teams, the Selfy application continued to be improved upon with new additions.

Ankara City Hospital - Special Projects

Innova provides application and management services for the Hospital Information Management System (HBYS) at Ankara City Hospital Bilkent, the biggest Public-Private Partnership Project of Turkey in the field of health and the world's largest hospital built at one time. All software required for the performance of this service was brought together by Innova.

Ankara City Hospital commissioned the HICAMP Health Solutions Platform, which contributes to the secure and uninterrupted operation of integrated health facilities containing various complex services and which provides enhanced and integrated solutions. The data center installation required by this software, integration of all hardware, network and other IT infrastructure, and the hundreds of data entry employees recording the data on operations for the management of hardware and systems and on patients are all provided by Innova. Ankara City Hospital Bilkent started to admit patients in February 2019, and its Hospital Information Management System service will be provided by Innova for 5 years.

Ailemin İnterneti (My Family's Internet)

Ailemin İnterneti is a project offered to Türk Telekom customers who wish to protect their children from harmful content on the internet and/or control the time their

children spend online, which allows profiling all devices connected to WiFi with a mobile application controlled by the parents and restricting the internet traffic. All devices connected to WiFi within a household can be controlled with a mobile application.

Treasury Portal

The Türk Telekom Treasury Portal Project is an application where all procedures related to Türk Telekom Group Treasury Operations are performed on an end-to-end basis, where data can be stored and realtime reports and views can be provided, web-based realtime integration is ensured with banks and the SAP in a manner to include all treasury transactions, instructions are signed with a mobile signature and communicated to banks and end-of-the-day statement reconciliations can be performed.

EASYS (Access Infrastructure Order Management System)

Containing various modules, principally survey, supplementary protocol and progress transactions performed within the scope of construction, maintenance and repair agreements for access networks throughout Turkey, EASYS application is actively used by Türk Telekom.

Channel Document Management System

The Channel Document Management System is an individual application that includes the functions of the Document Management System used for the control/follow-up of customer/dealer documents related to PSTN, xDSL, Mobil and Tivibu products, web logs and the Customer Document Follow-up System (METS), and which allows the performance of document control and follow-up procedures. The data to be obtained from the system will be shared with the sales channels with a view to ensure that missing documents can be completed correctly and in full.

Şans Girişim İddaa Terminal Installation, Maintenance and Support Project

Thanks to the coordinated efforts of the Innova and Türk Telekom field teams, İddaa terminals and network devices were installed at 6,000 İddaa dealers located in various locations in Turkey's 81 provinces within a one and a half month period. Innova will provide maintenance and support services for these devices for a period of 5 years.

A strong and secure infrastructure for Mobile Wallet

Developed by Innova on the back of its experience in financial technologies, the PayFlex Mobile Wallet solution brings all payment instruments such as debit cards, credit cards and gift cards together in a single platform. The solution offers its users a strong and secure infrastructure for payments and money transfers.

PayFlex Mobile Wallet provides its users with advantages such as discounted shopping and the opportunity to earn as they spend at merchants.

Innova PlayFlex Mobile Wallet products can be used by both end users and merchants.

With its strong technological infrastructure, effective human resources management and excellent service approach, Türk Telekom Group company AssisTT sets the standards for call center operations.



12,315 Employees
27 Locations
22 Provinces



assisTT

Founded in 2007, AssisTT provides call center services, as well as end-to-end and customized services to sector leading private companies and public institutions as a “strategic partner”. AssisTT provides services such as Technical Infrastructure, Interactive Voice Response (IVR) Software, Seat Rental, Payroll Services, Training, Recruitment, Speech Analysis, the 11818 Directory Data Update and Enrichment, Customer Experience services as well as classic call center services.

Technological solutions focused on making a difference

AssisTT aims to provide solutions that can make a difference for its customers through technological advantages. The Framer application, completely developed by AssisTT IT team using the latest software technologies, was successfully implemented. Framer automates all processes from the entry of customer data to the creation of reports.

In addition, AssisTT IT team develops other leading applications such as Nebula, IVR Redesign and Metrik. Savings with “Nebula”, the customer representative interface application, and an increase in completion rate in IVR with “IVR Redesign” application is targeted. The “Metrik” application was developed for effective tracking, reporting and communication within the company.

The world's first and only 24/7 Central Physician Appointment System

AssisTT commenced services for the Central Physician Appointment System serving all locations in Turkey with the MHRS project implemented by the Ministry of Health in 2011. By collecting appointment information from public hospitals in the central database, it provides 24/7 call center services for the Central Physician Appointment System, the first and only such system in the world. AssisTT continues to contribute to the MHRS project in Rize, Adıyaman, Bitlis, Bingöl, Erzurum and Ankara.



60% female employee ratio

As well as being an important source of employment for the country, AssisTT provides equal employment opportunity with its 60% ratio of female employees.

Rapid expansion in the public sector

AssisTT continued to expand its public partnership portfolio with new additions in 2019. In addition to the companies in its portfolio, the company signed contracts with the Turkish Patent Institute, Eti Maden, the State Materials Office, the Antalya Metropolitan Municipality, the RTÜK White Table, the ICTA Information and Notice Center and TEDAŞ.

New additions in private sector business partnerships

AssisTT continues to gain new customers in the private sector. In 2019, the company began providing services to Halkbank and renewed its contract with Vakıfbank. In the same year, it also started to provide services to the Jockey Club of Turkey and the Agricultural Credit Cooperatives. With the call center services launched at the Samsung location for the Agricultural Credit Cooperatives, support is offered to answer queries and solve problems faced by farmers throughout Turkey.

AssisTT's activities win acclaim in the national and global arena

In 2019, AssisTT's activities were won wide acclaim with a clutch of awards on both national and global scales.

AssisTT won the "Best Customer Services" category Gold Award, and the "Best Large Scale Outsource Call Center" category Silver award in the EMEA Finals of the Contact Center World Awards, one of the most prestigious award organizations in the call center industry.

Contributions to employment continue unwaveringly

With its strong technological infrastructure, effective human resource management and an excellent service approach, AssisTT sets the standards for call centers. AssisTT contributes to the development of the economy by providing thousands of jobs through its investments in Anatolia. With over 12 thousand employees, 60% of which are female, as well as being an important source of employment for the country, the company provides equal employment opportunity.

With more than 30 years of experience, SEBiT is a pioneer in education with its comprehensive solutions ranging from educational content to technological platforms, from intelligent measurement and evaluation to teachers' professional development.



Innovative approach that structured the foundations of today's education ecosystem in the '80s



SEBiT designs and implements the education of the future through the effective use of technology and contributes significantly to the global transformation in education

SEBiT, a subsidiary of Türk Telekom, is active not only in Turkey but also abroad with the educational solutions it has developed since its establishment in 1988, as an R&D Laboratory in TÜBİTAK. In this context, the company designs national and international products and services that are of tailored to the educational needs of individuals to create a social benefit and impact.

With the innovative use of the technology and the strong synergy with Türk Telekom, SEBiT is constantly expanding its product and service portfolio and continues to lead the transformation in education.

The educational products developed by SEBiT's strong organization of approximately 240 professionals at Ankara METU Technopolis and at the SkySong Innovation Center of Arizona State University in the USA are used by students and teachers all over the world.

Continuing its work with competent and creative human resources and proving its leadership with numerous awards, SEBiT is cited by many international education authorities as one of the best educational technology companies in the world.

Solutions that provide 21st century competencies to students, teachers and administrators of educational institutions

With its new services and products designed using mobile information and internet technologies, SEBiT aims to offer equal opportunity and product variety at every stage of education, as well as to remove barriers to participative education.



SEBIT VCloud, a next generation educational collaboration platform, offers a personalized learning environment that goes beyond classroom walls with its innovative structure.

The products and services developed by SEBIT within the scope of the FATİH Project have been offered to millions of students and hundreds of thousands of teachers since 2015. In 2019, the following activities took place;

Content Activities: Within the scope of the new curriculum announced by MEB (the Ministry of National Education), content and assessment material updates at every grade level are published on the Educational Information Network-EBA (www.eba.gov.tr), which is the official education portal of the FATİH Project. These updates are expected to continue in the upcoming activity period, with the addition of new content.

Professional Development: The formation of professional development groups in the EBA Professional Development as well as improvement and update activities related to the content continued during the 2019 activity period. In addition to the e-course structure that enables teachers to receive professional development courses, analysis and system designs necessary for live training were completed. Pilots for the creation of MEB's own courses and assignment of these to particular

trainees have got underway. Efforts are under way to integrate the existing content of the institutions and organizations that the MEB cooperates with, in order to diversify the courses. Further improvements of the EBA Professional Development will also continue in the next activity period.

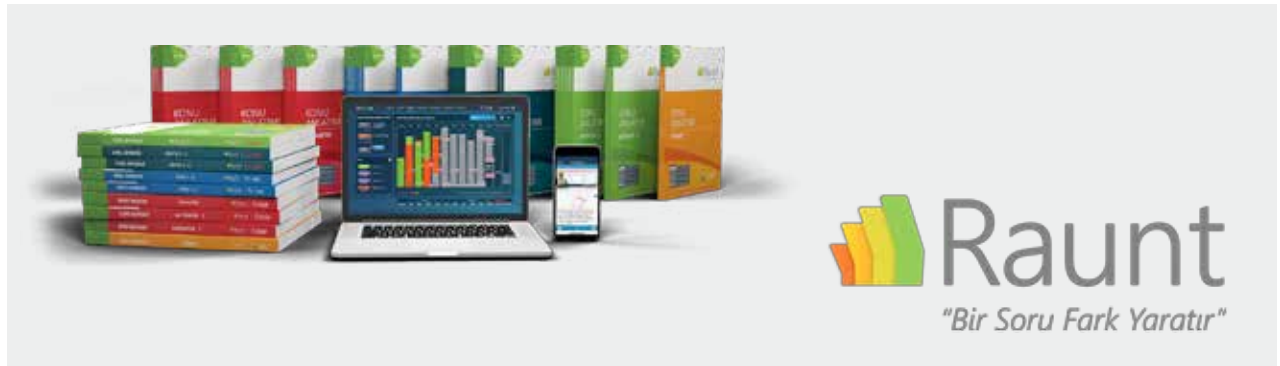
VCollab: VCollab is a social learning platform designed and developed by SEBIT with an innovative approach. Performance improvements and feature development of VCollab continue. The VCollab wall structure has also been adapted to the EBA Professional Development workspace, with a brand-new interface and features since the beginning of the 2019-2020 academic year to cover entire EBA. In addition, studies were carried out in the new academic year on topics such as the addition of gamification features and the further development and inclusion of the e-Portfolio infrastructure in the VCloud.

Raunt - The most innovative and result-oriented solution ever offered for university preparation

Turkey's first and only personalized university entrance exam preparation product, Raunt, was developed by SEBIT for both the retail market and for the use of university candidates in private and public high schools. The product has been in use since 2015 and after years of development and improvement, it is now being used in all grades from the 9th to the 12th grades in private high schools.

The "Smart Recommendation System", which is a personalized study plan offered by Raunt through the (www.raunt.com) website and the Raunt Mobile Application fully prepares candidates for the university entrance exam with its rich digital and printed content.

In the 2019-2020 education year, books released by Turkey's most established and experienced publishers in university preparation were selected by SEBIT and included in Raunt. With this partnership structure, Raunt offers its users a privileged university preparation environment, where Turkey's most reputable publications in university preparation are consolidated to ensure the best performance for students with the help of an integrated structure in digital and printed materials.



SEBIT VCloud builds a strong academic backbone for educational, managerial and production-based solutions for schools

Turkey's first Next-Generation Educational Sharing and Cooperation Platform, SEBIT VCloud, was designed in order to rapidly transform the educational environment of private schools. The product has started a new era in educational technologies and is used by a total of around 100 thousand students, teachers, and administrators in around 300 private schools. VCloud's development activities continued in 2019 in line with feedback from the field.

With SEBIT VCloud, students participate in the process with a personalized educational approach. Users began to carry their social and academic knowledge accumulated in collaborative learning environments into the future with the "e-Portfolio" included in the product as a result of extensive R&D activities.

Similarly, new features that support the needs of institutions that wish to provide teachers with professional development support have been added to the VCloud, providing both central (such as chain private schools or the Ministry of National Education) and organization-specific professional development infrastructure for organizations with multi-school structures.

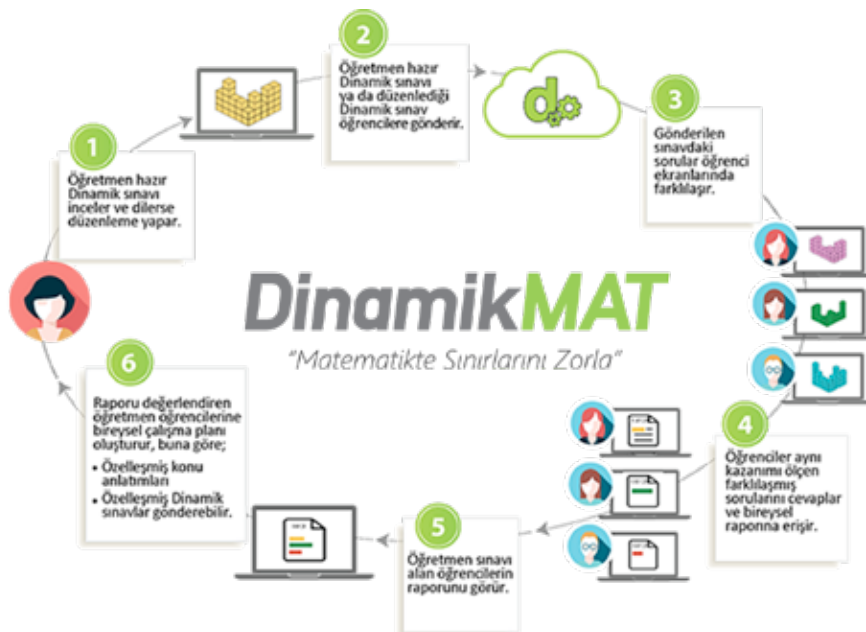
A holistic learning approach with the integration of technology and books

Vitamin, the largest course content library in Turkey developed by SEBIT since 2000, has been available to private schools together with VCloud and has been used for years as a tool for teachers to offer support in their lessons.

Vitamin textbooks, which enable the Vitamin content on VCloud to be used more effectively and integrated within the learning process, were introduced to private schools for the first time in 2018. In the 2019-2020 academic year, the books were updated with the experience and feedback from previous years, and additionally Social Sciences books, "İnkılap Tarihi" and "Atatürkçülük" were prepared for the secondary schools and presented to the market, and thus the work on all Vitamin textbooks for all secondary school level courses was completed.

VFabrika - an interactive content creation system for teachers and students

VFabrika was developed to produce e-content with the help of a visual programming paradigm without requiring software coding, with additional features included to allow programming of embedded electronic boards (Arduino). In 2019, additional features were developed to program MicroBit and MakeBlock cards. These new features enable the development of applications in which



More than 30 years of experience

SEBIT, which has created and continuously developed an educational ecosystem with more than 30 years of experience, is changing the education perspectives of all stakeholders, from school principals to parents.

data from live sensors can be processed. In addition, the remote control of embedded systems became possible with an application developed on the Android operating system.

VStore – the reliable market for educational applications

Within the scope of SEBIT VCloud, a dedicated educational applications market was created for the institutional schools that receive services from SEBIT. Work started on the infrastructure of a new retail sales channel, where the products and services of SEBIT's business partners can be delivered to students, teachers in schools and parents, and as such, through the VStore.

DinamikMAT – for ever greater success in mathematics

DinamikMAT is Turkey's first and only "smart question generating system". In maths lessons for students in their 5th, 6th, 7th, and 8th grades, DinamikMAT can generate an unlimited number of questions in short answer and multiple-choice forms. Thousands of questions can be derived by the DinamikMAT algorithm which is prepared in accordance with the curriculum of the Ministry of National Education. This allows the creation of an unlimited number of questions from any question type. In the worksheets sent by teachers, students receive differentiated exercises with different questions and changing difficulty levels that measure similar learning outcomes.

Hızlıgo – an online speed-reading platform that doubles the reading speed at minimum

The online speed-reading system, Hızlıgo, which helps increase reading speed using scientific methods, was updated in September 2018 with a new interface, enhanced personalization features and an intelligent tutoring system that adapts to the level of each user. Hızlıgo, which increases the speed of reading without any loss of comprehension, includes texts prepared for the 5th – 12th grade students and adults at appropriate length and difficulty levels.

The system allows students to save time in solving long paragraph questions in critical exams. Moreover, the system helps students review curricular topics, thanks to the sample texts for performing eye exercises that are selected from different courses for different grades. Performance improvements continued during 2019 in response to the feedback framework from the field.

SEBIT's international activities and collaborations

With innovative and effective use of technology, SEBIT is progressing towards becoming one of the world's leading companies in educational technologies. The company has a presence in many countries with its own products.

Within the framework of global scale sales partnership program with Microsoft, the VCloud product has been rendered "Co-Sell Ready" and work is being carried out to sell the product in cooperation.

Together with Safaricom, Kenya's largest mobile operator, business model development continues for the use of the SEBIT VCloud and Adaptive Curriculum products in schools across Kenya.

As a result of bilateral discussions with the Qatar Ministry of Education, a visit was carried out to Doha in July and possible scenarios were evaluated to enable Qatar to benefit from SEBIT's efforts in Turkey. In this context, SEBIT shared detailed presentations and demos of its existing products and services. Studies into the scope and methods of potential collaborations will continue.

In addition, as a result of the meetings held with a delegation headed by the Minister for Education and Culture of the TRNC (Turkish Republic of Northern Cyprus), the decision was taken to determine the



requirements for use of an EBA-like system in the TRNC and to start work in this direction.

BEACONING -the project offering game-based learning for strong STEM infrastructure

SEBİT, with the support of the Horizon 2020 R&D program, undertook the leadership of the “pilot application”, “evaluation” “implementation and commercialization” business packages of the BEACONING Project, which started in 2016. The company has also been involved in development work, particularly in the design of learning analytics functions and interfaces.

The BEACONING application, which reached the “Technology Readiness Level 8” technical maturity level in 2019, was launched for the use of app, which reached around 20 thousand students through the SEBİT VCloud product. Children between the ages of 12 and 16 from Turkey, Coventry, Barcelona, Madrid, Porto, Milan, Nantes, Paris, Bucharest, Bremen, Edinburgh, Warsaw and Singapore enjoyed a digital and location-based gaming experience centered on discovery and learning, and the project was completed successfully.

In the final progress meeting with European Commission referees in June 2019, the project was described as the most successful project of the relevant unit of the European Commission, and the EU arbitration committee announced that the method of Impact Analysis developed and implemented by SEBİT would be used as

a reference in EU projects. After the final decision, SEBİT and the project partners signed a letter of intent and entered the product development process.

Socio-technical design in higher education for the 1-1 education model

SEBİT carried out a socio-technical university design in order to adapt the 1-1 education model to higher education, which was developed for the Ministry of National Education's FATİH Project.

The project, which started in 2016 with the support of the Ministry of Development, covers the design of a higher education system with a focus on serving society in a new global approach known as “Third Generation Universities”. The scope of the project includes integration with digital technologies and the creation of the roadmaps for implementation. The model also covers structural changes that need to be implemented so Turkish universities can meet the new international accreditation requirements. This model, which has a curriculum based on competence and which envisages educational programs that will advance by involving students in applied projects in an active learning approach, was developed by project stakeholders led by SEBİT and then piloted at the Abdullah Gül University (AGÜ) with successful results. In 2018 and 2019, AGÜ was ranked 2nd among universities established after 2000 in the list of URAP (University Rankings by Academic Performance) Research Laboratory summarizing the academic performance of the universities.



Following this success, the university model was published as a comprehensive book. The book, entitled “The Socio-Technical University Education Model in Higher Education; System and Process Design” was published in March 2019 and shared with major universities, the YÖK (Council of Higher Education) and related institutions. In the second half of 2019, plans for transition to this model were made at various departments of METU and TOBB ETÜ universities, particularly for engineering programs.

Data-Driven continuous improvement in national education

Following its participation in the “Discovery Conference” aimed at establishing a 2023 vision in national education, SEBIT supports the activities carried out by the Ministry in accordance with the Ministry of Education 2023 Vision announced in October 2018. The first section and first two objectives of the published vision document are “Data Driven Administration with Learning Analytics Tools”. SEBIT has also started to contribute to this study, which aims transition to a data-driven administration on a school by school basis.

SEBIT has developed competence in the fields of learning analytics, school analytics and educational analytics through various R&D projects supported by the Horizon 2020 R&D programme being undertaken by the European Commission. With that expertise, SEBIT has commenced a design and pilot study into which variables can be monitored through the School Development Model announced in the MEB 2023 Vision, and which actions can be implemented accordingly. The output of the study is to develop a decision support software that each school can use to measure “the added value” it provides to students, as well as to carry out self-assessment and planning. Thus, each school will enter a continuous cycle of data-driven improvement and the success gap between schools will be reduced.

A cooperation protocol between the Ministry of National Education (MEB) and SEBIT was signed under the “School Profile Evaluation” project introduced by MEB in March 2019, and work on the R&D and design of the decision support software accelerated. The first designs for the indices that will show the status of the related school in the development areas as a result of data analysis and school profile screens were completed in 2019.

MEB Academic Support Program for University Preparation

As a priority in the fields of measurement and evaluation, the MEB 2023 Vision aims to reduce the pressure associated with the transition exams students take when they transfer from middle school to high school, or from high school to university in the education system. SEBIT also took part in two projects initiated in 2019 for this purpose; a flexible and modular program design project in accordance with the interests and abilities of students in high school education, and an academic support project to help in the transition from high school education to university.

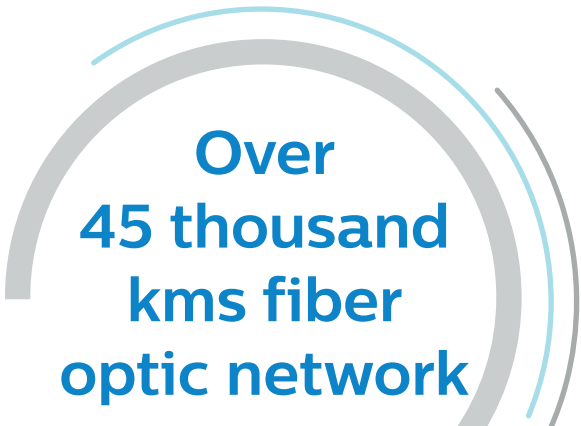
Raunt, created by SEBIT, is the first and only personalized university preparation program available on a nationwide basis. Within the scope of the Academic Support Project, MEB aims to make the Raunt infrastructure and the digital question banks and test systems on this infrastructure available to state schools. Students in the 11th and 12th grade will be able to prepare for university with this academic support, which will complement the curriculum taught in schools.

With the publisher ecosystem to be created within the scope of the project, it will be possible to provide all students with the entire national accumulation of assessment and evaluation in an equitable understanding for all. Within the same ecosystem, SEBIT Raunt question banks and tests will also be available to state school students in print media format. The Raunt product, which has also retail and corporate versions for private schools, will thus reach the entire country.



eha AKADEMİK
DESTEK

Türk Telekom International, an international member of Türk Telekom Group, carries out its operations in international data, internet, fiber infrastructure, wholesale voice communication and mobile roaming areas through its subsidiaries in 17 countries.



**Over
45 thousand
kms fiber
optic network**

With a fiber optic network extending over 45 thousand kms, mainly in Central and Eastern European countries, Türk Telekom International makes a notable contribution to Turkey's goal of becoming a communication bridge between the continents of Europe and Asia.



Türk Telekom International serving customers in an extensive geographical region with a rich product portfolio

Türk Telekom International, headquartered in Budapest, Hungary, serves a wide geographical region that includes Central and Eastern Europe, the Middle East, the Caucasus, Central and Southern Asia and the Far East as well as Turkey. Türk Telekom International's major customers include fixed and mobile telecommunication operators, international alternative infrastructure operators, domestic and international internet service providers and corporations, with the following services offered:

- A full range of internet and data communications,
- IP transit service,
- Network planning and implementation
- Integrated network operations
- Fiber-optic infrastructure and access
- International and local wholesale voice services
- Mobile roaming and services management
- International IT and telecommunications consultancy
- Service, product and market development
- Customer management from a single center
- Services such as Global MTN & SD-WAN for corporate clients

Türk Telekom International continues to strengthen its position through expansion efforts in the Eurasian market

With a fiber optic network over 45 thousand km long, mainly located in the Central and Eastern European countries, Türk Telekom International makes a notable contribution to Turkey's goal of becoming a communication bridge and data crossroads between the continents of Europe and Asia.



SEA-ME-WE-5

Türk Telekom International is a full member of the SEA-ME-WE-5 submarine fiber optic cable consortium consisting of 19 operators, all of which are leaders in their fields.

Türk Telekom International offers internet and IP services to a wide array of operators and companies with 114 points-of-presence (PoP) in 22 countries.

In addition to providing communication services and products to companies and operators abroad, Türk Telekom International provides international data and Internet access to Türk Telekom with a capacity of 10.7 terabytes per second.

With the strength derived from the Türk Telekom brand, which is well-recognized not only regionally but also globally, Türk Telekom International continued building on its strong position in 2019 through its efforts undertaken to develop new products and services and to expand across Eurasia.

Türk Telekom International is expanding its field of activity through new cooperation projects aimed at capturing a significant share in the digitalized world and offering different products to its customers.

An important regional player in international wholesale data and voice communication

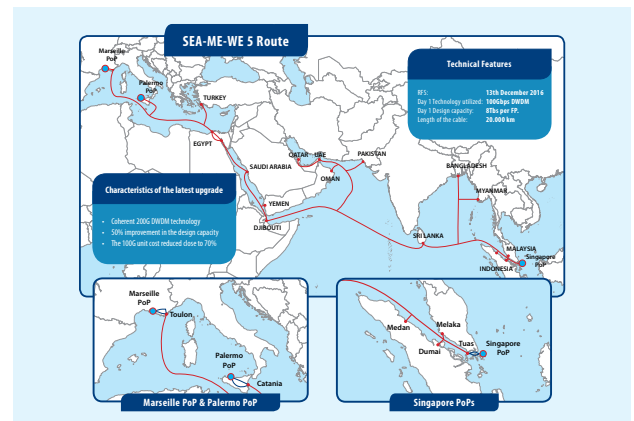
In addition to international data services, Türk Telekom International is an important regional player in international wholesale voice communication and international mobile roaming.

The company has more than 250 business partnerships with the world's most important telecommunications operators in international wholesale voice communication. Within this scope, approximately 120 million minutes of monthly transit traffic is carried from Eastern Europe, Turkey, the Middle East, the Commonwealth of Independent States, Africa and the Far East.

The company also has multilateral international mobile roaming agreements with 770 mobile network operators in over 212 countries. Within the scope of LTE technology, there are multilateral international mobile roaming agreements with more than 200 operators.

SEA-ME-WE-5, a submarine fiber optic cable project with 19 leading operators including Türk Telekom International, is a vital communication link between Asia and Europe

The Southeast Asia-Middle East-Western Europe 5 (SEA-ME-WE 5) international submarine fiber optic cable system project is the fifth generation project of the SEA-ME-WE System. Türk Telekom International is a full member of the SEA-ME-WE-5 submarine cable consortium consisting of 19 operators, all of which are leaders in their fields.



Cooperation with in the scope of the consortium aims to provide the European connections of carriers and operators in the Asian region through the Marmaris Cable Landing Station. The cable provides access via the Marmaris Cable Landing Station to the Istanbul and Edirne border links through Türk Telekom and Türk Telekom International fiber optic networks and through the Türk Telekom International fiber networks in Europe to the European PoPs. Accordingly, a route is created that provides a fully protected backup to the SEA-ME-WE-5 Cable System passing through the Mediterranean Sea.

This project contributes to Turkey's positioning as a communication bridge and data crossroads between East and West. Five consortium members have already moved their capacity to Marmaris. The route is also critical for the transmission of Türk Telekom traffic.

Türk Telekom International aiming to reach higher capacities with its New Backbone Project

Türk Telekom International aims to provide a fast and high quality service to its customers at more affordable prices by strengthening its infrastructure with its New Backbone Project.

The New Backbone Project will also provide connections to Sofia, Budapest, and Vienna through two different protected routes in Europe with endpoints in Edirne and Frankfurt, each with a fiber network of over 3,000 km. The project, which aims to reach high capacities that will enable the provision of value-added services in the area of data, is expected to be ready for operation in 2020.

Caspian Sea Crossing Project to create high quality and fast alternatives between Europe and Asia

The routes that can provide telecommunication links between Europe and Asia with minimum latency are the routes that extend to China via Turkey terrestrially. Work undertaken by the consortium to determine the technical and commercial details with regard to the route, which will reach China through Turkey, Georgia, Azerbaijan, the Caspian Sea, and Kazakhstan, is ongoing.

This project will establish high quality and rapid alternatives between Europe and Asia and a connection to the countries of the Caucasus, Eastern European countries and Central Asian Turkish Republics, which lack access to submarine cable systems.

Further efforts to increase uninterrupted service and quality levels at international exit points in 2019

In order to limit and the impact of internet downtime arising from human error or natural disasters, or to completely eliminate it if possible, the work to strengthen Türk Telekom International's network on the border exit points continued throughout 2019.



Within this scope, technological upgrade work was completed on the infrastructure to enable Med-Türk, the submarine cable exiting from Istanbul, to carry higher internet capacities.

IP products offered by Türk Telekom International to accelerate Istanbul's transformation into a data hub

In addition to the projects aimed at the geographic expansion and diversification of existing routes, Türk Telekom International has been offering IP products to international-based service and content providers since 2018 with the aim of securing Turkey's place as an international data center of attraction. This service allows companies with international content providers to reach Istanbul using Türk Telekom International's infrastructure and to host their servers in Türk Telekom International's Istanbul Data Center.

In 2019, major cloud and content providers such as Microsoft, Limelight and Cloudflare commenced operations in Istanbul and important steps were taken to make Istanbul a data hub. The infrastructure and value-added services offered by Türk Telekom International strengthen Istanbul's position as the center of attraction by providing access with high speeds and capacities.

Major awards for Türk Telekom International in 2019

Türk Telekom International was awarded the "*Best Wholesale Sales Team*" award at the Global Carrier Awards 2019 in London.

With this award, Türk Telekom International's commitment to excellence, innovation and its position as a market leader in the region has been reaffirmed, and the company's competence in customer service, high service quality and reliability has been recognized by the international community and its customers.

Moreover, the SEA-ME-WE 5 consortium, of which Türk Telekom International is a member, received the "*Best Submarine Cable Operator*" award in Berlin in 2019. Türk Telekom International also won "*The Project of the Year – Submarine Networks Award*" within the scope of the Telecoms World ME Awards held in Dubai in September 2019.

Important Developments after the Accounting Period

10 January 2020 dated Regulatory Disclosure - Notification Regarding Issue Limit - CMB approval of the domestic debt securities issuance certificate

Within the scope of our regulatory disclosure dated on 2 October 2019; our application to Capital Markets Board (CMB) regarding the issuance of Turkish Lira denominated debt instrument(s) in the form of bonds and/or bills not exceeding TL 1,000,000,000 (one billion Turkish Lira) in total, within the domestic market to be sold to qualified investors without public offering, in single or multiple tranches, with different maturities up to maximum 5 (five) years, has been approved and announced via CMB's bulletin dated 09.01.2020.

13 January 2020 dated Regulatory Disclosure - Notification Regarding Issue Limit - CMB approval of the domestic debt securities issuance certificate

Within the scope of our regulatory disclosure dated on 2 October 2019; our application to Capital Markets Board regarding the issuance of Turkish Lira denominated debt instrument(s) in the form of bonds and/or bills not exceeding TL 1,000,000,000 (one billion Turkish Lira) in total, within the domestic market to be sold to qualified investors without public offering, in single or multiple tranches, with different maturities up to maximum 5 (five) years, has been approved by the Capital Markets Board by on 09.01.2020, with decision number 4/55. The application form, issuance certificate and its annex are attached.

13 January 2020 dated Regulatory Disclosure - Issuance Certificate - CMB approval of the domestic debt securities issuance certificate

Within the scope of our regulatory disclosure dated on 2 October 2019; our application to Capital Markets Board regarding the issuance of Turkish Lira denominated debt instrument(s) in the form of bonds and/or bills not exceeding TL 1,000,000,000 (one billion Turkish Lira) in total, within the domestic market to be sold to qualified

investors without public offering, in single or multiple tranches, with different maturities up to maximum 5 (five) years, has been approved by the Capital Markets Board by on 09.01.2020, with decision number 4/55. The issuance certificate and its annex are attached.

27 January 2020 dated Regulatory Disclosure 2019 4th Quarter Financial Calendar

Our Company's financial reports for 01.01.2019-31.12.2019 accounting period are planned to be disclosed to public on 12.02.2020.

12 February 2020 dated Regulatory Disclosure - Guidance for 2020 Consolidated Financial Results

Under current circumstances, guidance for 2020 is as below:

- Consolidated revenue growth (excluding IFRIC 12) to be around 14% over 2019
- Consolidated EBITDA to be around TL 12.4 billion level
- Consolidated CAPEX to be around TL 5.8 billion level

As of the date of announcement of this Annual Report, the Board of Directors has not made a proposal to General Assembly for dividend distribution. Once the Board makes a proposal, it will be announced separately.

01.01.2019 - 31.12.2019 Accounting Period Conclusion of Affiliation Report

This Report is prepared and issued in reliance upon paragraph (1) of Article 199 of the Turkish Commercial Code No. 6102, to the extent of knowledge of the Board of Directors of our Company, with respect to the relations of our Company with its Controlling Company and with other affiliates of its Controlling Company in the 2019 fiscal year. Therefore, it is undersigned and hereby declared that each legal transaction mentioned in the Report is balanced with an appropriate counter performance, and that our Company has not incurred any damages or losses due to any measure taken or avoided.

Corporate Governance Principles Compliance Report

Statement of Compliance with Corporate Governance Principles

Türk Telekomünikasyon A.Ş. ("Türk Telekom") pays utmost attention to implementing the Corporate Governance Principles published by the Capital Markets Board of Turkey ("CMB"). The Company updates its annual and interim activity reports and corporate website, and makes them available to its shareholders to meet the said principles. Shareholders have access to comprehensive information through the Türk Telekom investor relations website, which is constantly kept up-to-date, and may also direct their queries to the Investor Relations Department.

On 12 December 2019, the corporate governance rating assessment report of Türk Telekom was prepared by SAHA Kurumsal Yönetim ve Kredi Derecelendirme Hizmetleri A.Ş. (SAHA A.Ş.), which holds an operating license to perform rating assessment in Turkey in line with the CMB's Corporate Governance Principles.

The Company received an overall average rating of 9.40 as a result of a corporate governance rating assessment. The Company's Corporate Governance Rating was determined as a result of the assessment undertaken under four major categories (Shareholders, Public Disclosure and Transparency, Stakeholders, Board of Directors) with weightings assigned within the framework of the CMB's Corporate Governance principles. The breakdown of corporate governance rating under the major categories was as follows:

Sub Categories	Weight	Rating
Shareholders	25%	87.59
Public Disclosure & Transparency	25%	98.85
Stakeholders	15%	99.33
Board of Directors	35%	92.83
Total		94.00

The rating of 9.40 assigned by SAHA A.Ş. based on the Corporate Governance Principles is a clear indicator that the Company is largely compliant with the CMB Corporate Governance Principles and has brought the necessary policies and measures into effect. The Company will

maintain its efforts to fully comply with the Principles of Corporate Governance.

Reasons for non-compliance with Corporate Governance Principles

Pursuant to the Communiqué No: II-17.1 dated 3 January 2014 of the Capital Markets Board on the Corporate Governance, and other regulations, the non-complied issues and their grounds are listed below. No conflict of interest has occurred to date due to the principles that are not complied.

Presence of voting privileges

The privileges attached to the Golden Share held by the Ministry of Treasury and Finance of the Republic of Turkey are statutory (the law numbered 4673), and the Company is not authorized to amend these privileges.

Presence of no articles in the Articles of Association regarding the procedures for the invitation of Board of Directors for a meeting by shareholders and stakeholders

Pursuant to the New Turkish Commercial Code numbered 6102, which entered into force on 1 July 2012, each Board Member may submit a written request to the Chairman of the Board to invite members of Board of Directors for a meeting.

Furthermore, shareholders holding 5% of the shares have the right to ask the Board of Directors to call a General Assembly Meeting by stating the reasons for doing so and the agenda in written form, and also insert additional topics onto the agenda in the event that an General Assembly Meeting is to be convened anyway.

There is no other method of invitation of Board of Directors for a meeting.

Mechanisms and models to encourage the participation of stakeholders in the management of the company are not regulated by the Articles of Association or the Company's internal regulations

Models for the participation of the Company's employees in the management have not been included in the Articles of Association; however, such models have been

developed and put into practice within the scope of the company's internal directives. Models for the participation of the Company's employees in the management, such as the Occupational Health and Safety Boards, Disciplinary Boards, the Dispute Resolutions Board and the Inventor Idea System are being developed.

Presence of no articles in the Articles of Association to extend minority rights to shareholders, which hold less than one twentieth of the capital

The Articles of Association of the Company was prepared taking into account the ratio determined by the Turkish Commercial Code in relation to minority rights.

Board of Directors' participation is not limited to one committee

Due to the number of independent members of the Board of Directors of the Company, some independent members of the Board of Directors are assigned in more than one committee.

No performance assessments of Board of Directors have been conducted to evaluate whether the Board of Directors have fulfilled their responsibilities effectively

No assessment had yet been carried out as of the publication date of the Annual Report.

Shareholders

Investor Relations Unit

At Türk Telekom the activities with respect to management of relationships with existing and potential shareholders and fixed income investors, responding effectively to queries from investors and analysts, and activities targeted at increasing the value of the Company is carried out by Investor Relations Department ("the Department") which reports directly to the CEO.

Execution of the responsibility arising from capital markets legislation and coordination of corporate governance practices is supervised by the Director of Investor Relations, Sabriye Gözde Çullas, who holds Capital Market Activities Level 3 and Corporate Governance Rating licenses, and is also responsible for the management of investor relations activities.

The primary activities handled by the Department are as follows:

- Including all kinds of cases related to Corporate Governance and Public Disclosure, performing the requirements of the Capital Market Regulations, and handling necessary internal and external disclosures and monitoring related processes,
- Introducing and presenting the Türk Telekom Group to domestic and foreign; individual and institutional; equity and fixed income investors,
- Keeping existing and potential equity investors and fixed income investors regularly informed of the

Company's activities, financial standing and strategies in a timely, accurate and complete manner,

- To ensure that records related to correspondences between investors and the Company and other information and documents are maintained in a manner that is sound, reliable and up-to-date,
- Responding to written information requests from equity and fixed income investors related to the Company,
- Preparing documents required for submission for shareholders' review with regard to the General Assembly Meeting, and taking precautions to ensure the organization of the General Assembly Meeting in accordance with related regulation, the Articles of Association and other regulations within the corporation,
- Responding to requests for information from research analysts; ensuring the best introduction of the Company and providing necessary information to ensure that reports for investors are prepared in an accurate and complete fashion,
- Sharing the interim and year-end statements, investor presentations, press releases and annual and interim activity reports regarding financial and operational results with investors and the press; updating the investor relations website regularly to ensure that shareholders have access to accurate and complete information,
- Keeping investors regularly informed of Türk Telekom and the Turkish Capital Markets by participating in conferences and investor meetings,
- Monitoring public disclosures carried out pursuant to the Company's disclosure policy and applicable legislation,
- Sharing stock related information within the Company, by monitoring the composition of domestic/foreign investors and significant changes in trading volume of the Türk Telekom shares which are publicly traded on the Borsa Istanbul.

Please contact the Corporate Governance and Compliance Manager, Eren Öner, for questions related to dividends, voting on during General Assembly or transfer of shares.

The Department received over 1,000 requests for information by telephone and email during 2019 and all these inquiries were responded to.

In 2019, Türk Telekom attended 11 investor conferences and 8 non-deal roadshows at various locations, particularly in the United States and the UK. The Company also attended the deal-roadshow in the US and the UK in relation to bond issued in 2019. Including the meetings held in Istanbul, Türk Telekom met more than 350 equity and fixed income investors in total throughout 2019.

Employees of Investor Relations Department	
Name and Last Name	Job Title
Sabriye Gözde Çullas	Director
Eren Öner	Manager
Nergis Gündoğdu	Manager
Özlem Mutcan	Associate
Tuğçe Cengiz	Assistant Associate

Phone: 0212 309 96 30

E-mail: investorrelations@turktelekom.com.tr

Shareholders' Exercise of their Right to Obtain Information

Within the framework of the Turkish Commercial Code No. 6102, queries other than those relating to trade secrets and undisclosed information received from shareholders and analysts by the Investor Relations Department by letter, telephone, email or other means are answered to in the fastest and most effective way possible upon contacting the relevant person with the highest authority on the related matter. More than 1,000 information requests were answered by Türk Telekom in the relevant period. Furthermore, information and developments related to Türk Telekom, which may be of concern to the shareholders, are published both in Turkish and English both in current form and retrospectively in order to ensure shareholders exercise of their right to obtain information and quick and easy access to information through the investor relations website. They are also regularly communicated to those registered on the database through email.

The www.ttyatirimciiliskileri.com.tr website with the relevant documents is periodically updated in accordance with the legislative requirements.

Further details are presented under the heading of the "Corporate Investor Relations Website and its Content" below.

Company activities are periodically audited by independent auditors appointed by the General Assembly upon proposal by the Board of Directors. Independent audit services for the activities conducted in 2019 were

provided by KPMG Bağımsız Denetim ve Serbest Mali Müşavirlik A.Ş.

There is no article related to the appointment of a special auditor in the Articles of Association. There was no request for the appointment of a special auditor in 2019 and no special audit was conducted. On the other hand, the Company is subject to the audit and inquiry of the Information and Communications Technologies Authority, the Capital Markets Board of Turkey and the Competition Authority within the scope of the relevant legislation of the sector. The results of inquiries and audits are disclosed to the public in the context of disclosure of material events regulated by the Communiqué on Material Events Disclosure.

Minority shareholders rights regarding the appointment of a special auditor are regulated in accordance with the 438th and 439th articles of the New Turkish Commercial Code 6102.

General Assembly Meetings

The arrangements regarding the General Assembly Meetings of the Company, is in the Articles of Association of Türk Telekomünikasyon A.Ş., which is publicly available on the Company's investor relations website of the Company.

Article 19 of the Articles of Association stipulates, "The General Assembly shall be the main decision body of the Company, possessing every kind of authority in relation to the business of the Company provided by law". Article 21 of the Articles of Association lists the "Material Decisions to be adopted by the General Assembly" as follows:

- the presentation of any petition for winding-up ;
- any change to these Articles of Association;
- any change in the corporate name of the Company;
- any change to the accounting reference date or accounting policies, other than as required by law;
- any change in the share capital or the creation, allotment or issue of any shares or of any other security or the grant of any option rights or rights to subscribe to the capital, or to convert any instrument into such shares or securities other than bonus shares;
- any reduction of capital or variation of the rights attached to any class of shares or any redemption, purchase or other acquisition by the Company of any shares or other securities of that company;

- g. any merger with or material acquisition of any other company;
- h. the cessation of any major Business operation;
- i. any material change to the nature of its Business;
- j. the payment or declaration by the Company of any dividend or distribution of any other kind relating to the shares other than in accordance with Article 30;
- k. decisions on any of the matters referred to in Article 12 (a) to (f) above to the extent that such matters have not been approved in accordance with Article 12:
 - the entry into of any contract or commitment not provided for in the Budget under which the Group Company may incur costs (per transaction) of more than USD 50 million;
 - the acquisition of any assets or property (other than in the ordinary course of business) at a total cost (per transaction) of more than USD 50 million;
 - the sale or disposition of any fixed assets for a total price per transaction of more than USD 10 million;
 - the borrowing of amounts by a Group Company which when aggregated with all other borrowings of that Group Company would exceed USD 150 million, except for the loans obtained from banks in the ordinary course of business;
 - entering any agreement (other than any management agreement referred to in Article 12(g) below) between a Group Company and a Shareholder (other than the holder of the Group B Shares) or its Associates which (x) is not at arm's length terms in terms or (y) involves the transfer of monies or goods and services of a value greater than USD 30 million
 - the appointment of any representative to act for the Company at any general assembly meeting of any Group Company (other than the Company and AVEA);
 - the entry into of any management agreement between a Group Company on the one part and a Shareholder, or any Associated Companies of a Shareholder or any

person that entered into a management agreement/ management consultancy agreement with the holder of the Group A Shares or any of its Associated Companies in connection with the tender process for the block sale on the other part. However, this Article shall not prevent the Company from entering into employment or consultancy agreements with individuals.

Pursuant to Article 18 of the Articles of Association, right holders who have right to join the General Assembly meetings of the Company may participate in these meetings electronically as well, in accordance with article 1527 of Turkish Commercial Code.

2019 General Assembly Meetings

On 25 January 2019, the Extraordinary General Assembly Meeting convened at the address of Türk Telekomünikasyon A.Ş. Genel Müdürlük Kültür Merkezi, Turgut Özal Bulvarı, 06103 Aydınlikevler, Ankara, where 90.37% of the Company shares were represented in order to amend Articles 1, 6, 8, 16, 17 and 19 of the Company's Articles of Association, elect the Members of the Board of Directors and determine their terms of office and their remuneration. During this meeting, no questions were raised by shareholders attending either through the electronic platform or individually. Minutes of the Meeting can be accessed from <http://www.ttyatirimciliskileri.com.tr/en-us/corporate-governance/pages/general-assembly-meeting.aspx> No proposals for agenda items were tabled by shareholders during the meeting other than the sub-agenda Items.

Particulars related to the said Extraordinary General Assembly Meeting dated 25 January 2019 were registered by the Ankara Trade Registry Directorate on 8 February 2019, and published in Turkish Trade Registry Gazette dated 13 February 2019.

On 25 January 2019, the privileged shareholders' meeting was held for Group A, B and C shares with the participation of all relevant shareholders in order to discuss and approve the resolutions issued in the Extraordinary General Assembly Meeting held on 25 January 2019.

The articles of the Company's Articles of Association amended during the Extraordinary General Assembly Meeting held on 25 January 2019 are as follows;

Corporate Governance Principles Compliance Report

<div>Former Version</div> <div>INCORPORATION</div> <div>ARTICLE 1.</div> <div>In accordance with the provisions of the “Law on the Amendment of an Article of the Telegram and Telephony Law and the Addition of Additional and Provisional Articles to this Law” Numbered 4000 and dated 10.06.1994, a joint stock company has been established by the founder whose name, residence and nationality is given below:</div> <div>Undersecretariat for Treasury of the Prime Ministry of the Republic of Turkey (the “Treasury”) Ankara, Republic of Turkey.</div>	<div>New Version</div> <div>INCORPORATION</div> <div>ARTICLE 1.</div> <div>In accordance with the provisions of the “Law on the Amendment of an Article of the Telegram and Telephony Law and the Addition of Additional and Provisional Articles to this Law” Numbered 4000 and dated 10.06.1994, a joint stock company has been established by the founder whose name, residence and nationality is given below:</div> <div>Ministry of Finance and Treasury of the Republic of Turkey (the “Treasury”) Ankara, Republic of Turkey.</div>																																																																		
<div>CAPITAL</div> <div>ARTICLE 6.</div> <div>The capital of the Company is TL 3,500,000,000 (three billion five hundred million Turkish Liras) and is fully paid-up. This capital is divided into 350,000,000,000 (three hundred and fifty billions) shares each having a nominal value of Kr 1 (one) (TL 0.01) as set out below:</div> <table><tr><th>Group</th><th>Shareholder Name</th><th>Capital Amount (TL)</th><th>Type</th><th>Number of Shares</th><th>Percentage to the Capital</th></tr><tr><td>A</td><td>Ojer Telekomünikasyon A.Ş.</td><td>1,925,000,000.00</td><td>Registered</td><td>192,500,000,000</td><td>55%</td></tr><tr><td>B</td><td>Treasury</td><td>1,049,999,999.99</td><td>Bearer</td><td>104,999,999,999</td><td>30%</td></tr><tr><td>C</td><td>Treasury</td><td>0.01</td><td>Registered</td><td>1</td><td>-</td></tr><tr><td>D</td><td>Open to public</td><td>525,000,000.00</td><td>Bearer</td><td>52,500,000,000</td><td>15%</td></tr></table> <div>The capital increases shall be realized as follows: group A shares shall be issued for group A shareholders, and group B shares shall be issued for group B shareholders, and group D shares shall be issued for group D shareholders pro rata to their shares. In case of a capital increase by way of issuing new share certificates in return for cash, the shareholders are entitled to preemptive rights pro rata to their current shares, within the framework of the provisions of the Turkish Commercial Code, unless otherwise resolved by the General Assembly.</div> <div>Following the public offering of the Company, the Company shall comply with the provisions of the Capital Markets regulations and the principles for the dematerialization of the share certificates, with regards to the form of the share certificates regarding the shares to be issued.</div> <div>Subject to Article 6/A below, all Shares of Türk Telekom can be transferred except for one privileged (golden) share of Group C. For the purpose of protecting the national interest in issues of national security and the economy, the following actions and resolutions cannot be taken without the affirmative vote of the holder of the C Group Privileged Share at either a meeting of the board of directors or the General Assembly. Otherwise, such transactions shall be deemed invalid.</div> <div>a. any proposed amendments to the Articles of Association;</div> <div>b. the transfer of any registered Shares in the Company which would result in a change in the management control of the Company;</div> <div>c. the registration of any transfer of registered shares in the Company's shareholders' ledger.</div> <div>Pursuant to Article 8(d) below, the holder of the C Group Privileged Share appoints one member representing the Privileged Share, to the Board of Directors of Türk Telekom. The C Group Privileged Share owner cannot participate in capital increases.</div> <div>On condition that all of the financial rights stemming from the public's shareholder status remain on the Treasury, the rights and competences based on the Treasury's shareholder status such as right of vote, management, representation and control are exercised by Ministry of Transport, Maritime Affairs and Communications.</div>	Group	Shareholder Name	Capital Amount (TL)	Type	Number of Shares	Percentage to the Capital	A	Ojer Telekomünikasyon A.Ş.	1,925,000,000.00	Registered	192,500,000,000	55%	B	Treasury	1,049,999,999.99	Bearer	104,999,999,999	30%	C	Treasury	0.01	Registered	1	-	D	Open to public	525,000,000.00	Bearer	52,500,000,000	15%	<div>CAPITAL</div> <div>ARTICLE 6.</div> <div>The capital of the Company is TL 3,500,000,000 (three billion five hundred million Turkish Liras) and is fully paid-up. 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In case of a capital increase by way of issuing new share certificates in return for cash, the shareholders are entitled to preemptive rights pro rata to their current shares, within the framework of the provisions of the Turkish Commercial Code, unless otherwise resolved by the General Assembly.</div> <div>Following the public offering of the Company, the Company shall comply with the provisions of the Capital Markets regulations and the principles for the dematerialization of the share certificates, with regards to the form of the share certificates regarding the shares to be issued.</div> <div>Subject to Article 6/A below, all Shares of Türk Telekom can be transferred except for one privileged (golden) share of Group C. For the purpose of protecting the national interest in issues of national security and the economy, the following actions and resolutions cannot be taken without the affirmative vote of the holder of the C Group Privileged Share at either a meeting of the board of directors or the General Assembly. Otherwise, such transactions shall be deemed invalid.</div> <div>a. any proposed amendments to the Articles of Association;</div> <div>b. the transfer of any registered Shares in the Company which would result in a change in the management control of the Company;</div> <div>c. the registration of any transfer of registered shares in the Company's shareholders' ledger.</div> <div>Pursuant to Article 8(d) below, the holder of the C Group Privileged Share appoints one member representing the Privileged Share, to the Board of Directors of Türk Telekom. The C Group Privileged Share owner cannot participate in capital increases.</div> <div>On condition that all of the financial rights stemming from the public's shareholder status remain on the Treasury, the rights and competences based on the Treasury's shareholder status such as right of vote, management, representation and control are exercised by Ministry of Transport and Infrastructure.</div>	Group	Shareholder Name	Capital Amount (TL)	Type	Number of Shares	Percentage to the Capital	A	Levent Yapılandırma Yönetimi A.Ş.	1,925,000,000.00	Registered	192,500,000,000	55%	B	Treasury	875,011,884.975	Bearer	87,501,188,497.50	25%	B	Turkish Wealth Fund	174,988,115.015	Bearer	17,498,811,501.50	5%	C	Treasury	0.01	Registered	1	-	D	Open to public	525,000,000.00	Bearer	52,500,000,000	15%
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<p>THE BOARD OF DIRECTORS ARTICLE 8.</p> <p>The board of directors is composed of members in charge with executive affairs and members not in charge with executive affairs. A board member not in charge with executive affairs is a person who does not hold any other administrative duties other than being a board member within the company and who does not intervene with the daily business and ordinary activities of the Company. The majority of the board of directors is composed of board members who are not in charge with executive affairs.</p> <p>In this respect;</p> <p>The board of directors shall be composed of twelve (12) members nominated by the Shareholders as follows:</p> <p>(a) the Group A Shareholder shall be entitled to nominate seven (7) persons for election as Directors;</p> <p>(b) provided that the Treasury as Group B Shareholder shall hold:</p> <ul style="list-style-type: none"> • 30% or more of the Shares, the Treasury shall be entitled to nominate four (4) persons for election as Independent Board Members who carry the independence criteria as defined in the Capital Markets legislation; or • 15% or more of the Shares (but less than 30% of the Shares) the Treasury shall be entitled to nominate two (2) persons for election as Independent Board Members who carry the independence criteria as defined in the Capital Markets legislation; • During the calculation of 15% and 30% of the Shares mentioned in above paragraphs, the amount of Group B Shares and Group D Shares held by the Treasury shall be taken into account together. <p>(c) As long as the Treasury holds 15% or more of the Shares (but less than 30% of the Shares), the Group A shareholder shall be entitled to nominate two (2) persons, who carry the independence criteria as defined in the Capital Markets legislation, for election as Independent Board Members and (7) persons for election as Director.</p> <p>(d) while the Treasury holds the C Group Privileged Share, the Treasury shall be entitled to nominate, a further one (1) person, for election as Director for the C Group Privileged Share;</p> <p>(e) Each one of the A, B and C Group shareholders shall vote for the election of the directors nominated pursuant to this article. This article shall not restrict the voting rights of the shareholders that have acquired the Shares from stock exchange market.</p> <p>The Chairman of the Board of Directors shall be nominated by the directors nominated by the Group A Shares from among the Directors and be elected and removed by the simple majority votes of those present at the meeting of the Board of Directors.</p> <p>The Vice Chairman shall be nominated by the directors nominated by the Group B Shares from among the Directors and be elected and removed by the simple majority votes of those present at the meeting of the Board of Directors.</p> <p>The Chief Executive Officer and other executives shall be nominated by the holder of the Group A Shares and elected and removed by a simple majority of those present at the meeting of the Board of Directors.</p> <p>The Shareholder who wishes to make a nomination shall take reasonable steps to ensure that its nominee is able to perform his or her duties competently.</p> <p>Each nominating Shareholder shall determine and announce the name, qualifications and experience of its nominee and intended date of nomination in accordance with the Capital Markets Board regulations.</p> <p>The wages of the members of the Board of Directors shall be determined by the General Assembly. In the determination of the remuneration policy of the Board of Directors members, the Capital Markets Board regulations shall be complied with.</p>	<p>THE BOARD OF DIRECTORS ARTICLE 8.</p> <p>The board of directors is composed of members in charge with executive affairs and members not in charge with executive affairs. A board member not in charge with executive affairs is a person who does not hold any other administrative duties other than being a board member within the company and who does not intervene with the daily business and ordinary activities of the Company. The majority of the board of directors is composed of board members who are not in charge with executive affairs. In this respect;</p> <p>The board of directors shall be composed of nine (9) members nominated by the Shareholders as follows:</p> <p>(a) the Group A Shareholder shall be entitled to nominate five (5) persons for election as Directors;</p> <p>(b) provided that the Treasury and Turkish Wealth Fund, as Group B Shareholders shall hold:</p> <ul style="list-style-type: none"> • - 30% or more of the Shares, the Treasury shall be entitled to nominate three (3) persons for election as Independent Board Members who carry the independence criteria as defined in the Capital Markets legislation; or • - 15% or more of the Shares (but less than 30% of the Shares) the Treasury shall be entitled to nominate two (2) persons for election as Independent Board Members who carry the independence criteria as defined in the Capital Markets legislation; • - During the calculation of 15% and 30% of the Shares mentioned in above paragraphs, the amount of Group B Shares and Group D Shares held by the Treasury and Turkish Wealth Fund shall be taken into account together. <p>(c) As long as the Treasury and Turkish Wealth Fund holds 15% or more of the Shares (but less than 30% of the Shares), the Group A shareholder shall be entitled to nominate one (1) person, who carry the independence criteria as defined in the Capital Markets legislation, for election as Independent Board Members and five (5) persons for election as Director.</p> <p>(d) while the Treasury holds the C Group Privileged Share, the Treasury shall be entitled to nominate, a further one (1) person, for election as Director for the C Group Privileged Share;</p> <p>(e) Each one of the A, B and C Group shareholders shall vote for the election of the directors nominated pursuant to this article. This article shall not restrict the voting rights of the shareholders that have acquired the Shares from stock exchange market.</p> <p>The Chairman of the Board of Directors shall be nominated by the directors nominated by the Group A Shares from among the Directors and be elected and removed by the simple majority votes of those present at the meeting of the Board of Directors.</p> <p>The Vice Chairman shall be nominated by the directors nominated by the Group B Shares from among the Directors and be elected and removed by the simple majority votes of those present at the meeting of the Board of Directors.</p> <p>The Chief Executive Officer and other executives shall be nominated by the holder of the Group A Shares and elected and removed by a simple majority of those present at the meeting of the Board of Directors.</p> <p>The Shareholder who wishes to make a nomination shall take reasonable steps to ensure that its nominee is able to perform his or her duties competently.</p> <p>Each nominating Shareholder shall determine and announce the name, qualifications and experience of its nominee and intended date of nomination in accordance with the Capital Markets Board regulations.</p> <p>The wages of the members of the Board of Directors shall be determined by the General Assembly. In the determination of the remuneration policy of the Board of Directors members, the Capital Markets Board regulations shall be complied with.</p>
<p>BOARD OF STATUTORY AUDITORS ARTICLE 16.</p> <p>The Board of Statutory Auditors shall consist of three members. Two members shall be elected by the General Assembly from among the nominees nominated by the holder of the Group A Shares and one member shall be elected by the General Assembly from among the nominees nominated by the Treasury representing the C group privileged share.</p> <p>The Board of Statutory Auditors shall elect a chairman from among its members.</p> <p>The Statutory Auditors shall hold office for a term of 3 years. The Statutory Auditor, whose term has ended, may be re-elected.</p> <p>The Statutory Auditors are also subject to the qualifications and conditions of appointment set out in Article 9 of these Articles of Association.</p> <p>The wages of the members of Board of Statutory Auditors shall be determined by the decision of the General Assembly.</p>	<p>BOARD OF STATUTORY AUDITORS ARTICLE 16.</p> <p>Removed.</p>
<p>DUTIES, AUTHORITIES AND LIABILITIES OF THE STATUTORY AUDITORS ARTICLE 17.</p> <p>The Statutory Auditors have the duty of and are authorized to audit the overall business and budget of the Company, to fulfill those tasks required to be performed by Statutory Auditors under the Turkish Commercial Code, to ensure that the Company is managed efficiently, and to submit proposals to the Board of Directors regarding the protection of the rights and assets of the Company, to call the General Assembly for a meeting when necessary and to determine the agenda of the meeting and to prepare the report required by Article 354 of the Turkish Commercial Code. The Statutory Auditors are obliged to perform the works given to them by Law and these Articles of Association fully and completely.</p>	<p>DUTIES, AUTHORITIES AND LIABILITIES OF THE STATUTORY AUDITORS ARTICLE 17.</p> <p>Removed.</p>
<p>AUTHORITY OF THE GENERAL ASSEMBLY ARTICLE 19.</p> <p>The General Assembly shall be the main decision body of the Company possessing every kind of authority in relation to the business of the Company provided by law. The decisions of the General Assembly shall be binding upon every organ of the Company, primarily upon the 18 Board of Directors. The General Assembly decides on the release and responsibilities of the Board of Directors members and Auditors.</p>	<p>AUTHORITY OF THE GENERAL ASSEMBLY ARTICLE 19.</p> <p>The General Assembly shall be the main decision body of the Company possessing every kind of authority in relation to the business of the Company provided by law. The decisions of the General Assembly shall be binding upon every organ of the Company, primarily upon the 18 Board of Directors. The General Assembly decides on the release and responsibilities of the Board of Directors members.</p>

An Ordinary General Assembly Meeting convened on 2 April 2019 at Türk Telekomünikasyon A.Ş. Genel Müdürlük Kültür Merkezi, Turgut Özal Bulvarı, 06103 Aydınlikevler, Ankara, in which 91.44% of the Company's shares were represented. No questions were raised by shareholders or their representatives attending during this meeting, either over the electronic platform or in person. The minutes of the Meeting are accessible on the website, <http://www.ttyatirimciiliskileri.com.tr/en-us/corporate-governance/pages/general-assembly-meeting.aspx>. No proposals for the agenda items were tabled by shareholders during the meeting other than the sub-agenda items.

Particulars related to the said Ordinary General Assembly Meeting dated 2 April 2019 were registered by Ankara Trade Registry Directorate on 24 April 2019, and were published in the Turkish Trade Registry Gazette dated 26 April 2019.

Furthermore, public disclosures announced by the Company regarding the General Assembly meetings were also published on the Public Disclosure Platform as of the meeting dates. Press or stakeholders did not participate to the General Assembly Meetings.

According to Article 31 of the Company's Articles of Association, General Assembly Meetings are announced at least 21 days in advance of the meeting date, excluding the dates of announcement and meeting, in the Turkish Trade Registry Gazette and in two national newspapers in accordance with Article 414 of the Turkish Commercial Code, so as to inform the shareholders in advance of the General Assembly Meetings. Information on General Assembly Meetings, General Assembly agenda, letters of invitation, proxy sample forms and information note, which includes detailed information regarding agenda items are also posted on the investor relations website and the E-Company portal of the Central Registry Agency.

Shareholders who wished to exercise their rights attached to their shareholding and who fulfilled the necessary procedures for participation in General Assembly Meetings pursuant to applicable legislation attended the General Assembly Meeting.

The announcement and explanations which the Company is required to disclose in accordance with the principles of corporate governance, the Information Set forth and the invitation to the General Assembly Meeting and the Minutes of the Meeting are made available for uninterrupted access to the shareholders on the website www.ttinvestorrelations.com, the E-Company portal of the Central Registry Agency and the Public Disclosure Platform.

There were no transactions that required the positive vote of a majority of independent Board Members in order to be resolved by the Board of Directors, or which were left to the discretion of General Assembly due to the negative votes of independent Board Members.

In the Ordinary General Assembly Meeting on 2 April 2019, the shareholders were informed of donations including education, health, sport, culture, the arts or humanitarian aid undertaken by the Company to associations and charitable institutions, which totaled TL 27,120,534 in the year 2018. Total donations including education, health, sport, culture, the arts and humanitarian aid made in 2019 amounted to TL 36,467,085. In line with the donation policy of the Company, total donations in a fiscal year cannot exceed TL 40 million.

As far as Company is aware, no shareholders holding management control, Board Members, insiders with administrative responsibilities or spouses and their relatives up to the second degree relation by blood or marriage were not engaged in any transaction that could cause a conflict of interest for the Company or its subsidiaries, or did not carry out any commercial transaction included in the operation of the Company and its subsidiaries on behalf of themselves or another individual, or did not join a partnership engaged in the same scope of activity in the capacity of a partner with unlimited liability. There was no General Assembly Meeting resolution that was not implemented in 2019.

The Company's Class A shares held by LYY Telekomünikasyon A.Ş. and Class C shares held by the Ministry of Treasury and Finance of the Republic of Turkey are registered, whereas the remaining shares are bearer shares.

Voting and Minority Rights

All Shares of Türk Telekom can be transferred except for one privileged (golden) share of Group C. For the purpose of protecting the national interest in issues of national security and the economy, the following actions and resolutions cannot be taken without the affirmative vote of the holder of the C Group Privileged Share at either a meeting of the Board of Directors or the General Assembly. Otherwise, such transactions shall be deemed invalid.

- Any proposed amendments to the Articles of Association;
- The transfer of any registered Shares in the Company which would result in a change in the management control of the Company;

c. The registration of any transfer of registered shares in the Company's shareholders' ledger.

Pursuant to the Articles of Association and the Telegram and Telephone Law numbered 406, the holder of the C Group Privileged Share appoints one member representing the Privileged Share to the Board of Directors of Türk Telekom. The C Group Privileged Share owner cannot participate in capital increases.

The Company's Articles of Association contain the provision that minority rights are to be exercised by shareholders representing at least 5% of the paid-in capital. However, minority shareholders are not represented on the Board of Directors.

There is no cross-ownership the Company's share capital.

Dividend Right and Profit Distribution Policy

The Articles of Association do not grant any privileges regarding participation in the Company's profit. Each share is entitled to an equal profit share; however, the holder of the Class C share does not receive any share from the profit. Türk Telekom dividends are paid within the legally prescribed periods of time as set out by the applicable legislation.

The Company adopts a policy of distributing the maximum amount of distributable profit in accordance with Articles 28, 29 and 30 of our Company's Articles of Association. The Dividend Distribution policy was approved by shareholders' in the 2013 Ordinary General Assembly Meeting convened on 27 May 2014. On the other hand, the Board of Directors considers the short-term financial liabilities of group companies and the conditions of those contracts signed with creditors in determining the Company's dividend proposal.

As stated in the Company's Articles of Association, the dates and the manner of distribution of the annual profit to shareholders is decided by the General Assembly upon the proposal by the Board of Directors, in accordance with the provisions of the Capital Market Law and applicable legislation.

The Dividend Distribution Policy is disclosed to the public through investor relations website (www.ttinvestorrelations.com) and stated in Company's Annual Report.

In the Board of Directors meeting held on 31 January 2019, it was decided that as a result of the Company's activities performed during the 1 January 2018 – 31 December 2018 the Company recorded loss of TL 1,391,261,128 according to the independently audited consolidated financial statements prepared pursuant to the provisions of the Series II-14.1 "Capital Market Communiqué on Principles Regarding Financial Reporting" and the Company's commercial loss calculated in accordance with the provisions of the Tax Procedure Law stood at TL 1,965,757,320, and accordingly, no dividend should be distributed for the 2018 activity year because of the loss arising in accordance with the Company's 2018

consolidated financial statements and the provisions of the Tax Procedure Law. The proposal of the Board of Directors for dividend distribution was accepted in the general assembly meeting held on 2 April 2019, and no dividend distribution was performed.

The Company did not buy back its shares in 2019.

Transfer of Shares

The provisions of the Company's Articles of Association restricting transfer of shares are as follows:

Subject to Article 6/A of the Company's Articles of Association, all shares of Türk Telekom can be transferred except for one privileged (golden) share of Group C. For the purpose of protecting the national interest in issues of national security and the economy, the following actions and resolutions cannot be taken without the affirmative vote of the holder of the C Group Privileged Share at either a meeting of the Board of Directors or the General Assembly. Otherwise, such transactions shall be deemed invalid:

a) Any proposed amendments to the Articles of Association;

b) The transfer of any registered shares in the Company which would result in a change in the management control of the Company;

c) The registration of any transfer of registered shares in the Company's shareholders' ledger

The transfer of shares are restricted until the expiration of the Strategic Commitment Period of 14 November 2008 as stipulated in Article 6.A.2 of the Articles of Association, which is as follows: "At any time after the later of the expiry of the Strategic Commitment Period and the date on which the holder of the Group A Shares has paid in full for all of its Shares in the Company, the holder of the Group A Shares may transfer some or all of its Shares to a third party, subject always to the veto rights of the holder of the C Group Privileged Share." After the end of the aforementioned restriction period, the transfer of the Company's Group A shares may always be the subject of the veto rights of the holder of the Group C Privileged Share. The Strategic Commitment Period ended on 14 November 2008 and the holder of Group A shares paid the amount in full for all of their shares in the Company. Accordingly, the Company's Group A shares may be transferred with the approval of the holder of the C Group Privileged Share. The Group A Shareholder may pledge, mortgage or charge those of its shares as shall from time to time not be subject to the Share Pledge to a financial institution for the purpose of security for borrowings incurred in respect of the purchase of such shares or otherwise. If that financial institution forecloses such a pledge, mortgage or charge then it may only transfer the Group A Shares subject to the pledge, mortgage or charge in the event that it obtains the prior written consent of the Treasury (such consent not to be unreasonably withheld).

According to Article 6.A.3 of the Company's Articles of Association, the restriction placed of the transfer of shares of Group B shareholders is limited to the strategic commitment period and there shall be no restrictions on the transfer of Group B shares after the end of the strategic commitment period on 14 November 2008.

Furthermore, according to the supplemental Article 17 of the Telegram and Telephone Law numbered 406 and paragraph 4 of the Article 6 of the Company's Articles of Association, the C Group Privileged Share shall not be sold.

Public Disclosure and Transparency

Company Disclosure Policy

The Türk Telekom Disclosure Policy has been formulated in line with the CMB's Communiqué on Principles Governing Disclosure of Material Events No: II-15.1 and CMB's Corporate Governance Principles. In line with the decision taken by the Company's Board of Directors, the policy was updated on 12 April 2018 and announced on the Public Disclosure Platform, and has been approved and brought into effect by the Board of Directors, with shareholders being informed during the Ordinary General Assembly Meeting convened on 28 May 2018. The disclosure policy is posted on the investor relations website (www.ttinvestorrelations.com) under the "Corporate Governance" heading. The Investor Relations Department is responsible for the monitoring and development of the said policies, and the names and duties of those with the relevant responsibility are listed under the heading of the Investor Relations Unit. These individuals closely cooperate with the Board of Directors and Corporate Governance Committee in the fulfillment of these responsibilities.

2019 Company Guidance

On 26 July 2019 and 31 October 2019, the Company revised the guidance for 2019, which was announced on 30 January 2019.

Guidance for 2019 Regarding Consolidated Financial Results announced on 30 January 2019 is as follows:

- "Under current circumstances, guidance for 2019 is as below:
- Consolidated revenue growth (excluding IFRIC 12) to be at 15-16% levels over 2018,
- Consolidated EBITDA to be at TL 10.0 billion-TL 10.2 billion levels,

- Consolidated CAPEX to be at TL 5.5 billion- TL 5.7 billion levels.

Note: The Company adopted IFRS 16 accounting standards with effect from 1 January 2019. Guidance includes the impact of IFRS 16 on EBITDA (TL 650-700 million) and CAPEX (TL 850- 900 million)."

Explanations related to the guidance revision on 26 July 2019 are as follows:

"Our Company decided to revise upwards its 2019 guidance on EBITDA on the back of strong operational profitability in the first half of 2019.

Accordingly, undercurrent circumstances, guidance for 2019 is as below;

- Consolidated revenue growth (excluding IFRIC 12) to be around 15%-16% over 2018;
- Consolidated EBITDA to be at TL 10.3 billion and 10.5 billion levels,
- Consolidated CAPEX to be around TL 4.6 billion - TL 4.8 billion."

Our company adopted IFRS 16 accounting standards starting from 1 January 2019. EBITDA includes IFRS 16 impact, while CAPEX does not include gross additions to right of use assets (TL 850 - 900 million) which is netted off by gross additions to leasing liability arising from IFRS 16."

Explanations related to the guidance revision on 31 October 2019 are as follows:

"Our company has decided to revise its 2019 guidance based on the results and strong operational profitability in the first nine months of 2019. Accordingly, under the current circumstances, the guidance for 2019 is as below;

- Consolidated revenue growth (excluding IFRIC 12) to be around 15% over 2018;
- Consolidated EBITDA to be around TL 11.0 billion,
- Consolidated CAPEX to be around TL 4.8 billion."

Realization of 2019

While the consolidated revenue (excluding IFRIC 12) increased by 15.1% in line with the Company's annual revenue growth guidance, the EBITDA recorded was TL 11.2 billion compared to the latest guidance of TL 11.0 bn. The Group invested TL 4.9 billion in line with the consolidated CAPEX guidance.

Guidance for 2020 Consolidated Financial Results

“Under the current circumstances 2020 guidance is as follows:

- Consolidated revenue growth (excluding IFRIC 12) to be around 14% over 2019;
- Consolidated EBITDA to be around TL 12.4 billion level;
- Consolidated CAPEX to be around TL 5.8 billion level.”

The Investor Relations Website and its Content

The Investor Relations website can be accessed from www.ttinvestorrelations.com, and is actively used in achieving transparency and public disclosure in parallel with Capital Market legislation, CMB and BIST rules and regulations and the CMB's Corporate Governance Principles. The information on the website is provided in both Turkish and English. The main headings covered on the website are listed below:

- Detailed information about the company profile
- Vision, mission and values
- Company management and shareholding structure
- Information about the Members of the Board of Directors and Senior Management of the Company
- Company's Articles of Association and the Turkish Trade Registry Gazette where the amendments are published
- Trade registry information
- Financial statement and activity reports
- Public disclosures of material events
- Earnings releases
- Investor presentations
- Stock performance information
- Bond information
- Credit ratings

- Contact information of analysts
- Information about the General Assembly Meetings
 - Agenda
 - Information set
 - Meeting Minutes
 - List of attendants
 - Proxy sample
- Corporate Governance Principles compliance report
- Profit distribution policy, history and capital increases
- Disclosure policy, remuneration policy, Board of Directors women membership policy, human rights policy and other policies
- Ethic Codes
- Independent auditor information
- List of insiders with administrative responsibilities
- Internal Audit and Risk Management
- Information on committees established according to the Capital Markets Board Corporate Governance Principles
- Offering circular related to the public offering
- Türk Telekom Call Center and contact information
- Investor Relations contact information
- Sustainability
- Information related to the social responsibility projects of Türk Telekom
- Frequently asked questions and answers
- Telecom glossary

Trade Registry Information	
Date of Registration	30 June 1994
Date of publishing the corporation in Turkish Trade Registry Gazette	1 July 1994
Registration Number	103633
Trade Registry Office	Ankara Trade Registry Office
Central Registration System Number	0876005220500084

Corporate Governance Principles Compliance Report

Disclosure of Ultimate Controlling Individuals

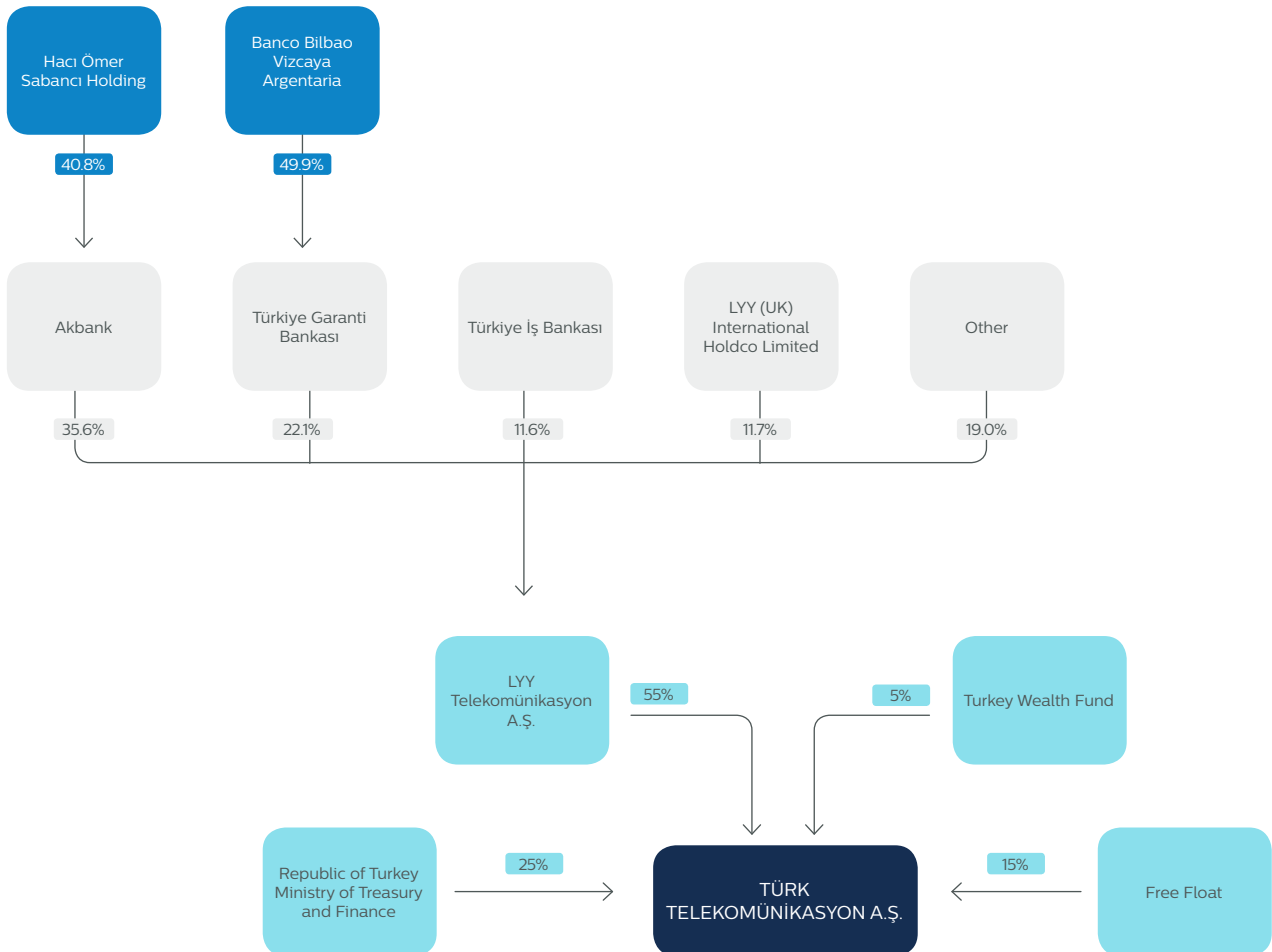
Not subject to the registered capital system, the Company has a share capital of TL 3,500,000,000 which is fully paid-in.

The distribution of the paid-in capital among the shareholders is shown below:

Shareholders	Share in Capital		
	Amount (TL)	Group	Share (%)
LYY Telekomünikasyon A.Ş.	1,925,000,000.00	A	55
Republic of Turkey Ministry of Treasury and Finance	875,011,884,975	B	25
Republic of Turkey Ministry of Treasury and Finance	0.01	C	
Turkish Wealth Fund	174,988,115.015	B	5
Free Float	525,000,000.00	D	15
TOTAL	3,500,000,000.00	-	100

Note: According to the Official Gazette, on 5 February 2017, the Council of Ministers decided to transfer the 6.68% stake (5% B Group shares and 1.68% D Group free float shares) of the Company belonging to Republic of Turkey Ministry of Treasury and Finance to the Turkish Wealth Fund. The transaction was completed in 2017.

Real and legal persons owning shares directly and indirectly in the Company are as follows:



Note: 1) There is no real or legal person whose shareholding exceeds 5% except those shown in the shareholder structure.

2) Turkey Wealth Fund has 1.68% share in free float.

Other Information in accordance with legislation

The content of the annual activity report is prepared in accordance with the New Turkish Commercial Code and the regulations of the Capital Market Board.

There were no conflicts of interest arising between Türk Telekom and the related organizations which offer investment advice, investment analysis and rating activity.

The Chief Executive Officer is not the Chairman of the Board of Directors.

No administrative sanction or penalty has been imposed on any member of the Board of Directors.

As there is no cross ownership in the Company's share capital, no information regarding this issue is provided in the activity report.

Board of Directors

Structure and Formation of the Board of Directors

During the Extraordinary General Assembly Meeting of the Company held on 25 January 2019, Article 8 of the Articles of Association of the Company, entitled "Board of Directors" was amended and the number of the members of the Board of Directors was set at nine, and the Board of Directors was elected for a term of 3 years.

In accordance with the Company's Articles of Association, members of the Board of Directors may be nominated as follows;

(a) the Group A Shareholder as all be entitled to nominate five (5) persons for election as Directors.

(b) provided that the Treasury and Turkish Wealth Fund, as Group B Shareholders shall hold;

- 30% or more of the shares, the Treasury shall be entitled to nominate three (3) persons for election as independent board members who carry the independence criteria as defined in the Capital Market legislation or

- 15% or more of the shares (but less than 30% of the shares), the Treasury shall be entitled to nominate two (2) persons for election as independent board members who the carry the independence criteria as defined in the Capital Markets legislation

- During the calculation of 15% and 30% of the shares mentioned above paragraphs, the amount of B Group shares and D Group shares held by the Treasury and Turkish Wealth Fund shall be taken into account together.

(c) As long as the Treasury and Turkish Wealth Fund holds 15% or more of the Shares (but less than 30% of the Shares), the Group A shareholder shall be entitled to nominate one (1) person, who carry the independence criteria as defined in the Capital Markets legislation, for election as independent Board Members and five (5) persons for election as Director.

(d) while the Treasury holds the C Group Privileged Share, the Treasury shall be entitled to nominate, a further one (1) person, for election as Director for the C Group Privileged Share.

Corporate Governance Principles Compliance Report

As of the report date, the structure of the Board of Directors of the Company is as shown below:

Türk Telekomünikasyon A.Ş. Members of the Board of Directors			
Name - Surname	Date of First Appointment to the Board of Directors	Duties at Türk Telekomünikasyon A.Ş. over the last five years	Duties outside Türk Telekomünikasyon A.Ş.
Dr. Ömer Fatih Sayan	Chairman of the Board - 21.12.2018 Board Member - 04.09.2018		<ul style="list-style-type: none"> Deputy Minister at the Ministry of Transport and Infrastructure of the Republic of Turkey
Eyüp Engin	21.12.2018	<ul style="list-style-type: none"> 28.12.2018 - Still: Board Member of TT Mobil İletişim Hizmetleri A.Ş. 28.12.2018 - Still: Board Member of TTNET A.Ş. 28.12.2018 - Still: Chairman of the Board of Argela Yazılım ve Bilişim Teknolojileri San. ve Tic. A.Ş.. 	<ul style="list-style-type: none"> Akbank T.A.Ş. Executive Board Member Ak Yatırım Menkul Değerler A.Ş. Board Member
Yiğit Bulut	06.05.2014		<ul style="list-style-type: none"> Chief Advisor of the President of the Republic of Turkey Member of the Economy Policies Committee of the Presidency of the Republic of Turkey
Hakan Aran	21.12.2018	<ul style="list-style-type: none"> 28.12.2018 - Still: Board Member of TT Mobil İletişim Hizmetleri A.Ş. 28.12.2018 - Still: Board Member of TTNET A.Ş. 28.12.2018 - Still: Board Member of AssisTT Rehberlik ve Müşteri Hizmetleri A.Ş. 28.12.2018 - Still: Board Member of Innova Bilişim Çözümleri A.Ş. 28.12.2018 - Still: Chairman of the Board of Sebit Eğitim ve Bilişim Teknolojileri A.Ş. 	<ul style="list-style-type: none"> Assistant General Manager of Türkiye İş Bankası A.Ş. Chairman of the Board of Softtech Yazılım Teknolojileri Araştırma Gel. ve Paz. Tic. A.Ş. Chairman of the Board of Livewell Giyilebilir Sağlık Ürün Hiz. ve Tekn. San. ve Tic. A.Ş. Chairman of the Board of Gullseye Lojistik Teknolojileri A.Ş. Board Member of Türkiye İş Bankası A.Ş. Mensupları Munzam Sosyal Güvenlik ve Yardımlaşma Sandığı Vakfı
Selim Dursun	04.09.2018	<ul style="list-style-type: none"> 02.03.2012 - 02.02.2015: Innova Bilişim Çözümleri A.Ş. Examination Board Member 	<ul style="list-style-type: none"> Deputy Minister at the Ministry of Transportation and Infrastructure of the Republic of Turkey
Dr. Nureddin Nebati	Group B - 27.12.2018 Group A - 02.11.2018		<ul style="list-style-type: none"> Deputy Minister at the Ministry of Treasury and Finance of the Republic of Turkey

Türk Telekomünikasyon A.Ş. Members of the Board of Directors			
Name - Surname	Date of First Appointment to the Board of Directors	Duties at Türk Telekomünikasyon A.Ş. over the last five years	Duties outside Türk Telekomünikasyon A.Ş.
Dr. M. Cüneyt Sezgin	21.12.2018	<ul style="list-style-type: none"> 28.12.2018 - Still: Deputy Chairman of TT Mobil İletişim Hizmetleri A.Ş. 28.12.2018 - Still: Board Member of TTNET A.Ş. 28.12.2018 - Still: Chairman of the Board of Türk Telekom International Group 	<ul style="list-style-type: none"> Board Member of T. Garanti Bankası A.Ş. Board Member of Garanti Bank S.A. (Romania) Head of the Audit Committee of Garanti Bank S.A. (Romania) Board Member of Garanti Emeklilik ve Hayat A.Ş. Head of the Audit Committee of Garanti Emeklilik ve Hayat A.Ş. Board Member of Garanti Yatırım Menkul Kıymetler A.Ş. Head of the Audit Committee of Garanti Yatırım Menkul Kıymetler A.Ş. Member of the Board of Trustees of Teachers Academy Foundation Member of the Board of Trustees of World Wildlife Fund (WWF Turkey) Member of the Board of Trustees of Kabataş Boys' High School Education Foundation Member of the Board of the Turkish Finance Managers' Foundations Board Member of Turkish Corporate Governance Association
Aclan Acar	07.03.2019		<ul style="list-style-type: none"> Member of the Advisory Board of Turkish Education Foundation (TED) Member of the Board of Trustees of TED University
Ertuğrul Altın	12.03.2019		<ul style="list-style-type: none"> Advisor to the Minister at Ministry of Treasury and Finance of the Republic of Turkey Board Member of Boru Hatları ile Petrol Taşıma A.Ş.

There are no executive Board Members in the Company.

Biographies of the members of Türk Telekom's Board of Directors are provided in the Board of Directors Section of the annual report and Investor Relations website. Pursuant to the 10th article of the Articles of Association, the members of the Board of Directors shall hold office for a term of 3 years.

In line with the Capital Markets Board legislation, the Corporate Governance Committee performed the member nomination responsibility of the Nomination Committee for the designation of the independent members of the Board of Directors whose nominations were discussed and decided at the Extraordinary General Assembly Meeting, which was held on 25 January 2019. B Group shareholders presented three independent board nominee members to the Corporate Governance Committee, and the Corporate Governance Committee prepared a report dated 4 January 2019 on the suitability of the nominees with respect to the independency criteria, and presented this report to the Board of Directors on the same dates. After the Capital Markets Board provided consent for the nominees, three nominees of

independent members of the Board of Directors were submitted to the General Assembly's approval and were also elected.

Statements of Independence that each independent Board Member have signed are presented in the appendix of this report. No circumstances were found which could jeopardize the independence of the Board of Directors in the activity period. No company rules have yet been internally established regarding the positions to be held by the members of Board of Directors outside the company.

Changes in the Members of the Board of Directors in 2019

On 7 March 2019, Board Member Bülent Aksu resigned from his position, and Aclan Acar was appointed as Board Member on 7 March 2019 for the Board Membership position that became vacant upon the resignation of Bülent Aksu. Board Member status of Aclan Acar was approved by the General Assembly in the Ordinary General Assembly Meeting held on 2 April 2019 to be valid under the same terms and conditions of the other Board Members and for the remaining term of office of his predecessor.

On 12 March 2019, Board Member Emre Derman resigned from his position, and Ertuğrul Altın was appointed as Board Member on 12 March 2019 for the Board Membership position that became vacant upon the resignation of Emre Derman. Board Member status of Ertuğrul Altın was approved by the General Assembly in the Ordinary General Assembly Meeting held on 2 April 2019 to be valid under the same terms and conditions of the other Board Members and for the remaining term of office of his predecessor.

Principles of Activity of the Board of Directors

Pursuant to the Articles of Association, the Board of Directors shall meet at least four times a year or shall meet whenever the Company's business so requires. The activities of the Board of Directors are run by the Board Secretariat. At least 10 business days before the meeting, a notice of the time of meeting and the agenda, which is accompanied by any relevant papers, are sent to the members of the Board of Directors. Meeting notices are sent to the members of the Board of Directors via e-mail. The agenda of the meetings of the Board of Directors is set by e-mails in view of the proposals set forth by members of the Board of Directors, the CEO – General Manager, Assistant General Managers and Executive members of departments. The agenda is finalized by receiving the consent of the Chairman of the Board.

In 2019, the Company's Board of Directors convened 12 times in total to evaluate strategic matters concerning the Company. The overall attendance rate of board meetings was 91%. Pursuant to the 12th article of Articles of Association, questions arising meetings are passed by a simple majority of the votes of the Directors present at such meeting unless the resolution relates to a "Supermajority Decision Relating to the Board". Supermajority Decisions Relating to the Board were taken with the presence and affirmative vote of seven Directors, at least one of which shall be a Director representing the Ministry of Treasury and Finance of the Republic of Turkey. Questions arising at the meeting of Board of Directors and issues with multiple views are read into the minutes with the appropriate grounds of negative votes in detail. The rights of members of the Board of Directors representing the C Group shareholder are set out in the section of Voting Rights and Minority Shares. No negative votes on these resolutions were received. There were no significant transactions presented for approval of the independent directors and all related party transactions were approved by the majority of the independent directors. The Company has insured the damages that will be caused by the faults of the members of the Board of Directors during

their duties. The Company's existing Executive Liability Insurance policy has been implemented in a way that the total liability limit exceeds 25% of the Company's capital.

Numbers, Structures and the Independence of Committees within the Board of Directors

Audit Committee

The Audit Committee was established with the Board Resolution dated 16 June 2008.

With the Board Resolution dated 11 January 2019, Independent Board Member Yiğit Bulut was selected as the Chairman of the Audit Committee, and independent Board Member Selim Dursun was elected to the membership position of the Audit Committee.

The Committee holds meetings once every three months. The Audit Committee gathered seven times in 2019 and reviewed and monitored Türk Telekom Group's processes of accounting, finance and auditing as well as their processes for monitoring compliance with the law and regulations and their own code of business conduct, as well as such other matters which may be delegated specifically to the Committee by the Board from time to time.

Corporate Governance Committee

The Corporate Governance Committee was established with the Board Resolution dated 17 October 2012.

With the Board Resolution dated 11 January 2019, Independent Board Member Nureddin Nebati was appointed as Chairman of the Corporate Governance Committee, and Independent Board Member Selim Dursun and Board Member Dr. Muammer Cüneyt Sezgin were elected as members of the Corporate Governance Committee. Investor Relations Director, Sabriye Gözde Çullas is also a member of the Corporate Governance Committee.

The Corporate Governance Committee shall provide the implementation, improvement and adoption of corporate governance principles within the Company and shall convene as often as deemed necessary to ensure the effectiveness of its work. In 2019, the Corporate Governance Committee held four meetings and carried out its tasks effectively.

Nomination and Remuneration Committee

A “Nomination Committee” and a “Remuneration Committee” were established to operate under the control of the Board of Directors with the Company Board resolution dated 16 December 2019 and numbered 228 in order to perform the current tasks of the “Nomination and Remuneration Committee” established on 22 February 2019 under Article 4.5.1 of the Corporate Governance Principles set forth in the Capital Market Board’s Communiqué Series II-17.1 on Corporate Governance.

Nomination Committee

Independent Board Member Dr. Nureddin Nebati serves as the Chairman of the Nomination Committee, established with the resolution issued by the Company’s Board of Directors on 16 December 2019, while Chairman of the Board of Directors Dr. Ömer Fatih Sayan and Board Member Aclan Acar serve as members of the Nomination Committee.

Nomination Committee convenes at the frequency required by the tasks assigned to it, provided that such frequency shall not be less than 2 meetings per year. Since the Nomination Committee was established on 16 December 2019, it did not hold any meetings within 2019.

Remuneration Committee

Independent Board Member Yiğit Bulut is serving as Chairman of the Remuneration Committee established with the resolution issued by the Company’s Board of Directors on 16 December 2019, while Vice Chairman of Board of Directors Eyüp Engin and Board Member Dr. Muammer Cüneyt Sezgin serve as members of the Remuneration Committee.

Remuneration Committee convenes at the frequency required by the tasks assigned to it, provided that such frequency shall not be less than 2 meetings per year. Since the Remuneration Committee was established on 16 December 2019, it did not hold any meetings within 2019.

Early Identification and Management of Risks Committee

The Early Identification and Management of Risks Committee was established with the Board of Resolution dated 14 August 2013.

Pursuant to the Board Resolution dated 11 January 2019, independent Board Member Yiğit Bulut serves as the Chairman of the Early Identification and Management of Risks Committee, whereas Vice Chairman of the Board of Directors Eyüp Engin and Board Member Hakan Aran serve as the members of the Early Identification and Management of Risks Committee.

The Early Identification and Management of Risks Committee convenes every two months and carries out its tasks effectively. In 2019, the Committee held a total of four meetings. This Early Identification and Management of Risks Committee was established with the following aims:

- To identify any potential risks that could jeopardize the existence, development and continuity of the Türk Telekom Group,
- To establish the Corporate Risk Management System to implement necessary measures and actions with the aim of eliminating identified risks, and to ensure the system’s continuity and to improve it if necessary,
- To conduct activities related to the risk management and monitoring via risk management tools within the scope of a risk management system,
- To ensure that the findings received from the Corporate Risk Management System form important components of the decision making process, and to present reports to the Board of Directors on these issues.

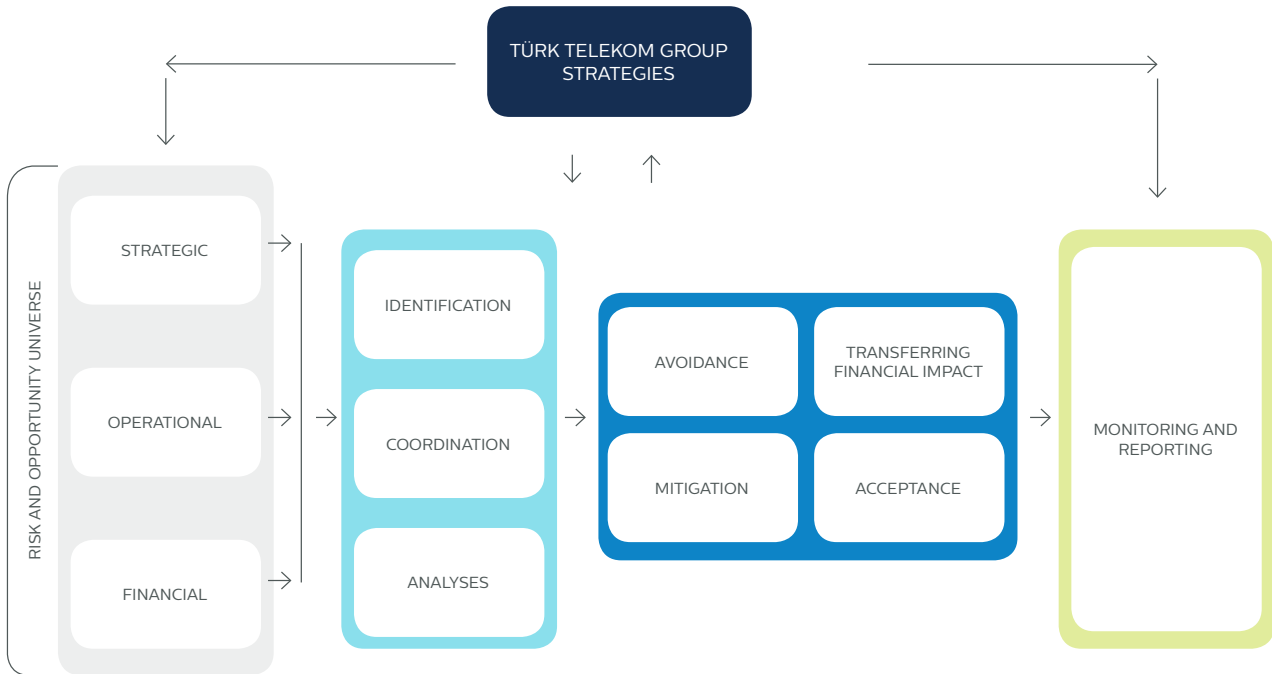
Independent Board Member Yiğit Bulut is serving as the Chairman of the Early Identification and Management of Risks Committee, Chairman of the Audit Committee and Chairman of the Remuneration Committee, while independent Board Member Selim Dursun serves as both the Member of the Corporate Governance Committee and the Member of the Audit Committee and independent Board Member Dr. Nureddin Nebati serves as both the Chairman of the Corporate Governance Committee and the Member of the Nomination Committee.

Türk Telekom Risk Management and Internal Control Mechanism

With awareness on the value add of Enterprise Risk Management to the Group and Group companies, Türk Telekom adopts international standards in Enterprise Risk Management, and carries out activities required to develop risk management in line with best practices.

In this context, Türk Telekom creates the Enterprise Risk Management framework in a manner to integrate all important processes and decision-making mechanisms. By this way, it is aimed to effectively manage the significant risks that may be encountered during the performance of activities carried out for achieving the targets of both Türk Telekom Group and the Group Companies.

Türk Telekom Group Enterprise Risk Management Process



Türk Telekom Group Enterprise Risk Management Life Cycle

The risks that may affect the short- and long-term strategic targets of the Group are defined, and the potential root causes and results of the identified risks are determined. The root cause chain that may cause / trigger potential risks is analyzed in detail, and the elimination/ reduction of risks at a reasonable cost is aimed with the actions taken according to the priorities determined.

After the owner is determined for each risk, risk stakeholders who have an impact on the root causes that have the potential to cause the risk, or who are affected by the consequences of these risks are determined.

Since most of the risks are similar to each other in terms of their nature, they may be classified under a number of main risk categories. The risks exposed at Türk Telekom are classified and monitored under Strategic, Financial and Operational Risk categories.

During the risk analysis, an assessment is made on the probability of realization of risks, as well as the impacts they may cause when realized. A particular risk may have an influence on more than one area, and a separate assessment is made for each area of influence.

While making decisions related to risk management, risk owners perform cost-benefit analysis, and take stakeholder expectations into consideration. In addition, whether risk management requires special expertise which the business units may not have is also assessed. In this context, 4 main options to be considered are as follows:

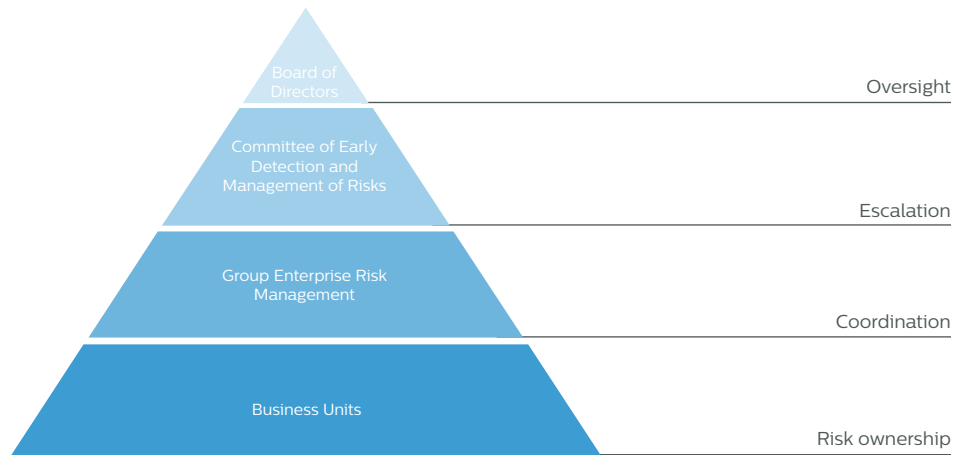
1. Accept the Risk
2. Reduce the Risk
3. Transfer the Risk (Share)
4. Avoid the Risk

Creating Control Environment

Controls are actions to reduce the possibility of realization of the risk and/or reduce its impact in case of realization. Control activities are aimed to be integrated into systems and processes during the design of the relevant structure.

Risk owner determines the existing controls together with the stakeholders to accurately identify the risk level, and the efficiency of these controls is assessed together with the control owners.

Türk Telekom Enterprise Risk Management Governance Model



Türk Telekom Group Enterprise Risk Management Governance Structure

According to the governance structure of Türk Telekom,

- the Board of Directors reviews and monitors the risks and opportunities that Türk Telekom is exposed to according to the Group's strategies. The final authority and responsibility for the effectiveness of the Enterprise Risk Management rests with the Board of Directors.
- the Early Identification and Management of Risks Committee has been formed on the basis of the decision dated 14 August 2013 of the Board of Directors in accordance with Article 378 of the Turkish Commercial Code No. 6102 and the applicable regulations of the Capital Markets Board. Its structure, tasks and responsibilities are set forth under the heading "The Tasks and Working Principles of the Committee of Early Detection and Management of Risks".
- the Enterprise Risk and Business Continuity Management department is responsible from setting and improving the standards regarding the Enterprise Risk Management System, coordinating the Enterprise Risk Management processes carried out within the Group, monitoring the current levels and the progress of the identified risks and reporting them to the related Management units.
- Business Units own the risks and take necessary actions for the risks. Risk management is a natural part of everyone's tasks. All Company employees are responsible for compliance with the risk management policy, effective management of the risks related to their own areas and taking necessary measures to ensure compliance with the legal legislation.
- The Internal Control Environment provides assurance regarding the functioning of the controls and actions in managing the risks.

The risks of Group companies is also managed in parallel to the risk management standards established for Türk Telekom.

Strategic Targets of the Company

The Strategic Business Plan, which includes the strategic targets determined by observing global and local sectoral developments, technological developments and the identification of customer preferences and the annual budget, are subject to approval from the Board of Directors. The Board monitors Türk Telekom's performance in reaching its strategic targets on a monthly basis

Prohibition on Carrying out Business and Competing with the Company

The Company has adopted practices that are aligned with Articles 395 and 396 of the Turkish Commercial Code and Principles of Corporate Governance annexed to Communiqué II-17.1 on Corporate Governance on this subject.

During the Extraordinary General Assembly Meeting dated 25 January 2019 and the Ordinary General Assembly Meeting dated 2 April 2019, the General Assembly permitted the members of the Board of Directors to perform the works set forth in Articles 395 and 396 of the Turkish Commercial Code, pursuant to Corporate Governance Communiqué No: II.17.1, the General Assembly was informed of the transactions realized during the year by the controlling shareholders, members of the Board of Directors, the senior executives and their spouses and their relatives by blood and marriage up to the second degree to conduct material transactions which may cause a conflict of interest for the Company or the Company's subsidiaries and/or to perform any transaction in the category of commercial affair falling into the scope of the fields of activity of the Company or its subsidiaries on their own or others' behalf or to acquire shares in another company engaged in the

Corporate Governance Principles Compliance Report

same type of commercial activities under the capacity of unlimited partner.

Remuneration of Members of the Board of Directors and Senior Executives

Shareholders were informed of the “Remuneration Policy” determined for the Members of the Board of Directors and the Senior Executives in accordance with the Principles of Corporate Governance in the Ordinary General Assembly Meeting dated 2 April 2019. The Remuneration Policy was disclosed to the public and was also posted on the investor relations website on the same day. Remuneration of members of the Board of Directors is determined by the General Assembly in accordance with Article 408 of Turkish Commercial Code No. 6102 and Article 8 of the Company's Articles of Association.

During the Ordinary General Assembly Meeting held on 28 May 2018 and the Extraordinary General Assembly Meeting held on 19 July 2018, it was approved and accepted that each member of the Board of Directors shall be paid a net remuneration amount of TL 15,000 per month, in addition to two bonuses per year, each equal to monthly remuneration amount, in January and in July.

During the Extraordinary General Assembly Meeting held on 25 January 2019, it was decided that the monthly net remunerations per member determined at the Extraordinary General Assembly Meeting held on 19 July 2018, would be increased in line with the 2018 annual consumer price index (CPI) announced by the Turkish Statistical Institute (TurkStat), and that the bonuses, to be paid twice in a year, in January and in July, would also be raised by the same amount as the monthly remunerations.

During the Ordinary General Assembly Meeting held on 2 April 2019, it was decided that the net remuneration and bonus payable to each of the elected members of the Board of Directors for their activities to be performed in 2019 pursuant to the Remuneration Policy would be determined in the form accepted by the Company's Extraordinary General Assembly Meeting dated 25 January 2019.

There is no performance measurement and a performance-based rewarding system in place for Board members. The Company has never lent money or extended loans to any Board member or executive, no credit has been extended under personal loans through third persons, nor have any guarantees been provided such as suretyship in their favor.

The remuneration of directors and other members of key management for 2018 and 2019 are as follows collectively:

(TL x 1,000)	1 January – 31 December 2018	1 January – 31 December 2019
Short-term benefits	110,327	161,146
Remunerations and similar fees	99,646	152,913
Attendance fees	10,681	8,233
Long-term defined benefits	2,365	1,921
Social Security Institution premiums	2,365	1,921
Total	112,692	163,067

Stakeholders

Türk Telekom's stakeholders are individuals, institutions or interest groups, such as employees, creditors, customers, suppliers, dealers, trade unions and various non-governmental organizations which are involved in the fulfilment of the Company's objectives or activities.

In its operations and activities, Türk Telekom strives to protect the rights of its stakeholders as regulated by relevant legislation and mutual agreements. In situations where the rights of stakeholders cannot be protected by legislation and mutual agreements, the interests of stakeholders are protected in accordance with the rules of good faith and to the extent of the Company's capabilities.

Company Policies Regarding Stakeholders

Türk Telekom's policies regarding its employees are carried out in accordance with the principles of its human resources and human rights policies; while its relations with suppliers are guided by the practices described in its procurement policy.

Türk Telekom has defined its vision as doing its best in all aspects of its work, thereby contributing to the enrichment of the businesses and lives of its customers.

As a responsible employer, Türk Telekom assigns utmost priority to the execution of the business processes and transactions of stakeholders with whom it is related, in accordance with labour and social security laws, and the Company's human rights policy.

Türk Telekom listens to the requests and suggestions of its customers and exercises maximum effort to resolve complaints as rapidly as possible; in a fair, impartial and confidential manner; in accordance with laws, regulations and Company rules.

Türk Telekom attaches importance to ensuring that its relations with companies with which it is engaged in a commercial relationship, such as dealers, contractors and business partners, are proper, consistent and reliable; and that all manner of business is carried out in accordance with the relevant contracts, laws or regulations. In the contracts signed with these companies, objective criteria such as conformity with principles and practices; and the benefits and costs by taking into account the opinions of the legal and the relevant business unit, are taken into consideration.

Türk Telekom protects the rights of its stakeholders with policies and regulations related to the prevention of corruption and bribery. In this field, efforts were undertaken for the preparation of Türk Telekom Anti-Bribery and Anti-Corruption Policy in 2019. The Company's corporate website features an ethics violation notification channel, through which stakeholders may report transactions that contravene the relevant legislation or are not ethical. These notices are reviewed impartially by Türk Telekom Business Ethics Committee,

which provides consultancy services to employees on ethical issues. The Business Ethics Committee is tasked with conducting the relevant investigation and inquiry; and notifications are resolved within the framework of the findings. The Committee evaluates conflicts of interest brought to its attention in a balanced manner. Necessary audits and inspections are carried out by the Company and the results are reported to the applicants.

Information security requirements and rights of stakeholders are evaluated within the framework of the Information Security Policy, under the scope of the Law on the Protection of Personal Data (KVKK) and other legislation. Türk Telekom undertakes all technical and administrative measures to ensure the appropriate level of security in order to prevent illegal access to personal data or processing of the data, and to ensure the protection of the data.

As a result of efforts to enable stakeholder participation in the management; implementation and development of models to enable the participation of Company employees in the management, such as Occupational Health and Safety Boards, Disciplinary Boards, Conflict Resolution Board and Inventor Idea System, continued in 2019.

The participation of employees in the management via Disciplinary Boards and Dispute Resolution Boards is regulated in the Collective Labour Agreement.

Informing Stakeholders

Türk Telekom shareholders and investors are kept informed in line with public disclosure principles.

The Company's Marketing and Customer Care Department efficiently handles the requests of Türk Telekom customers for information concerning services and products; addresses comments or complaints; and provides solutions to customer problems.

Intracompany disclosures are carried out by the Internal Communication Department within the body of the Human Resources Unit, the Academy and the Internal Communication Directorate.

Through public policies posted in Turkish and English on the Company's website; suppliers, dealers, investors, employees and other stakeholders are kept abreast of the Company's practices vis-à-vis stakeholders.

Human Resources Policy

Türk Telekom aims to be the most preferred company in the Turkish telecommunications sector, and thus, in line with its future strategy and targets, to attract a qualified workforce aligned with its corporate culture and values.

Türk Telekom in principle seeks to generate long term employment, bound by opportunities presented by technological developments, financial and economic conditions and sectoral changes in its area of activity, in order to provide fast, high quality and affordable services.

Türk Telekom's track record of success rests on the flexibility of its employees and proficiency in adapting rapidly and efficiently to the sector's changing circumstances. With their superior skills, competence and experience, employees help Türk Telekom become one of the leading companies in the world.

Türk Telekom plans competence needs, both present and future, to match its strategies and leadership model. To that end, Türk Telekom undertakes training and development activities to ensure the advancement of knowledge, skills and behavior; to support the employer brand; and to embark on development investments with a view to supporting and retaining high performance and high potential, through an integrated talent management perspective.

The basic tenets include ensuring that the right training and development investment is made to the right person at the right time, with managers playing an active role in the development of their employees; integrating the development opportunities offered with all human resources processes; promoting the sustainability of training and development activities supported by technology; and using alternative development methods and resources in all processes.

The Company informs employees of decisions taken or developments concerning employees by appropriate internal communication tools (such as notifications, e-mail announcements, instant notifications and the internal communication portal).

Recruitment and career planning is conducted in line with the principle of providing equal opportunities to employees in equal conditions, within the context of the human resources policy determined by the Company. A uniform set of rules on recruitment has been created, with recruitment criteria set on the basis of objective principles.

In those cases where changes in Company management are foreseen to cause disruptions to the management of the Company, a succession plan is drawn up to determine the managers to be appointed.

Recruitment processes are devised in accordance with applicable laws and regulations.

The Company's relations with its employees are managed by Human Resources Business Partners working under Human Resources.

Human Rights Policy

Türk Telekom Human Rights Policy, which covers members of the Board of Directors, managers and employees working at all levels of Türk Telekom and all its subsidiaries, was approved by Türk Telekom Board of Directors and took effect in November 2019.

Universal Declaration of Human Rights, the Constitution of the Republic of Turkey, International Labour Organization (ILO) Conventions, other conventions ratified by the Republic of Turkey, and the national legislation governing human rights and work life form the basis of Türk Telekom Human Rights Policy.

With this policy devised to ensure compliance with human rights in its relations with its employees, customers, suppliers and business partners, and all stakeholders with which it has a business relationship, Türk Telekom aims to create a working environment that respects human rights and to act in accordance with the principles of human rights in its activities.

Türk Telekom values diversity; perceives diversity as a source of strength and strives to ensure that employees feel they are part of the Company. No person can be subject to discrimination at Türk Telekom for reasons such as age, language, race, ethnicity, nationality, health, disability status, gender, marital status, religion and sect, political thoughts, philosophical understanding or belief.

Türk Telekom respects and supports the freedom of association and freedom of expression of its employees, as well as unionization and collective bargaining rights. The Company rejects all forms of forced labour, including compulsory work, child labour, employment of illegal immigrants and foreign nationals without work permits, as well as debt bondage, and any kind of human trafficking. Children under the age of 18 are not hired and international conventions and national legislation approved by Turkey are adhered to on children's rights. This approach is open to vetting by public authorities. Türk Telekom seeks to encourage women's participation in working life and to increase female employment.

At Türk Telekom, female employees have the opportunity to take 16 weeks of paid maternity leave; eight weeks before and eight weeks after birth. In addition, non-paid maternity leave of up to six months and 1.5 hours of breastfeeding leave per day until the infant reaches its first birthday is provided upon request. Pregnant or breastfeeding employees are not required to work for more than 7.5 hours per day. Apart from these stipulations, attention is paid to employee rights within the scope of legal requirements.

Claims and notifications regarding human rights violations are evaluated within the scope of ethical violations and are examined and concluded according to the procedures and principles stipulated in Türk Telekom Business Ethics Code. Human rights violations may result in disciplinary action and enforcement of legal sanctions.

No discrimination complaints were filed by the employees in 2019.

Social Dialogue and Workplace Harmony

Türk Telekom respects and supports the right of “freedom of association”. Türk Telekom adopts the principle of achieving and developing social dialogue with the labour union and workplace harmony, within the scope of union organization and collective bargaining. A Collective Bargaining Agreement is signed with Türkiye Haber-İş Labour Union every two years. Demands and expectations of union members are assessed and managed under this agreement.

In 2019, the 13th term Collective Bargaining Agreement, which determines wages, other social benefits and work conditions of 10,211 unionized employees (as of December 2019) at Türk Telekom throughout Turkey, was signed between Türkiye Haber-İş Labour Union and Türk Telekom on 5 August 2019. The agreement is effective for two years from 1 March 2019, until 28 February 2021.

Thanks to effective social dialogue and cooperation between Türk Telekom and Türkiye Haber-İş Labour Union, workplace harmony has been maintained; and there have been no occurrences of strike, suspension of business or work stoppage.

Meetings are held regularly between the union and Türk Telekom, where the expectations and problems of employees are discussed. With these meetings, necessary measures and actions are taken by Türk Telekom, and decisions that affect employees are reported to union representatives and the union.

Türk Telekom regularly notifies and reminds all Central and Regional Units regarding overtime rules, as per local laws on working hours/overtime and collective bargaining agreements. At Türk Telekom, overtime inspections are carried out every month to gauge whether Türk Telekom Principles, collective bargaining agreement and relevant laws are observed. Minimum wages at Türk Telekom are determined by collective agreement and are higher than the legal minimum limit.

Recruitment Processes

Türk Telekom's recruitment efforts are aimed at meeting the Company's needs for a qualified workforce, by employing the most appropriate candidates that possess the required level of competency and experience. The recruitment process is evaluated in three phases; namely, demand management, selection and placement.

In the process of demand management, annual workforce plans are set out considering the needs of the

organization, norm staff and new staff. For the selection process, a rich candidate pool is created, out of which suitable applicants are chosen on the back of objective criteria. The Company's career site, leading recruitment sites, along with domestic and foreign HR consulting firms are used to that end. In order to access potential candidates, contact is established with universities, vocational chambers and official institutions such as Turkish Employment Agency (İŞKUR), while digital and social media tools are also employed.

In the selection process, different measurement and evaluation tools are used to ensure objectivity and to correctly assess competence.

All candidates that have not been selected are notified.

Work Culture

Türk Telekom strives to establish an enduring relationship with its employees, managers and stakeholders, predicated on respect, trust and ethical values; built on its values, namely “Customer Focus, Innovation, Human Focus, Trust and Agility”, and on its Company culture imbued with respect and sharing.

There is a performance oriented, innovative and agile working culture at Türk Telekom, based on winning together with cooperation and team spirit. As dictated by global competition and the relentless pace of change in the sector; new working models such as Agile, Task Force are implemented.

Occupational Health and Safety, and the Environment

Creating a healthier and safer working environment for its employees; minimizing the effects of damage to the environment through its activities; and implementing environmentally friendly technologies are the Company's prioritized objectives.

In line with these targets, employees are expected to comply with legal regulations, practices and accepted standards in workplaces; conform with measures taken as a result of risk and impact assessments, with a preventive approach; comply with systems to minimize the occurrence of incidents, accidents or emergency losses; participate in training programs organized to promote safety culture, risk perception, and environmental consciousness; demonstrate an objective and transparent attitude in audits related to occupational health, safety and the environment; notify and report any behavior, situation or accident that could endanger occupational health and safety; and cooperate with the responsible Occupational Health and Safety specialist in charge.

Türk Telekom, which has adopted proactive and productive Occupational Health Safety and Environmental Management standards, works to improve these management systems to prevent occupational accidents; foster environmental awareness; and promote occupational health and safety, and an environmental culture among employees.

Türk Telekom prepares and documents risk and environmental impact assessment tables to determine potential hazards and related risks arising from its activities, products and services; and to evaluate environmental impacts and dimensions, so as to systematically define the methods and principles for controlling potential risks and minimizing occupational accidents, occupational illnesses and environmental risks.

The aim of the work is to identify the risks that may cause occupational accidents and occupational illnesses before they occur, and to take appropriate measures.

In order to protect employees from work-specific hazards, personal protective equipment is provided where collective protection is not possible.

"Occupational Health and Safety Committees" have been established at the Company's workplaces. At periodic meetings, the following tasks are fulfilled:

- Guiding employees regarding occupational health and safety issues;
- Evaluating hazards and precautions related to occupational health and safety at the workplace; determining the measures and notifying employers or their representatives;
- Carrying out the necessary investigation, identifying the measures, and notifying the employer or the employer's representative with a report in the event of any occupational accident occurring at a workplace, or an occurrence at the workplace that does not qualify as an occupational accident but may cause damage to the workplace or to work equipment, or in case of occupational illness or occupational health and safety hazards;
- Planning trainings on occupational health and safety at work; preparing programs related to occupational health and safety and related rules; presenting them to the employer or the employer's representative for approval; monitoring the implementation of these programs and providing feedback in case any deficiency is noted;
- Planning the security measures necessary during maintenance and repair work to be performed at the workplace and controlling the implementation of these measures;
- Monitoring the adequacy of the measures taken against fire, natural disaster, sabotage or similar hazards at work and monitoring the works of related teams.

Employee representatives also participate in these boards as members, and all kinds of feedbacks that employees provide on occupational health and safety measures are evaluated.

Performance Management and Continuous Improvement

The purpose of the Performance Management process is to ensure that the targets set in line with the Company's vision and strategic priorities of the relevant year are attained with the contributions of the employees; that employees' contributions to the attainment of targets are assessed in an objective, systematic and measurable manner; and that a motivating work environment and personal development are fulfilled.

Each year, the Company's objectives are cascaded to departmental and individual levels, so that employees can perceive how their individual efforts contribute to the bigger picture. Target dissemination meetings, which are held every year after the preparation of Senior Management Target Cards, are aimed at ensuring that the performance culture is disseminated across the Company; that the targets are set in line with SMART criteria; and that an appropriate assessment is undertaken. It is paramount that the managers communicate the information and strategies shared during those meetings to their teams.

After the goals are set, the extent to which they have been realized is evaluated. Managers provide performance feedback to their teams based on target realizations, with a view to supporting their development and helping them maximize their potential. The outcomes of the Performance Management Process serve as inputs for various HR processes, such as Compensation and Rewards, Career and Talent Management, Training and Development, and Performance Development Process activities.

Communication works in the form of guidelines, announcements, visuals, infographics, videos etc. related to Performance Management Process and System are shared with relevant individuals during performance periods.

Remuneration

In order to realize its goals, Türk Telekom aims to attract qualified work force; retain employees; uphold motivation to ensure its services are sustainable; and reward outstanding performance. In that context, remuneration is determined by relevant legislation; job description; responsibilities; qualifications; and market value.

Non-Compensation Benefits

In order to improve working conditions and living standards, Türk Telekom provides its employees with various benefits, such as free communication services, free life and accident insurance, meal card, personnel transportation, company vehicle and private pension support. Türk Telekom also supports the living standards of its employees and their families through various funds, health and welfare organizations. In addition, Türk Telekom implements a private pension system in order to further contribute to the lives of its employees during their retirement.

These rights differ on the basis of various parameters, such as employment contracts, status, work areas, title, position and job levels.

Business Ethics Code

Türk Telekom Business Ethics Code was drawn up in line with Türk Telekom's vision, mission and values; in order to describe how all employees should behave both within and outside working environment and what type of sanctions would be applicable in instances where the Code was contravened.

The Business Ethics Code, approved by the Board of Directors and disclosed to the public both in Turkish and in English through the Company's investor relations website, covers all employees, including members of the Board of Directors.

Newly recruited employees of the Company are sent the "Business Ethics Code" and the "Business Ethics Notification Form" by the Recruitment team via e-mail, and are required to sign the latter. Moreover, at the beginning of each year, "Business Ethics Code Compliance" declarations are renewed for all employees.

In addition, e-training programs are prepared in order to inform existing employees on the Business Ethics Code; enhance the intelligibility of policies and rules; and ensure the observance of ethical standards. Additionally, these topics feature in some classroom trainings, such as Job Compliance Training, Occupational Health and Safety Training and Manager's HR Framework Training. In these training programs, information about the Business Ethics Code and definitions of mobbing, its scope, the roles and responsibilities of employees and managers in these issues, sample cases, and how and to whom ethics violations should be reported, are shared with the participants. All employees at Türk Telekom are responsible for maintaining, establishing and sustaining ethical standards, where each employee serves as a voluntary auditor. Acting in compliance with the code of ethics, managers serve as role models; encourage a culture of behaving in accordance with these rules; and respond to any questions or concerns that their employees may have regarding the Business Ethics Code.

In the event of a situation where violation of Türk Telekom Group Business Ethics Code is detected or observed,

this situation is honestly reported through one of the ethics violation notification channels. While notifications related to the Business Ethics Code are never prevented, employees may also make notifications without seeking their managers' consent. Imposition of sanctions such as discrimination, demotion, dismissal, deprivation of rights, threats or harassment of employees that disclose violations or are involved in investigation processes also constitute breach of the Business Ethics Code. Any infringements by employees are taken into consideration in HR practices.

Türk Telekom accords importance to acting lawfully, ethically and honestly towards its employees, customers, suppliers, business partners and official authorities, and to inspire a sense of trust in everyone with whom it has a business relationship.

As per the Business Ethics Code concerning the prevention of bribery and corruption, employees are prohibited from obtaining personal benefits by virtue of their position and from providing benefits to their relatives or third parties. Employees are required to exercise care so as not to use their positions, Company property or Company information for their personal interests; not to put their personal interests above those of the Company; and to safeguard the advantages of the Company. In addition, employees are barred from submitting to any demands that may have unfavorable consequences for the Company; to derive private benefits from customers/suppliers/business partners and to transfer benefits by serving as an intermediary among them.

Employees are expected to act cautiously when receiving gifts, invitations and donations or accepting them on behalf of the Company; and are expected to exercise sound judgment and avoid conflicts of interest.

In this context, regardless of its material value, it is stated that no gift;

- that implies a relationship that could affect impartiality or independence;
- that would place the employee who gives or accepts gifts or the Company under obligation and may damage their reputation;
- that is given to derive benefits from the employee who gives or accepts the gift; to affect the way the employee performs their duty; or to encourage any actions that would contravene the behavior patterns set out in the Business Ethics Code;
- that is in the form of cash or convertible to cash;
- whose value exceeds the permitted limit

will be accepted.

Board of Directors Women Membership Policy

"Board of Directors Women Membership Policy" is established in accordance with Article 4.3.9. Corporate Governance Principles of the Capital Markets Board's Corporate Governance Communiqué II-17.1.

The Board of Directors of Türk Telekomünikasyon A.Ş. aims to prioritize women in the selection of members of the Company's Board of Directors and to strengthen the position of women in the Company's highest decision making mechanism. It is considered that ensuring diversity in terms of knowledge, experience and perspective at the Board of Directors will contribute positively to the activities of the Company, as well as to the Board of Directors operating effectively. In this context, consideration of the selection of female members among the nominees with the same characteristics in terms of knowledge, experience and competence in the Company's Board of Directors member composition; and appointment of at least one woman member to the Company's Board of Directors, and delivery of this goal with in next 5 years by appointing women member(s) to the Board of Directors is aimed. The Board of Directors will annually assess the progress made in fulfilling this goal.

Procurement and Supplier Management

The procurement activities of Türk Telekom and its Group Companies, as well as the creation and supervision of standards are carried out centrally by the Support Services and Procurement Management Assistant General Manager. Support Services and Procurement Management Assistant General Manager is responsible for the implementation of the Procurement Policy and updating it when necessary.

The Mission of Türk Telekom Procurement and Supplier Management is:

- to determine and implement the procurement strategies which will support Türk Telekom's targets,
- to support the Business Units in delivering their business targets,
- to conduct the procurement process with optimum quality, price and technical performance, and
- to manage supplier relations in a sustainable and effective manner by improving the ecosystem of the Türk Telekom Group.

The Vision of Türk Telekom Procurement and Supplier Management is:

being one of the procurement and supplier management teams with a high level of competence that employs global and sectoral best practices and contributing to the Group's strategies.

The duties and authorities related to the rules and procedures to deliver the Company's core purchasing strategy, which is "to establish the necessary competitive environment and fulfilling the requests with the most appropriate price, term, quality and conditions" are determined by the Procurement Policy and Procedure approved by the Board of Directors of Türk Telekom.

Procurement Policy and Procedure covers all employees who work at Türk Telekom Group and who are involved in demand procurement procedures. Procurement Policy and Procedure is published on the internal communication channels of the Company. All employees are notified about the changes by e-mail. When necessary, trainings are provided on the relevant subjects for the Company employees.

The Procurement Policy published on the website of Türk Telekom is available for the use of the suppliers around the world in both English and Turkish. Suppliers are informed about the Procurement Policy of Türk Telekom during the business processes. Suppliers are provided with a copy of the Policy upon request.

At Türk Telekom;

A holistic procurement strategy based on end-to-end management of processes is adopted in order to ensure that procurement activities are carried out in the most appropriate manner and to create added value.

A clear definition of processes is ensured in order to make the supplier management more effective and standardize the implementation.

Supplier Performance Assessment processes are carried out over a system. Supplier performance assessments are performed semi-annually and the segmented suppliers are subject to a detailed assessment under the main headings determined. Suppliers are assessed in terms of Occupational Health and Safety, Environment, Quality and Organization, and they are provided with feedback about the assessment results.

The suppliers accounting for around 60% of the total procurement volume of the Company were assessed in the first half of 2019, and were provided with feedback about the assessment results.

Türk Telekom's Procurement Process Approach

The responsibilities of the demand and procurement units were reorganized within the scope of an increased efficiency approach, and an efficient and lean procurement organization was designed in consideration of main criteria such as the total cost of ownership, supply chain risks and sustainability.

With the revision in approval hierarchy of authorization limits, an approval mechanism including administrative control is established.

The procurement activities of Türk Telekom Group Companies are carried in accordance with the relevant legislation and the provisions of the of Türk Telekom Group Procurement Policy and Procedure and through tender/quote request methods. Considering the principle of segregation of duties, the procurement units and other units perform their tasks related to procurement under their responsibility in line with this policy.

In order to make sure that the procurement activities can be carried out with the optimal quality, lead times and prices, all units work together with the responsibility to inform each other and to perform their tasks on time.

In order to ensure that the procurement activities are carried out in accordance with the interests of Türk Telekom Group, acting in-line with short, medium and long-term business plans, a thoroughly transparent and competitive environment is created.

In order to benefit from scale advantages and the total purchasing power of Türk Telekom Group, demands that are similar in economic and technical terms are combined to the maximum extent possible.

An effective procurement is carried out taking account main criteria such as TCO (Total Cost of Ownership), supply chain risks and sustainability.

In order to avoid the abuse of the suppliers' trust, efforts are taken to prevent additional tasks on suppliers beyond what is commercially required.

Taking the nature of business into account, Türk Telekom Group Companies' requirements meet without intermediary (manufacturer, importer or main distributor) to the maximum extent possible.

Supplier Management Principles

The main principles followed by Türk Telekom in vendor management process are as follows:

- Transparency,
- Fairness and equal treatment,
- Communication based on mutual respect and honesty,
- Protection of intellectual property and confidential information.

Sustainable Procurement Approach

The purpose of sustainable procurement approach is to ensure overall sustainability in procurement activities of Türk Telekom Group.

The main values of procurement processes are transparency, accuracy and honesty. The relationship of Türk Telekom Group employees with stakeholders and suppliers is based on the core values specified in the Türk Telekom Code of Ethics, including mainly the following:

At Türk Telekom,

- Utmost care is taken in the fulfillment of obligations on time vis-a-vis suppliers within the framework of the contracts.
- All measures are taken and monitored carefully for ensuring that the procurement processes are conducted in accordance with the laws and Company policies.
- In accordance with the supplier relationship management responsibilities, the Procurement unit provides suppliers with relevant information regarding the Procurement Policy and the Procedures throughout the year.
- The suppliers are provided with necessary instructions for acting in accordance with the human rights, human resources, human health and environmental policies of Türk Telekom.
- Within the scope of procurement activities, the Group competes in the market in accordance with the law and code of ethics.
- All efforts are taken to prevent attitudes or behavior by suppliers, which may harm Türk Telekom Group's brand value.
- No burden is imposed on the suppliers apart from the requirements of legal regulations and customs of trade.
- Suppliers are treated fairly and at equal distance based on the conditions of competition and the market.
- In supplier selection, assessments are made based on fair and objective criteria.
- Relations with the suppliers are managed on a transparent and fair basis, avoiding conflicts of interest, without establishing a relationship based on self-interest.

Besides, the procurement process is managed through prioritization of the protection of environment and human health, reduction in natural resources consumption and waste minimization. Türk Telekom Group take utmost care to comply with sustainability principles, and to prefer most suitable products or alternative domestic products.

Obligations of Suppliers within the Scope of the Policy and the Contracts

In addition to the general obligations, the provisions of all contracts to which Türk Telekom is a party provide that;

Suppliers are required to;

- Fulfill their employee-related obligations in accordance with the applicable laws including mainly the Labour Law, Social Security Law and the other relevant legislation, and ensure that their employees and sub-contractors also comply with the same,
- Fulfill all their civil, penal and financial obligations arising from their relationship with the Regional Labour

Directorate, Social Security Institution, Ministry of Health and other authorized bodies and the legislation,

- Comply with the applicable laws, regulations, by laws and other applicable legislation as regards the fulfillment of the contractual obligations, as well as the obligations related to occupational and employee health, environment and safety.

Besides, in Türk Telekom supply chain, pursuant to the Human Resources Policy of Türk Telekom, no discrimination is conducted and child labour and forced labour are not tolerated. Utmost care is taken for working with suppliers supporting safe working conditions, and suppliers are expected to provide full support for the employees' freedom of association and bargaining right.

Non-compliance with Policies and Procedures

Utmost care is taken for ensuring that suppliers act in accordance with the legal legislation and code of ethics. Suppliers are monitored by the demand and procurement units of Türk Telekom during the term of the business relationship. In case of violation of and non-compliance with the Company policies, necessary notifications and warnings are served, rectifications are requested and/or relationship with suppliers is reviewed.

Türk Telekom Group is entitled to end its relationship with those suppliers which fail to comply with the rules, and business relationship with those which fail to rectify incompatible conditions is ended.

Information Security

Information Security is one of the seven codes of the Türk Telekom Code of Ethics document. As set out in the "Information Security Policy" set in the Code, information is defined as all data, texts, images, sound and similar contents in the physical or digital environment that is produced, used, transmitted, archived or legally transferred to the Company during business processes.

Information including, but not limited to, the Company's strategic information, organizational information, commercial/technical/financial data, customer/dealer information, information on policies/procedures/regulations, product and service information and personal information of employees are considered within this scope. Information Security Management System covers Türk Telekom Group's all internal and outsourced employees, infrastructure, systems and applications, as well as products and services.

With regard to information security, the employees are informed against signature upon receipt of the Working Principles of Türk Telekom Human Resources that;

- they should attach importance to the confidentiality of information that has confidential and/or trade secret nature, and fulfill the duty of loyalty and non-disclosure;
- they should protect the confidential and private information of employees, customers, suppliers, business partners and other people and institutions with whom the company works, and not use this information for any purpose other than the intended business purpose;
- they should not share with unauthorized people and authorities inside or outside the Company the information and documents they acquired for business purposes, and not use these for personal purposes; and
- they should not use the information and documents they own in a manner detrimental to the Company or in favor of competitors after they leave the Company.

Besides, the employees are also notified by the Working Principles of Türk Telekom Human Resources, Commitment for the Use of Information Technologies and the Code of Ethics signed every year that

- they should attach importance to the protection of intellectual property such as patents, commercial secrets, copyrights, names and trademarks;
- leakage of any confidential information and/or documents within the scope of "Insider Trading" and benefit via stock exchange or any other means are prohibited;
- when some information needs to be shared with third parties due to business-related requirements, such information should be shared without causing any damage to the company (through confidentiality agreements etc.) by informing the information security unit/ relevant unit and obtaining approval from the senior manager and
- the e-mail account provided by the Company is allocated for Company affairs, and may be audited.

In addition,

- the Working Principles of Türk Telekom Human Resources and Commitment for the Use of Information Technologies state that the information and documents requested by regulatory authorities

and independent auditors should be shared when necessary, correctly and on time in accordance with the Company practices, and all requests of the relevant institution should be fulfilled during onsite examinations; and

- in case of access, exposure to, or sharing of, any confidential information without authorization/ accidentally, an application should be filed with the information security unit and any of the notification channels listed under “Notification of Ethic Violations” heading of the Code of Ethics.

In case of breach of any of the foregoing conditions, ethical and disciplinary processes are carried out, and the employees may be punished with any of the penalties set forth in the Disciplinary Principals depending on the breach.

The measures to be taken in relation to Information Security have been detailed in the “Information Security Policy” document prepared by the Company’s technology units, and have been shared with the employees through Türk Telekom Port, the internal communication portal.

Information Security Management System and Audit

The personal data required for the provision of the services to the customers may be accessed only on a strict “Need to know” basis. In order to identify suspicious usage or usage for purposes other than the stipulated purpose, access to these data is continuously recorded and audited.

At Türk Telekom, inter-system access, remote access to systems, access to databases, user identification processes and reporting request processes are carried out via secure and controlled processes designed through request management systems. Security tests are performed on the systems before the projects go live and at certain intervals, and any security findings identified are resolved by the relevant teams.

Security risks are minimized by separating the application layer, the database layer and the web layer through the layered structure set in the network layer. Network level security devices ensure controlled access in accordance with established rules. Pursuant to the “Separation of tasks and environments” clause of the Regulation on Network and Information Security, the processes for initiating and approving transactions to be performed on critical systems have been separated. Within the scope of access control, all systems are reviewed at least once a year in accordance with the Türk Telekom Group Information Security Policies and Procedures.

The movements of end-users are monitored, and the networks use systems aimed to prevent intentional or accidental data leakage from all kinds of channels through which critical data is processed and transferred. Anonymization and masking of critical/personal/ confidential data, and authorization of relevant users are performed on the databases in order to fulfill the

requirements of the Law on Protection of Personal Data (KVKK) and to prevent unauthorized access to confidential data.

The one-year audit plan, which principally covers technology processes and is drawn up based on the risk assessments performed at the end of each year, is approved by the Audit Committee reporting to the Board of Directors. Türk Telekom Internal Audit Department is authorized to perform the audit plan.

In recent years, information security has been determined as one of the most critical areas among the subjects handled during the risk assessments carried out within this framework. Thus, the audit plans of Türk Telekom Internal Audit Department cover the Information Security Policies and Systems every year. On the other hand, the Internal Audit Department provides reasonable assurance for the audits in the fields related to Information Security within the Türk Telekom Group as regards the methodologies used, in accordance with generally accepted auditing principles.

All employees are provided with e-trainings every year within the scope of Information Security Management System.

In addition, classroom information security awareness training is provided once a year for the employees such as subcontractor employees.

Information Security Certifications

Türk Telekom Group holds the ISO 27001 certificate covering fixed and mobile networks. Within this scope, Information Security Internal Audit activities are carried out on an annual basis, and action assignments and follow-ups are performed in accordance with the results of the audit. Moreover, all employees are assigned Information Security Awareness training periodically within the scope of the ISO 27001 standard.

In addition, Türk Telekom holds PCI-DSS certification under the scope of mobile network. Credit card data are periodically scanned on the systems, and security measures are taken as required by the standards. Within the scope of the PCI-DSS, related employees are provided periodically with awareness training as required by the standard.

Information on the Protection of Personal Data

The Türk Telekom Information Notice on the Law No. 6698 on the Protection of Personal Data (KVKK) was updated in July 2019 in accordance with the KVKK legislation and sets forth the identity of data controllers, the purposes of processing personal data, to whom and for which purpose personal data may be transferred, the method and legal grounds of collection of personal data, and the rights of personal data subjects under Article 11 of the Law.

Rights of the Data Subject

ARTICLE 11 – (1) Each person has the right to request to the data controller about him/her;

- a) to learn whether his/her personal data are processed or not,
- b) to demand for information as to if his/her personal data have been processed,
- c) to learn the purpose of the processing of his/her personal data and whether these personal data are used in compliance with the purpose,
- d) to know the third parties to whom his personal data are transferred in country or abroad,
- e) to request the rectification of the incomplete or inaccurate data, if any,
- f) to request the erasure or destruction of his/her personal data under the conditions referred to in Article 7 (when the relevant grounds requiring the processing cease to exist, personal data shall be deleted, destroyed or anonymized by the data controller sua sponte or upon request of the data subject),
- g) to request reporting of the operations carried out pursuant to sub-paragraphs (d) and (e) to third parties to whom his/her personal data have been transferred,
- h) to object to the occurrence of a result against the person himself/herself by analyzing the data processed solely through automated systems,
- i) to claim compensation for the damage arising from the unlawful processing of his/her personal data.

Türk Telekom has authorized dealers which process the data of customers as a third party. All dealer employees are informed on the legislation governing the protection of personal data through circulars. In addition, all dealers have updated subscriber/customer information notices located on visible areas. Detailed information was provided to subscribers and dealer employees about the business flows requiring express consent, customer consent templates have been drawn, and all dealers are required to obtain these consents when needed.

All agreements to which the Company is a party are reviewed and revised in line with the KVKK and the applicable legislation. In addition, trainings, announcements and audits were carried particularly for business partners and dealers as a part of the administrative measure obligation to ensure the security of personal data, and will continue to be carried in line with the possible amendments in the legislation.

Liability of the Company management regarding the protection of personal data

In accordance with the KVKK, the legal entities are responsible for fulfilling all obligations under said law and the applicable legislation. In terms of the company, the Board of Directors of Türk Telekom shall be responsible for the Confidentiality and Safety of Personal Data as the data controllers.

Within this framework, the Board of Directors has decided for the establishment of upper and sub-committees consisting of Assistant General Managers and directors for the monitoring and management of the Company's compliance process.

Employee trainings related to personal data security and confidentiality

Personal data security and confidentiality trainings have been assigned online to all permanent employees of Türk Telekom, TT Mobil and TTNET, while regional class trainings were provided to the sales teams, regional employees and dealers'.

The regular trainings provided address the following topics:

- History of the EU and Turkish legislation governing personal data protection and the legal basis
- The Company's main responsibilities on the issue
- Personal Data Processing Inventory and VERBIS (Data Controller Registry Information System)
- Rights of people concerned
- Data storage periods and deletion/destruction
- Penalties set forth in the applicable law and regulations
- Special measures that need to be taken in the Company business processes
- Actions to be taken specifically for sensitive personal data
- Information security awareness

Corporate Governance Principles Compliance Report

	Company Compliance Status					Explanation
	Yes	Partial	No	Exempted	Not Applicable	
1.1. FACILITATING THE EXERCISE OF SHAREHOLDER RIGHTS						
1.1.2- Up-to-date information and disclosures which may affect the exercise of shareholder rights are available to investors at the corporate website.	X					
1.2. RIGHT TO OBTAIN AND REVIEW INFORMATION						
1.2.1- Management did not enter into any transaction that would complicate the conduct of special audit.	X					
1.3. GENERAL ASSEMBLY						
1.3.2- The Company ensures the clarity of the General Assembly agenda, and that an item on the agenda does not cover multiple topics.	X					
1.3.7- Insiders with privileged information have informed the board of directors about transactions conducted on their behalf within the scope of the Company's activities in order for these transactions to be presented at the General Shareholders' Meeting.					X	
1.3.8- Members of the board of directors who are concerned with specific agenda items, auditors, and other related persons, as well as the officers who are responsible for the preparation of the financial statements were present at the General Shareholders' Meeting.	X					
1.3.10- The agenda of the General Shareholders' Meeting included a separate item detailing the amounts and beneficiaries of all donations and contributions.		X				This issue constitutes a separate item of the agenda of the General Assembly Meeting; and as there are many donations and beneficiaries, a summary information is provided.
1.3.11- The General Shareholders' Meeting was held open to the public, including the stakeholders, without having the right to speak.					X	There was no participation request to the General Assembly Meeting by the media in fiscal year 2019.
1.4. VOTING RIGHTS						
1.4.1- There is no restriction preventing shareholders from exercising their shareholder rights.	X					

Corporate Governance Principles Compliance Report

	Company Compliance Status					Explanation
	Yes	Partial	No	Exempted	Not Applicable	
1.4.2- The Company does not have shares that carry privileged voting rights.		X				There is no privileged voting rights. Group (A), (B) and (C) shareholders has been granted the privilege to nominate candidates to the Board of Directors in Article 8 of the Company's Articles of Association.
1.4.3- The Company withholds from exercising its voting rights at the General Shareholders' Meeting of any company with which it has cross-ownership, in case such cross-ownership provides management control.					X	
1.5. MINORITY RIGHTS						
1.5.1- The Company pays maximum diligence to the exercise of minority rights.		X				
1.5.2- The Articles of Association extend the use of minority rights to those who own less than one twentieth of the outstanding shares, and expand the scope of the minority rights.			X			There is no provision in the Articles of Association to be granted minority rights to shareholders who have less than one twentieth of the capital. At the same time, attention is paid to the use of minority rights within the scope of TTK and CMB regulations.
1.6. DIVIDEND RIGHT						
1.6.1- The dividend policy approved by the General Shareholders' Meeting is posted on the Company website.		X				
1.6.2- The dividend distribution policy comprises the minimum information to ensure that the shareholders can have an opinion on the procedure and principles of dividend distributions in the future.		X				

	Company Compliance Status					Explanation
	Yes	Partial	No	Exempted	Not Applicable	
1.6.3- The reasons for retaining earnings, and their allocations, are stated in the relevant agenda item.	X					
1.6.4- The board reviewed whether the dividend policy balances the benefits of the shareholders and those of the Company.	X					
1.7. TRANSFER OF SHARES						
						Group C Privileged Share refers to 1 Group C share held by Ministry of Finance and Treasury in accordance with Telegraph and Telephone Law No. 406. Without prejudice to Article 6/A of the Articles of Association of the Company, All shares of Türk Telekom except C Group 1 share may be sold.
1.7.1- There are no restrictions preventing shares from being transferred.		X				In accordance with Article 6/A.2. of the Company's Articles of Associate, transfer of the shares of Group A shareholder is subject to the veto right of the Group C share. According to Article 6 / A of the Company's Articles of Association, the transfer transaction of registered shares which affects the management control, and registration transaction of such transfer to the share ledger shall not be performed without the affirmative vote of the C Group Privileged Shareholder.
2.1. CORPORATE WEBSITE						
2.1.1- The Company website includes all elements listed in Corporate Governance Principle 2.1.1.	X					
2.1.2- The shareholding structure (names, privileges, number and ratio of shares, and beneficial owners of more than 5% of the issued share capital) is updated on the website at least every 6 months.	X					
2.1.4- The Company website is prepared in other selected foreign languages, in a way to present exactly the same information with the Turkish content.	X					
2.2. ANNUAL REPORT						
2.2.1- The board of directors ensures that the annual report represents a true and complete view of the Company's activities.	X					

Corporate Governance Principles Compliance Report

	Company Compliance Status					Explanation
	Yes	Partial	No	Exempted	Not Applicable	
2.2.2- The annual report includes all elements listed in Corporate Governance Principle 2.2.2.	X					
3.1. CORPORATION'S POLICY ON STAKEHOLDERS						
3.1.1- The rights of the stakeholders are protected pursuant to the relevant regulations, contracts and within the framework of bona fides principles.	X					
3.1.3- Policies or procedures addressing stakeholders' rights are published on the Company's website.	X					
3.1.4- A whistleblowing programme is in place for reporting legal and ethical issues.	X					
3.1.5- The Company addresses conflicts of interest among stakeholders in a balanced manner.	X					
3.2. SUPPORTING THE PARTICIPATION OF THE STAKEHOLDERS IN THE CORPORATION'S MANAGEMENT						
3.2.1- The Articles of Association, or the internal regulations (terms of reference/ manuals), regulate the participation of employees in management.		X				There are internal directives about this topic. Models for participation of company employees in management such as Occupational Health and Safety Boards, Disciplinary Boards, Dispute Resolution Boards, Inventor Idea System continued to be developed in 2019.
3.2.2- Surveys/other research techniques, consultation, interviews, observation method etc. were conducted to obtain opinions from stakeholders on decisions that significantly affect them.	X					
3.3. HUMAN RESOURCES POLICY						
3.3.1- The Company has adopted an employment policy ensuring equal opportunities, and a succession plan for all key managerial positions.	X					
3.3.2- Recruitment criteria are documented.	X					
3.3.3- The Company has a policy on human resources development, and organizes trainings for employees.	X					
3.3.4- Meetings have been organized to inform employees on the financial status of the Company, remuneration, career planning, education and health.	X					

	Company Compliance Status					Explanation
	Yes	Partial	No	Exempted	Not Applicable	
3.3.5- Employees, or their representatives, were notified of decisions impacting them. The opinion of the related trade unions was also taken.	X					
3.3.6- Job descriptions and performance criteria have been prepared for all employees, announced to them and taken into account to determine employee remuneration.	X					
3.3.7- Measures (procedures, trainings, raising awareness, goals, monitoring, complaint mechanisms) have been taken to prevent discrimination, and to protect employees against any physical, mental, and emotional mistreatment.	X					
3.3.8- The Company ensures freedom of association and supports the right for collective bargaining.	X					
3.3.9- A safe working environment for employees is maintained.	X					
3.4. RELATIONS WITH CUSTOMERS AND SUPPLIERS						
3.4.1- The Company measured its customer satisfaction, and operated to ensure full customer satisfaction.	X					
3.4.2- Customers are notified of any delays in handling their requests.	X					
3.4.3- The Company complied with the quality standards with respect to its products and services.	X					
3.4.4- The Company has in place adequate controls to protect the confidentiality of sensitive information and business secrets of its customers and suppliers.	X					
3.5. ETHICAL RULES AND SOCIAL RESPONSIBILITY						
3.5.1- The board of the corporation has adopted a code of ethics, disclosed on the corporate website.	X					
3.5.2- The Company has been mindful of its social responsibility and has adopted measures to prevent corruption and bribery.	X					
4.1. ROLE OF THE BOARD OF DIRECTORS						
4.1.1- The board of directors has ensured strategy and risks do not threaten the long-term interests of the Company, and that effective risk management is in place.	X					
4.1.2- The agenda and minutes of board meetings indicate that the board of directors discussed and approved strategy, ensured resources were adequately allocated, and monitored the Company and management performance.	X					

Corporate Governance Principles Compliance Report

	Company Compliance Status					Explanation
	Yes	Partial	No	Exempted	Not Applicable	
4.2. ACTIVITIES OF THE BOARD OF DIRECTORS						
4.2.1- The board of directors documented its meetings and reported its activities to the shareholders.	X					
4.2.2- Duties and authorities of the members of the board of directors are disclosed in the annual report.	X					
4.2.3- The board has ensured the Company has an internal control framework adequate for its activities, size and complexity.	X					
4.2.4- Information on the functioning and effectiveness of the internal control system is provided in the annual report.	X					
4.2.5- The roles of the Chairman and Chief Executive Officer are separated and defined.	X					
4.2.7- The board of directors ensures that the Investor Relations department and the corporate governance committee work effectively. The board works closely with them when communicating and settling disputes with shareholders.	X					
4.2.8- The Company has subscribed to a Directors and Officers liability insurance covering more than 25% of the capital.	X					
4.3. STRUCTURE OF THE BOARD OF DIRECTORS						
4.3.9- The board of directors has approved the policy on its own composition, setting a minimal target of 25% for female directors. The board annually evaluates its composition and nominates directors so as to be compliant with the policy.		X				Our Company has a Board of Directors Women Membership Policy. It is aimed to reach this goal within the next 5 years by assigning at least one woman member to the Board of Directors and assigning woman member (s) to the Board of Directors.
4.3.10- At least one member of the audit committee has 5 years of experience in audit/ accounting and finance.	X					
4.4. BOARD MEETING PROCEDURES						
4.4.1- Each board member attended the majority of the board meetings in person.	X					

	Company Compliance Status					Explanation
	Yes	Partial	No	Exempted	Not Applicable	
4.4.2- The board has formally approved a minimum time by which information and documents relevant to the agenda items should be supplied to all board members.	X					
4.4.3- The opinions of board members that could not attend the meeting, but did submit their opinion in written format, were presented to other members.	X					
4.4.4- Each member of the board has one vote.	X					
4.4.5- The board has a charter/written internal rules defining the meeting procedures of the board.	X					
4.4.6- Board minutes document that all items on the agenda are discussed, and board resolutions include director's dissenting opinions if any.	X					
4.4.7- There are limits to external commitments of board members. Shareholders are informed of board members' external commitments at the General Shareholders' Meeting.		X				There is no restriction for the members of the Board of Directors to assume any other duties outside the Company. The duties of the members of the Board of Directors outside the Company are presented in the annual report and in their resumes published on the website.
4.5. BOARD COMMITTEES						
4.5.5- Board members serve in only one of the Board's committees.			X			The number of independent members on the Board of Directors does not allow for Board members to serve in only one of the Board's committees. Therefore some independent members of the Board of Directors are assigned in more than on committee.
4.5.6- Committees have invited persons to the meetings as deemed necessary to obtain their views.	X					
4.5.7- If external consultancy services are used, the independence of the provider is stated in the annual report.					X	In fiscal year 2019, the committees have not received any consultancy services hence this subject was not included in the annual report.
4.5.8- Minutes of all committee meetings are kept and reported to board members.	X					

Corporate Governance Principles Compliance Report

	Company Compliance Status					Explanation
	Yes	Partial	No	Exempted	Not Applicable	
4.6. FINANCIAL RIGHTS						
4.6.1- The board of directors has conducted a board performance evaluation to review whether it has discharged all its responsibilities effectively.			X			The performance of the Board of Directors has not been evaluated.
4.6.4- The Company did not extend any loans to its board directors or executives, nor extended their lending period or enhanced the amount of those loans, or improve conditions thereon, and did not extend loans under a personal credit title by third parties or provided guarantees such as surety in favor of them.	X					
4.6.5- The individual remuneration of board members and executives is disclosed in the annual report.		X				The remuneration of provided to executives are disclosed in aggregated form on annual report and are not disclosed on individual basis.

Corporate Governance Information Form

1. SHAREHOLDERS	
1.1. Facilitating the Exercise of Shareholders Rights	
The number of investor meetings (conference, seminar/etc.) organized by the company during the year	Investor relations attended 11 investor conferences and 8 non-deal roadshows in various locations, in particular in the USA and in the UK, throughout 2019. The Company also participated in the deal-roadshow in the US and UK within the scope of the bond issued in 2019. Including numerous meetings held in Istanbul, Türk Telekom Investor Relations met over 350 equity and fixed income investors in 2019.
1.2. Right to Obtain and Examine Information	
The number of special audit request(s)	No requests were made for the appointment of a special auditor in the reporting period.
The number of special audit requests that were accepted at the General Shareholders' Meeting	None
1.3. General Assembly	
Link to the PDP announcement that demonstrates the information requested by Principle 1.3.1. (a-d)	https://www.kap.org.tr/tr/Bildirim/746598 https://www.kap.org.tr/tr/Bildirim/749751 https://www.kap.org.tr/tr/Bildirim/750762 https://www.kap.org.tr/tr/Bildirim/751868 https://www.kap.org.tr/tr/Bildirim/758485
Whether the company provides materials for the General Shareholders' Meeting in English and Turkish at the same time	Documents are also shared simultaneously on Public Disclosure Platform (KAP) and on the Company's investor relations website in English.
The links to the PDP announcements associated with the transactions that are not approved by the majority of independent directors or by unanimous votes of present board members in the context of Principle 1.3.9	No such transaction took place during the year.
The links to the PDP announcements associated with related party transactions in the context of Article 9 of the Communiqué on Corporate Governance (II-17.1)	No such transaction took place during the year.
The links to the PDP announcements associated with common and continuous transactions in the context of Article 10 of the Communiqué on Corporate Governance (II-17.1)	https://www.kap.org.tr/tr/Bildirim/777090
The name of the section on the corporate website that demonstrates the donation policy of the company	http://www.ttyatirimciiliskileri.com.tr/en-us/corporate-governance/pages/corporate-governance-policies.aspx http://www.ttyatirimciiliskileri.com.tr/Documents/en/corporate-governance/donation-policy.pdf

Corporate Governance Information Form

The relevant link to the PDP with minute of the General Shareholders' Meeting where the donation policy has been approved	https://www.kap.org.tr/tr/Bildirim/362681
The number of the provisions of the articles of association that discuss the participation of stakeholders to the General Shareholders' Meeting	There is no such provision in the articles of association.
Identified stakeholder groups that participated in the General Shareholders' Meeting, if any	There was no participation in General Assemblies held in 2019 except by shareholders.
1.4. Voting Rights	
Whether the shares of the company have differential voting rights	No
In case that there are voting privileges, indicate the owner and percentage of the voting majority of shares.	There is no differential voting rights. Group (A), (B) and (C) shareholders are granted the privilege to nominate candidates for the Board of Directors in Article 8 of the Company's Articles of Association.
The percentage of ownership of the largest shareholder	55%
1.5. Minority Rights	
Whether the scope of minority rights enlarged (in terms of content or the ratio) in the articles of the association	No
If yes, specify the relevant provision of the articles of association	There is no provision in the Articles of Association to grant minority rights to shareholders who have less than one twentieth of the capital. However, compliance with the use of minority rights within the scope of TTK and CMB regulations is ensured.
1.6. Dividend Right	
The name of the section on the corporate website that describes the dividend distribution policy	http://www.ttyatirimciiliskileri.com.tr/en-us/corporate-governance/pages/corporate-governance-policies.aspx http://www.ttyatirimciiliskileri.com.tr/Documents/en/corporate-governance/dividend-policy.pdf
Minutes of the relevant agenda item in case the board of directors proposed to the general assembly not to distribute dividends, the reason for such proposal and information as to use of the dividend	It is resolved at our Company's Ordinary General Assembly Meeting for the year 2018 that; 1. Our Company's loss generated as a result of its activities performed between dates 01.01.2018 – 31.12.2018 according to the independently audited consolidated financial tables prepared in accordance with the provisions of "CMB Communiqué About Financial Reporting in Capital Markets No. II-14.1" is TL 1,391,261,128 and the commercial loss calculated within the scope of the provisions of Tax Procedure Law is TL 1,965,757,320, 2. Accordingly, no dividend to be distributed for the activity year of 2018 due to the loss calculated in accordance with consolidated financial tables and the provisions of Tax Procedure Law.
PDP link to the related general shareholder meeting minutes in case the board of directors proposed to the general assembly not to distribute dividends	https://www.kap.org.tr/tr/Bildirim/751874

General Assembly Meetings

General Meeting Date	The number of information requests received by the company regarding the clarification of the agenda of the General Shareholders' Meeting	Shareholder participation rate to the General Shareholders' Meeting	Percentage of shares directly present at the GSM	Percentage of shares represented by proxy	Specify the name of the page of the corporate website that contains the General Shareholders' Meeting minutes, and also indicates for each resolution the voting levels for or against	Specify the name of the page of the corporate website that contains all questions asked in the general assembly meeting and all responses to them	The number of the relevant item or paragraph of General Shareholders' Meeting minutes in relation to related party transactions	The number of declarations by insiders received by the board of directors	The link to the related PDP general shareholder meeting notification
25.01.2019		90.37%	0%	90.37%	Corporate Governance/ General Assembly Meeting Informations	Corporate Governance/ General Assembly Meeting Informations	-	-	https://www.kap.org.tr/tr/Bildirim/735151
02.04.2019		91.44%	0%	91.44%	Corporate Governance/ General Assembly Meeting Informations	Corporate Governance/ General Assembly Meeting Informations	-	-	https://www.kap.org.tr/tr/Bildirim/751868

2. DISCLOSURE AND TRANSPARENCY

2.1. Corporate Website

Specify the name of the sections of the website providing the information requested by the Principle 2.1.1.

<http://www.ttyatirimciiliskileri.com.tr/en-us/pages/default.aspx>
Türk Telekom Group-Ownership Structure,
Announcements and Disclosures
Corporate Governance - Board of Directors, Committees, Senior Management, Insiders with Administrative Responsibilities,
Corporate Governance Compliance Report, Corporate Governance Rating, General Assembly Meeting Information, Articles of Association and Trade Registry Information, Internal Audit and Risk Management, Related Party Transactions, Code of Ethics, Policies, Independent Auditor

If applicable, specify the name of the sections of the website providing the list of shareholders (ultimate beneficiaries) who directly or indirectly own more than 5% of the shares.

<http://www.ttyatirimciiliskileri.com.tr/en-us/turk-telekom-group/investing-in-turk-telekom/pages/ownership-structure.aspx>
<http://www.ttyatirimciiliskileri.com.tr/Documents/en/detailed-shareholder-structure.pdf>

List of languages for which the website is available

Turkish, English

2.2. Annual Report

The page numbers and/or name of the sections in the Annual Report that demonstrate the information requested by principle 2.2.2.

a) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on the duties of the members of the board of directors and executives conducted out of the company and declarations on independence of board members

Corporate Governance Principles Compliance Report section

b) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on committees formed within the board structure

Corporate Governance Principles Compliance Report section

c) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on the number of board meetings in a year and the attendance of the members to these meetings

Corporate Governance Principles Compliance Report section

Corporate Governance Information Form

ç) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on amendments in the legislation which may significantly affect the activities of the corporation	There was no legislative amendments that could significantly affect the Company's operations in 2019.
d) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on significant lawsuits filed against the corporation and the possible results thereof	Consolidated Independent Audit Report/Commitment and Obligations
e) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on the conflicts of interest of the corporation among the institutions that it purchases services on matters such as investment consulting and rating and the measures taken by the corporation in order to avoid from these conflicts of interest	Corporate Governance Principles Compliance Report section/ Other information according to the legislation
f) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on the cross ownership subsidiaries that the direct contribution to the capital exceeds 5%	Corporate Governance Principles Compliance Report section
g) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on social rights and professional training of the employees and activities of corporate social responsibility in respect of the corporate activities that arises social and environmental results	Sustainability and Corporate Social Responsibility and Corporate Governance Principles Compliance Report section

3. STAKEHOLDERS

3.1. Corporation's Policy on Stakeholders

The name of the section on the corporate website that demonstrates the employee remedy or severance policy	http://www.ttyatirimciiliskileri.com.tr/en-us/corporate-governance/pages/corporate-governance-policies.aspx http://www.ttyatirimciiliskileri.com.tr/Documents/en/corporate-governance/compensation-policy.pdf
The number of definitive convictions the company - was subject to in relation to breach of employee rights	-
The position of the person responsible for the alert mechanism (i.e. whistleblowing mechanism)	Business Ethics Committee etik@turktelekom.com.tr
The contact detail of the company alert mechanism.	http://www.ttyatirimciiliskileri.com.tr/en-us/corporate-governance/pages/corporate-governance-committee-communication-form.aspx

3.2. Supporting the Participation of the

Stakeholders in the Corporation's Management

Name of the section on the corporate website that demonstrates the internal regulation addressing the participation of employees on management bodies.	Corporate Governance Principles Compliance Report section
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Corporate bodies where employees are actually represented	Türkiye Haber-İş Union
3.3. Human Resources Policy	
The role of the board on developing and ensuring that the company has a succession plan for the key management positions	<p>Human Resources Policy</p> <p>In cases for executive position changes that might lead to disruptions in Company management, back up plans are prepared for the determination of the new managers to be appointed.</p> <p>http://www.ttyatirimciiliskileri.com.tr/en-us/socially-responsible-investing/pages/policies.aspx</p> <p>http://www.ttyatirimciiliskileri.com.tr/Documents/en/corporate-governance/human-resources-policy.pdf</p> <p>Human Rights Policy</p> <p>Türk Telekom aims to recruit its employees on long term basis as a principal to provide rapid, high quality and economic services with regard to technological developments, financial and economic conditions and sectoral changes in its field of activity. Continuous success of Türk Telekom depends on the ability of its employees to adapt rapidly and efficiently to the changing conditions of the sector, as well as their flexibility in this respect. Our employees via their superior skills, competence and experience help the Company to become one of the leading companies in the world.</p> <p>Türk Telekom supports on-the-job training by programs carried in cooperation with regulatory and supervisory agencies as well as the universities and provides employment opportunities within this framework. Our company asserts its claim of being the most preferred company to work for by sharing the pride of being a Türk Telekom employee with young talents from universities and professionals outside the company. Recruitment criteria are determined and documented in written form and that criteria should be followed. Türk Telekom provides equal recruitment and career planning opportunity to its applicants.</p> <p>http://www.ttyatirimciiliskileri.com.tr/Documents/en/corporate-governance/human-rights-policy-20191129.pdf</p> <p>Diversity</p> <p>Türk Telekom values diversity and considers this as an asset, and strives to make its employees feel like they are a part of the Company.</p> <p>Accordingly, Türk Telekom</p> <p>Is committed to equal opportunity, and takes into account the qualifications, performance, skills and experiences of its employees for recruitment, placement, development, training, compensation, promotion, and resignation from the Company.</p> <p>Is aware that diversity in its labor contributes to achievement of the Company targets, and strives to recruit candidates with diverse backgrounds and experience, and employ them for a long term.</p> <p>Fulfills its legal obligations in relation to employment of people with disabilities, and disadvantages.</p>
The name of the section on the corporate website that demonstrates the human resource policy covering equal opportunities and hiring principles. Also provide a summary of relevant parts of the human resource policy.	
Whether the company provides an employee stock ownership programme	There is no employee stock ownership programme.

	http://www.ttyatirimciiliskileri.com.tr/en-us/socially-responsible-investing/pages/policies.aspx http://www.ttyatirimciiliskileri.com.tr/Documents/en/corporate-governance/human-resources-policy.pdf
<p>The name of the section on the corporate website that demonstrates the human resource policy covering discrimination and mistreatments and the measures to prevent them. Also provide a summary of relevant parts of the human resource policy.</p>	<p>Human Resources Policy</p> <p>Türk Telekom maintains all its business processes with an approach that respects universal human rights principles and equality of opportunity to all. Türk Telekom also respects and supports freedom of association and speech, and the right of unionization and collective bargaining.</p> <p>Our Company takes measures to avoid racial, religious, language and gender discrimination among employees and to protect employees against physical, mental and emotional harassment within workplace that are contrary to human rights. Discriminating acts on grounds of age, language, race, ethnicity, nationality, state of health, gender, marital status, religion, sect or denomination, political thought and philosophical beliefs are among acts and misconducts that necessitate a dismissal penalty according to disciplinary principles of the company.</p> <p>Türk Telekom takes measures for the protection of personal information and information privacy. It also monitors the compliance of the Company's practices with laws and regulations regarding working hours, overtime hours, forced and compulsory labor.</p> <p>Child labor, forced labor, illegal immigrants, and foreigners without work permit are forbidden to work at Türk Telekom and the compliance is audited by public authorities.</p> <p>http://www.ttyatirimciiliskileri.com.tr/Documents/en/corporate-governance/human-rights-policy-20191129.pdf</p>
<p>The number of definitive convictions the company is subject to in relation to health and safety measures</p>	7
3.5. Ethical Rules and Social Responsibility	
<p>The name of the section on the corporate website that demonstrates the code of ethics</p>	http://www.ttyatirimciiliskileri.com.tr/en-us/corporate-governance/pages/corporate-governance-policies.aspx http://www.ttyatirimciiliskileri.com.tr/Documents/en/corporate-governance/Code-of-Ethics.pdf
<p>The name of the section on the company website that demonstrates the corporate social responsibility report. If such a report does not exist, provide the information about any measures taken on environmental, social and corporate governance issues.</p>	http://www.ttyatirimciiliskileri.com.tr/en-us/socially-responsible-investing/pages/sustainability.aspx http://www.ttyatirimciiliskileri.com.tr/en-us/socially-responsible-investing/pages/corporate-social-responsibility.aspx
<p>Any measures combating any kind of corruption including embezzlement and bribery</p>	Anti-Corruption measures are included in the Code of Ethics.

4. BOARD OF DIRECTORS-I

4.2. Activity of the Board of Directors

Date of the last board evaluation conducted	-
Whether the board evaluation was externally facilitated	No
Whether all board members released from their duties at the GSM	Yes
Name(s) of the board member(s) with specific delegated duties and authorities, and descriptions of such duties	3 individuals jointly represent and bind our company in the broadest terms on all kind of matters as below: - Eyüp Engin, Member of the Board of Directors nominated by Group A Shareholder, - One of the Independent Board Members nominated by Group B Shareholder, - Member of Board of Directors representing Group C Privileged Share
Number of reports presented by internal auditors to the audit committee or any relevant committee to the board	Number of reports submitted to the Committee and Board of Directors is 7.
Specify the name of the section or page number of the annual report that provides the summary of the review of the effectiveness of internal controls	Assessments of the Board of Directors Section
Name of the Chairman	Dr. Ömer Fatih Sayan
Name of the CEO	Ümit Önal
If the CEO and Chair functions are combined: provide the link to the relevant PDP announcement providing the rationale for such combined roles	Not the same person
Link to the PDP notification stating that any damage that may be caused by the members of the board of directors during the discharge of their duties is insured for an amount exceeding 25% of the company's capital	https://www.kap.org.tr/tr/Bildirim/723758 http://www.ttyatirimciiliskileri.com.tr/en-us/corporate-governance/pages/corporate-governance-policies.aspx http://www.ttyatirimciiliskileri.com.tr/Documents/en/corporate-governance/women-board-membership-policy.pdf
The name of the section on the corporate website that demonstrates current diversity policy targeting women directors	
The number and ratio of female directors within the Board of Directors	0

Composition of Board of Directors								
Name, Surname of Board Member	Whether Executive Director Or Not	Whether Independent Director Or Not	The First Election Date To Board	Link to PDP Notification That Includes The Independence Declaration	Whether the Independent Director Considered By The Nomination Committee	Whether She/ He is the Director Who Ceased to Satisfy The Independence or Not	Whether The Director Has At Least 5 Years' Experience On Audit, Accounting and/or Finance or Not	
Dr. Ömer Fatih Sayan	Non-executive	Not independent	04.09.2018		Not considered	No	No	
Eyüp Engin	Non-executive	Not independent	22.12.2018		Not considered	No	Yes	
Yiğit Bulut	Non-executive	Independent	06.05.2014	https://www.kap.org.tr/tr/Bildirim/358251	Considered	No	Yes	
Hakan Aran	Non-executive	Not independent	22.12.2018		Not considered	No	Yes	
Selim Dursun	Non-executive	Independent	04.09.2018	https://www.kap.org.tr/tr/Bildirim/708083	Considered	No	No	
Dr. Nureddin Nebati	Non-executive	Independent	02.11.2018	https://www.kap.org.tr/tr/Bildirim/728732	Considered	No	No	
Dr. Muammer Cüneyt Sezgin	Non-executive	Not independent	22.12.2018		Not considered	No	Yes	
Aclan Acar	Non-executive	Not independent	07.03.2019		Not considered	No	Yes	
Ertuğrul Altın	Non-executive	Not independent	12.03.2019		Not considered	No	No	

4. BOARD OF DIRECTORS-II

4.4. Meeting Procedures of the Board of Directors

Number of physical board meetings in the reporting period (meetings in person)	12
Director average attendance rate at board meetings	91%
Whether the board uses an electronic portal to support its work or not	No

Corporate Governance Information Form

Number of minimum days ahead of the board meeting to provide information to directors, as per the board charter	10 days
The name of the section on the corporate website that demonstrates information about the board charter	Article 12 of the Company's Articles of Association. http://www.ttyatirimciiliskileri.com.tr/ / "Corporate Governance" / "Articles of Association and Trade Registry Information" http://www.ttyatirimciiliskileri.com.tr/en-us/corporate-governance/pages/articles-of-association-trade-registry-information.aspx
Number of maximum external commitments for board members as per the policy covering the number of external duties held by directors	-
4.5. Board Committees	
Page numbers or section names of the annual report where information about the board committees are presented	Board of Directors' Committees and Corporate Governance Principles Compliance Report Sector Audit Committee: https://www.kap.org.tr/en/Bildirim/659174 Nomination Committee: https://www.kap.org.tr/en/Bildirim/803744 Remuneration Committee: https://www.kap.org.tr/en/Bildirim/803744 Early Identification and Management of Risks Committee: https://www.kap.org.tr/en/Bildirim/304033 Corporate Governance Committee: https://www.kap.org.tr/en/Bildirim/741628
Link(s) to the PDP announcement(s) with the board committee charters	

Composition of Board Committees-I				
Names of the Board Committees	Name of Committees Defined As "Other" in the First Column	Name-Surname of Committee Members	Whether Committee Chair or Not	Whether Board Member or Not
Corporate Governance Committee		Dr. Nureddin Nebati	Yes	Board Member
Corporate Governance Committee		Selim Dursun	No	Board Member
Corporate Governance Committee		Dr. Muammer Cüneyt Sezgin	No	Board Member
Corporate Governance Committee		Sabriye Gözde Çullas	No	Not Board Member
Audit Committee		Yiğit Bulut	Yes	Board Member
Audit Committee		Selim Dursun	No	Board Member
Early Identification and Management of Risks Committee		Yiğit Bulut	Yes	Board Member
Early Identification and Management of Risks Committee		Eyüp Engin	No	Board Member
Early Identification and Management of Risks Committee		Hakan Aran	No	Board Member
Nomination Committee		Dr. Nureddin Nebati	Yes	Board Member
Nomination Committee		Dr. Ömer Fatih Sayan	No	Board Member
Nomination Committee		Aclan Acar	No	Board Member
Remuneration Committee		Yiğit Bulut	Yes	Board Member
Remuneration Committee		Eyüp Engin	No	Board Member
Remuneration Committee		Dr. Muammer Cüneyt Sezgin	No	Board Member

4. BOARD OF DIRECTORS-III

4.5. Board Committees-II

Specify where the activities of the audit committee are presented in your annual report or website (Page number or section name in the annual report/website)	Annual Report Corporate Governance Principles Compliance Report Section http://www.ttyatirimciiliskileri.com.tr/en-us/corporate-governance/pages/audit-committee.aspx
Specify where the activities of the corporate governance committee are presented in your annual report or website (Page number or section name in the annual report/website)	Annual Report/Corporate Governance Principles Compliance Report Section http://www.ttyatirimciiliskileri.com.tr/en-us/corporate-governance/pages/corporate-governance-committee.aspx
Specify where the activities of the nomination committee are presented in your annual report or website (Page number or section name in the annual report/website)	Annual Report/Corporate Governance Principles Report Section http://www.ttyatirimciiliskileri.com.tr/en-us/corporate-governance/pages/nomination-committee.aspx
Specify where the activities of the early detection of risk committee are presented in your annual report or website (Page number or section name in the annual report/website)	Annual Report/Corporate Governance Principles Report Section http://www.ttyatirimciiliskileri.com.tr/en-us/corporate-governance/pages/early-identification-and-management-of-risks-and-committee.aspx
Specify where the activities of the remuneration committee are presented in your annual report or website (Page number or section name in the annual report/website)	Annual Report/Corporate Governance Principles Report Section http://www.ttyatirimciiliskileri.com.tr/en-us/corporate-governance/pages/remuneration-committee.aspx
4.6. Financial Rights	
Specify where the operational and financial targets and their achievement are presented in your annual report (Page number or section name in the annual report)	Annual Report/Corporate Governance Principles Report Section
Specify the section of website where remuneration policy for executive and non-executive directors are presented.	Corporate Governance/Policies http://www.ttyatirimciiliskileri.com.tr
Specify where the individual remuneration for board members and senior executives are presented in your annual report (Page number or section name in the annual report)	Annual Report/Corporate Governance Principles Report Section "Financial Right Provided to the Members of Board of Directors and to the Senior Executives"

Composition of Board Committees-II					
Names of the Board Committees	Name Of Committees Defined As "Other" in the First Column	The Percentage of Non-executive Directors	The Percentage of Independent Directors in the Committee	The Number of Meetings Held in Person	The Number of Reports on its Activities Submitted to the Board
Audit Committee	-	100%	100%	7	5
Corporate Governance Committee	-	100%	50%	4	4
Early Identification and Management of Risks Committee	-	100%	33%	4	2
Nomination Committee	-	100%	33%	-	-
Remuneration Committee	-	100%	33%	-	-

Statement of Independence

Statement of Independence

I have been nominated for the vacant independent board membership of Türk Telekomünikasyon A.Ş. ("The Company"). Pursuant to Corporate Governance Principles attached to the Communiqué No: II-17.1 on the Corporate Governance;

I declare that;

- A relationship of an executive position with important duties and responsibilities has not been established by me, my spouse or up to third degree relatives by blood or marriage within the last five years and I do not jointly or separately hold more than 5% of capital or voting right or privileged share or have significant commercial relationship, with Türk Telekomünikasyon A.Ş., associations that Türk Telekomünikasyon A.Ş. holds management control or has significant effect on, and shareholders that hold Türk Telekomünikasyon A.Ş.'s management control or have significant effect on Türk Telekomünikasyon A.Ş. and entities whose management control held by these shareholders,
- I have not worked in a management position undertaking important duty and responsibilities for firms, particularly audit,(including tax audit, legal audit and internal audit), rating and consultancy firms, firms that Türk Telekomünikasyon A.Ş. purchases or sells goods or services considerably, in the period that goods and services are purchased or sold, and also have not been appointed as board member to those firms within the last five years.
- I have necessary educational background, information and experience for fulfilling independent board member duties,
- Pursuant to Income Tax Law No.193 dated by 31.12.1960, I am a resident in Turkey
- I have the ethical standards, reputation and experience enabling them to contribute to activities of the Company, protect their impartiality with regard to conflict of interest that may arise among shareholders, make independent decisions by taking into account the rights of stakeholders,
- I have time to follow the requirements of the business activities of Türk Telekomünikasyon A.Ş. and to precisely perform the tasks I have undertaken,
- I do not serve as an independent board member in more than three of the Türk Telekomünikasyon A.Ş.'s or the companies whose management control held by shareholders that hold Türk Telekomünikasyon A.Ş.'s management control and also in total more than five of publicly traded companies.
- I am not registered and announced on behalf of the legal entity elected as Board Member



Yiğit Bulut

Statement of Independence

I have been nominated for the vacant independent board membership of Türk Telekomünikasyon A.Ş. ("The Company"). Pursuant to Corporate Governance Principles attached to the Communiqué No: II-17.1 on the Corporate Governance;

I declare that;

- A relationship of an executive position with important duties and responsibilities has not been established by me, my spouse or up to third degree relatives by blood or marriage within the last five years and I do not jointly or separately hold more than 5% of capital or voting right or privileged share or have significant commercial relationship, with Türk Telekomünikasyon A.Ş., associations that Türk Telekomünikasyon A.Ş. holds management control or has significant effect on, and shareholders that hold Türk Telekomünikasyon A.Ş.'s management control or have significant effect on Türk Telekomünikasyon A.Ş. and entities whose management control held by these shareholders,
- I have not worked in a management position undertaking important duty and responsibilities for firms, particularly audit,(including tax audit, legal audit and internal audit), rating and consultancy firms, firms that Türk Telekomünikasyon A.Ş. purchases or sells goods or services considerably, in the period that goods and services are purchased or sold, and also have not been appointed as board member to those firms within the last five years.
- I have necessary educational background, information and experience for fulfilling independent board member duties,
- Pursuant to Income Tax Law No.193 dated by 31.12.1960, I am a resident in Turkey
- I have the ethical standards, reputation and experience enabling them to contribute to activities of the Company, protect their impartiality with regard to conflict of interest that may arise among shareholders, make independent decisions by taking into account the rights of stakeholders,
- I have time to follow the requirements of the business activities of Türk Telekomünikasyon A.Ş. and to precisely perform the tasks I have undertaken,
- I do not serve as an independent board member in more than three of the Türk Telekomünikasyon A.Ş.'s or the companies whose management control held by shareholders that hold Türk Telekomünikasyon A.Ş.'s management control and also in total more than five of publicly traded companies.
- I am not registered and announced on behalf of the legal entity elected as Board Member



Selim Dursun

Statement of Independence

Statement of Independence

I have been nominated for the vacant independent board membership of Türk Telekomünikasyon A.Ş. ("The Company"). Pursuant to Corporate Governance Principles attached to the Communiqué No: II-17.1 on the Corporate Governance;

I declare that;

- A relationship of an executive position with important duties and responsibilities has not been established by me, my spouse or up to third degree relatives by blood or marriage within the last five years and I do not jointly or separately hold more than 5% of capital or voting right or privileged share or have significant commercial relationship, with Türk Telekomünikasyon A.Ş., associations that Türk Telekomünikasyon A.Ş. holds management control or has significant effect on, and shareholders that hold Türk Telekomünikasyon A.Ş.'s management control or have significant effect on Türk Telekomünikasyon A.Ş. and entities whose management control held by these shareholders,
- I have not worked in a management position undertaking important duty and responsibilities for firms, particularly audit,(including tax audit, legal audit and internal audit), rating and consultancy firms, firms that Türk Telekomünikasyon A.Ş. purchases or sells goods or services considerably, in the period that goods and services are purchased or sold, and also have not been appointed as board member to those firms within the last five years.
- I have necessary educational background, information and experience for fulfilling independent board member duties,
- Pursuant to Income Tax Law No.193 dated by 31.12.1960, I am a resident in Turkey
- I have the ethical standards, reputation and experience enabling them to contribute to activities of the Company, protect their impartiality with regard to conflict of interest that may arise among shareholders, make independent decisions by taking into account the rights of stakeholders,
- I have time to follow the requirements of the business activities of Türk Telekomünikasyon A.Ş. and to precisely perform the tasks I have undertaken,
- I do not serve as an independent board member in more than three of the Türk Telekomünikasyon A.Ş.'s or the companies whose management control held by shareholders that hold Türk Telekomünikasyon A.Ş.'s management control and also in total more than five of publicly traded companies.
- I am not registered and announced on behalf of the legal entity elected as Board Member



Dr. Nureddin Nebati

Statement of Responsibility

FINANCIAL TABLES APPROVED BY THE BOARD OF DIRECTORS STATEMENT OF RESPONSIBILITY AS PER ARTICLE 9 OF THE CAPITAL MARKETS BOARD COMMUNIQUE NO: II-14.1

RESOLUTION DATED: 12.02.2020

RESOLUTION NO: 12

We hereby state that:

a) We have reviewed the Consolidated Financial Tables of our Company for the accounting period ending on 31 December 2019.

b) According to information to which we have access as a part of our duties and responsibilities within the Company, the Consolidated Financial Tables do not contain any material inaccurate disclosures or any shortcomings which may prove to be misleading because of the date of disclosure.

c) According to information to which we have access as a part of our duties and responsibilities within the Company, the Consolidated Financial Tables, which have been prepared in accordance with the Capital Markets Board Communiqué No: II-14.1, faithfully reflect the assets, liabilities, financial standing and profits and losses of the Company.

Kind regards,



Yiğit Bulut
Audit Committee Chairman



Selim Dursun
Audit Committee Member



Ümit Önal
General Manager-CEO



Kaan Aktan
Finance Assistant General Manager

Statement of Responsibility

ANNUAL REPORT APPROVED BY THE BOARD OF DIRECTORS STATEMENT OF RESPONSIBILITY AS PER ARTICLE 9 OF THE CAPITAL MARKETS BOARD COMMUNIQUE NO: II-14.1

RESOLUTION DATED: 29.02.2020

RESOLUTION NO: 29

We hereby state that:

a) We have reviewed the Board of Directors Annual Report for the 01.01.2019–31.01.2019 which has been prepared in accordance with II.14.1. “Communiqué on Principles of Financial Reporting in Capital Markets” and have reviewed the “Corporate Governance Compliance Report” and the “Corporate Governance Information Form which have been prepared in accordance with the mandatory formats specified by the Capital Markets Board’ (CMB) decision no: 2/49 on 10.01.2019 as per II-17.1 “Communiqué on Corporate Governance”.

b) Based on our knowledge within the scope of our duties and responsibilities in the Company, the Annual Report do not contain any misleading statements with regards to important matters or do not contain any shortcomings any missing information that would be interpreted as misleading as of the date of disclosure.

c) Based on our knowledge within the scope of our duties and responsibilities in the Company, the Annual Report faithfully reflects the development and performance of the business and the consolidated financial situation of the Company along with the risks and uncertainties that the Company is facing.

d) Based on our knowledge within the scope of our duties and responsibilities in the Company, the “Corporate Governance Compliance Report” and the “Corporate Governance Information Form” faithfully reflect the information provided in such reports.



Yiğit Bulut
Audit Committee Chairman



Selim Dursun
Audit Committee Member



Ümit Önal
General Manager-CEO



Kaan Aktan
Finance Assistant General Manager

Independent Auditor's Report on the Annual Report of the Board of Directors

CONVENIENCE TRANSLATION INTO ENGLISH OF INDEPENDENT AUDITOR'S REPORT ON THE BOARD OF DIRECTORS' ANNUAL REPORT ORIGINALLY ISSUED IN TURKISH

To the Shareholder's of Türk Telekomünikasyon Anonim Şirketi

Opinion

We have audited the annual report of Türk Telekomünikasyon Anonim Şirketi (the "Company") and its subsidiaries (together will be referred as "the Group") for the period between 1 January 2019 and 31 December 2019, since we have audited the complete set consolidated financial statements for this period.

In our opinion, the consolidated financial information included in the annual report and the analysis of the Board of Directors by using the information included in the audited financial statements regarding the position of the Group are consistent, in all material respects, with the audited complete set of consolidated financial statements and information obtained during the audit and provides a fair presentation.

Basis for Opinion

We conducted our audit in accordance with the standards on auditing issued by the Capital Markets Board of Turkey and Standards on Auditing which is a component of the Turkish Auditing Standards issued by the Public Oversight, Accounting and Auditing Standards Authority ("POA") ("Standards on Auditing issued by POA"). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Annual Report section of our report. We declare that we are independent of the Group in accordance with the Code of Ethics for Auditors issued by POA (POA's Code of Ethics) and the ethical requirements in the regulations issued by POA that are relevant to audit of financial statements, and we have fulfilled our other ethical responsibilities in accordance with the POA's Code of Ethics and regulations. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Auditor's Opinion on Complete Set of Consolidated Financial Statements

We have expressed an unqualified opinion on the complete set of consolidated financial statements of the Group for the period between 1 January 2019 and 31 December 2019 on 12 February 2020.

Board of Directors' Responsibility for the Annual Report

In accordance with the Articles 514 and 516 of the Turkish Commercial Code numbered 6102 ("TCC") and Communiqué on the Principles of Financial Reporting In Capital Markets numbered II – 14.1 (the "Communiqué"), the Group's management is responsible for the following regarding the annual report:

- a) Group's management prepares its annual report within the first three months following the date of statement of financial position and submits it to the general assembly.
- b) Group's management prepares its annual report in such a way that it reflects the operations of the year and the consolidated financial position of the Group accurately, completely, directly, true and fairly in all respects. In this report, the financial position is assessed in accordance with the Group's consolidated financial statements. The annual report shall also clearly indicates the details about the Group's development and risks that might be encountered. The assessment of the Board of Directors on these matters is included in the report.

Independent Auditor's Report on the Annual Report of the Board of Directors

c) The annual report also includes the matters below:

- Significant events occurred in the Group after the reporting period,
- The Group's research and development activities.
- Financial benefits such as wages, premiums and bonuses paid to board members and key management personnel, appropriations, travel, accommodation and representation expenses, benefits in cash and kind, insurance and similar guarantees.

When preparing the annual report, the Board of Directors also considers the secondary legislation arrangements issued by the Ministry of Trade and related institutions.

Auditor's Responsibility for the Audit of the Annual Report

Our objective is to express an opinion on whether the consolidated financial information included in the annual report in accordance with the TCC and the Communiqué and analysis of the Board of Directors by using the information included in the audited financial statements regarding the position of the Group are consistent with the audited consolidated financial statements of the Group and the information obtained during the audit and give a true and fair view and form a report that includes this opinion.

We conducted our audit in accordance with the standards on auditing issued by the Capital Markets Board of Turkey and Standards on Auditing issued by POA. These standards require compliance with ethical requirements and planning of audit to obtain reasonable assurance on whether the consolidated financial information included in the annual report and analysis of the Board of Directors by using the information included in the audited financial statements regarding the position of the Group are consistent with the consolidated financial statements and the information obtained during the audit and provides a fair presentation.

KPMG Bağımsız Denetim ve Serbest Muhasebeci Mali Müşavirlik Anonim Şirketi

A member firm of KPMG International Cooperative



Şirin Soysal, SMMM
Partner

28 February 2020
İstanbul, Türkiye

**31 December 2019 Consolidated Financial Statements and
Independent Auditor's Report**

Independent Auditor's Report



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To the Shareholders of Türk Telekomünikasyon Anonim Şirketi

A) Audit of the Consolidated Financial Statements

Opinion

We have audited the consolidated financial statements of Türk Telekomünikasyon Anonim Şirketi and its subsidiaries (together will be referred to as "the Group"), which comprise the consolidated statement of financial position as at 31 December 2019, the consolidated statement of profit or loss, the consolidated statement of other comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at 31 December 2019, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with Turkish Financial Reporting Standards ("TFRSs").

Basis for Opinion

We conducted our audit in accordance with standards on auditing issued by the Capital Markets Board of Turkey ("CMB") and Standards on Auditing which is a component of the Turkish Auditing Standards published by the Public Oversight Accounting and Auditing Standards Authority ("POA") ("Standards on Auditing issued by POA"). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Consolidated Financial Statements* section of our report. We declare that we are independent of the Group in accordance with the Code of Ethics for Auditors issued by POA ("POA's Code of Ethics") and the ethical requirements in the regulations issued by POA that are relevant to audit of financial statements, and we have fulfilled our other ethical responsibilities in accordance with the POA's Code of Ethics and regulations. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Revenue recognition

Refer to Note 2.4 and Note 2.5 to the consolidated financial statements for summary of significant accounting policies and significant accounting estimates and assumptions for revenue recognition.



The key audit matter	How the matter was addressed in our audit
<p>The Group's revenue is primarily generated from fixed-line telecommunication services, mobile telecommunication services, sales of equipment and TV subscriptions.</p> <p>The accuracy of revenue recognized in the consolidated financial statements is an inherent industry risk because the billing systems of telecommunications companies are complex and process large volumes of data with a combination of different products and services sold during the year, through a number of different systems.</p> <p>Significant management judgment can be required in determining the appropriate measurement and timing of recognition of different elements of revenue within bundled sales packages, which may include services and telecommunication products such as equipment.</p> <p>We identified revenue recognition as a key audit matter because of the accuracy and timing of revenue recognized by the IT billing systems given the complexity of the systems and the significance of volumes of data processed by the systems.</p>	<p>We have performed the following audit procedures to be responsive to this area:</p> <ul style="list-style-type: none"> Assessing the appropriateness of the revenue recognition policy of the Group; Assessing, with the assistance of our internal IT specialists, the design, implementation and operating effectiveness of management's; <ul style="list-style-type: none"> key internal controls over the general IT environment in which the business systems operate, including access to program controls, program change controls, program development controls and computer operation controls; and key internal IT controls over the completeness and accuracy of rating and bill generation and the end-to-end reconciliation controls from the rating and billing systems to the accounting system. Testing a sample of customer bills and checking these to supporting evidence and cash received; Testing material journals processed between the billing systems and the general ledger; Testing the end-to-end reconciliations from data records to the billing systems and to the general ledger; and Substantive testing on a sample of non-systematic adjustments which are outside of the normal billing process and therefore carry higher levels of management judgment. <p>Based on our work, we had no material finding that have impact on the audit of accounting for revenue recognition.</p>

Independent Auditor's Report



Initial application of TFRS 16 Leases

Refer to Note 2.3, Note 2.4 and Note 2.5 to the consolidated financial statements for summary of significant accounting policies and estimates and assumptions and the impact of the adaptation of TFRS 16 *Leases*.

<u>The key audit matter</u>	<u>How the matter was addressed in our audit</u>
<p>As described in note 2.3 to the consolidated financial statements, the Group has initially adopted TFRS 16 <i>Leases</i> as from 1 January 2019.</p> <p>The Group adopted TFRS 16 using the modified retrospective method of adoption with the date of initial application of 1 January 2019. At transition, lease liabilities were measured at the present value of the remaining lease payments, discounted at the Group's incremental borrowing rate as at 1 January 2019. The right-of-use assets for most leases were recognised based on the amount equal to the lease liabilities, adjusted for any related prepaid and accrued lease payments previously recognised. As a result of initially applying TFRS 16, in relation to the leases that were previously classified as operating leases, the Group recognised TL 1.317.907 thousand of right of use assets and TL 1.049.711 thousand of lease liabilities as at 1 January 2019.</p> <p>We identified financial instruments and initial application of TFRS 16 as a key audit matter because initial application of TFRS 16 <i>Leases</i> has a material effect in the consolidated financial statements.</p>	<p>We have performed the following audit procedures to be responsive to this area:</p> <ul style="list-style-type: none">• Through our discussions with the Group Management, understanding the Group's process in identifying lease contracts, or contracts contained leases.• Reading a sample of contracts to assess whether leases have been appropriately identified• Assessing the appropriateness of Group's accounting policies for ROU assets and lease liabilities in accordance with TFRS 16• Obtaining the Group's quantification of ROU assets and lease liabilities. For a sample of leases, we agreed the inputs used in the quantification to the lease agreements, challenged the calculations of the discount rate applied, and performed re-calculation checks.• Evaluating the appropriateness of the associated disclosures in the consolidated financial statements. <p>We found the initial application of TFRS 16 and assessments, estimates and assumptions in the consolidated financial statements appropriate.</p>



Litigations, claims and contingent liabilities

Refer to Note 2.4, Note 2.5 and Note 24 to the consolidated financial statements for summary of significant accounting policies and significant accounting assessments, estimates and assumptions for litigations, claims and contingent liabilities.

<u>The key audit matter</u>	<u>How the matter was addressed in our audit</u>
<p>The Group operates in a highly regulated industry. The Group is exposed to important risks such as anti-monopoly procedures, compliance with regulatory requirements, customer protection and compliance with other legal regulations. Required provisions are subject to assumptions and as a result there is an increased likelihood of misstatements.</p> <p>We have determined this to be a key audit matter, because there is a high level of judgment required in estimating the level of provisioning required.</p>	<p>We have performed the following audit procedures to be responsive to this area:</p> <ul style="list-style-type: none"> • Discussing with the legal department material legal cases to determine the Group's assessment of the likelihood and magnitude of any liability that may arise; • Reading legal opinions and on-going cases from legal counsels of the Group; • Assessing and challenging management's conclusions through understanding precedents set in similar cases; • Where appropriate and relevant, examining correspondence connected with the cases; and • Reviewing the level of provisions recorded and assessed the adequacy of disclosures in the consolidated financial statements. <p>We considered management's judgments on the level of provisioning to be reasonable.</p>

Independent Auditor's Report



Valuation of deferred tax assets

Refer to Note 2.4, Note 2.5 and Note 11 to the consolidated financial statements for summary of significant accounting policies and significant accounting assessments, estimates and assumptions for valuation of deferred tax assets.

The key audit matter	How the matter was addressed in our audit
<p>The Group has recognized deferred tax assets for deductible temporary differences and unused tax losses that it believes are recoverable.</p> <p>The recoverability of recognized deferred tax assets is dependent on the Group's ability to generate future taxable profits sufficient to utilize deductible temporary differences and tax losses (before latter expire).</p> <p>We have determined this to be a key audit matter, due to the inherent uncertainty in forecasting the amount and timing of future taxable profits and the reversal of temporary differences. Significant judgment is required in relation to the recognition and recoverability of deferred tax assets.</p>	<p>We have performed the following audit procedures to be responsive to this area:</p> <ul style="list-style-type: none">• Assessing and challenging the assumptions and judgments exercised by management in respect of the forecasts of future taxable profits by analyzing the assumptions adopted by management;• Considering the historical accuracy of forecasts of future taxable profits made by management by comparing the actual taxable profits for the current year with management's estimates in the forecasts made in the previous year and assessing whether there were any indicators of management bias in the selection of key assumptions;• Considering the impact of recent regulatory developments, where applicable and relevant;• Reconciling tax losses and expiry dates to tax statements; and• Assessing whether the Group's disclosures in the consolidated financial statements of the application of judgment in estimating recognized and unrecognized deferred tax asset balances appropriately reflect the Group's deferred tax position with reference to the requirements of the TFRSs. <p>We considered management's judgment on the recoverability of Group's deferred tax asset to be reasonable.</p>



Impairment of goodwill, Property, plant and equipment and Intangible assets

Refer to Note 2.4, Note 2.5, Note 16, Note 19 and Note 20 to the consolidated financial statements for summary of significant accounting policies and significant accounting assessments, estimates and assumptions for impairment of goodwill and, Property, plant and equipment and Intangible assets.

The key audit matter	How the matter was addressed in our audit
<p>As at 31 December 2019, the Group's non-current assets principally comprised property, plant and equipment and intangible assets. The Group has recognized goodwill amounting to TL 44.944 thousand as at 31 December 2019 (31 December 2018: TL 44.944 thousand). Impairment on property, plant and equipment and intangible assets are amounted to TL 25.081 thousand (31 December 2018: TL 16.299 thousand) and TL 4.900 thousand (31 December 2018: TL 1.132 thousand), respectively as at 31 December 2019.</p> <p>In performing impairment assessments, management compared the carrying value of each of the separately identifiable cash generating units ("CGUs") to which goodwill, property, plant and equipment and Intangible assets had been allocated with their respective value in use based on discounted cash flow forecasts to determine if any impairment loss should be recognized.</p> <p>The recoverable amount of CGUs, which is based on the higher of the value in use or fair value less costs to sell, has been derived from discounted cash flow models. These models use several key assumptions, including estimates of future sales volumes, and prices, operating costs, terminal value growth rates and the weighted-average cost of capital ("WACC").</p> <p>We identified this issue as a key audit matter because the carrying values of these assets are material to the consolidated financial statements and also because of the significant judgment required in determining the assumptions to be used to estimate the recoverable amount.</p>	<p>Our audit procedures to assess potential impairment of goodwill and other non-current assets included the following:</p> <ul style="list-style-type: none"> • Involving our own valuation specialist to assist in evaluating the appropriateness of discount rates applied, which included comparing the WACC with sector averages for the relevant markets in which the CGU's operate; • Evaluating the appropriateness of the assumptions applied to key inputs such as sales volumes and prices, operating costs, inflation and long-term growth rates, which included comparing these inputs with externally derived data as well as our own assessments based on our knowledge of the client and the industry; • Performing our own sensitivity analysis which included assessing the effect of reasonably possible reductions in growth rates and forecast cash flows to evaluate the impact on the currently estimated headroom for the CGUs; and • Evaluating the adequacy of the financial statement disclosures, including disclosures of key assumptions, judgments and sensitivities. <p>We found management's calculation methods and the assumptions reasonable.</p>

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with Turkish Financial Reporting Standards, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Responsibilities of auditors in an audit are as follows:

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with standards on auditing issued by the CMB and Standards on Auditing issued by POA. Misstatements can arise from fraud or error. They are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

Independent Auditor's Report



As part of an audit in accordance with the standards on auditing issued by the CMB and Standards on Auditing issued by POA, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control. Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

B) Other Legal and Regulatory Requirements

1) Pursuant to the fourth paragraph of Article 398 of Turkish Commercial Code ("TCC") no. 6102; Auditors' Report on System and Committee of Early Identification of Risks is presented to the Board of Directors of the Group on 12 February 2020.

2) Pursuant to the fourth paragraph of Article 402 of the TCC; no significant matter has come to our attention that causes us to believe that for the period 1 January – 31 December 2019, the Group's bookkeeping activities and consolidated financial statements are not in compliance with TCC and provisions of the Group's articles of association in relation to financial reporting.

3) Pursuant to the fourth paragraph of Article 402 of the TCC; the Board of Directors provided us the necessary explanations and required documents in connection with the audit.

KPMG Bağımsız Denetim ve Serbest Muhasebeci Mali Müşavirlik Anonim Şirketi
A member firm of KPMG International Cooperative

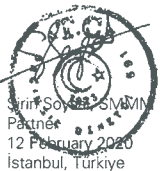


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Consolidated Statement of Financial Position

As at 31 December 2019

(Currency in thousands of Turkish Lira ("TL") unless otherwise stated, all other currencies are also disclosed in thousands)
(Convenience translation of a report and financial statements originally issued in Turkish)

	Notes	Current period Audited 31 December 2019	Prior period Audited 31 December 2018
Assets			
Current assets		12.077.205	10.936.213
Cash and cash equivalents	4	4.946.070	4.494.536
Trade receivables			
– Due from related parties	8	11.793	10.489
– Trade receivables from third parties	6	5.756.202	5.140.127
Other receivables			
– Other receivables from third parties	9	75.875	67.434
Derivative financial instruments	15	373.121	200.921
Inventories	10	252.042	248.852
Prepaid expenses	13	157.741	307.877
Current tax related assets		114.529	94.803
Other current assets	12	352.471	333.813
		12.039.844	10.898.852
Non-current assets or disposal groups classified as held for sale	17	37.361	37.361
Non-current assets		27.832.081	25.262.298
Financial investments	14	14.693	11.995
Trade receivables			
– Trade receivables from third parties	6	236.402	128.182
Other receivables			
– Other receivables from third parties	9	35.529	38.480
Derivative financial instruments	15	35.401	36.481
Right of use assets	2,7	1.365.525	-
Investment property	18	17.699	20.194
Property, plant and equipment	19	14.709.659	14.254.053
Intangible assets			
– Goodwill	16	44.944	44.944
– Other intangible assets	20	10.282.853	9.738.095
Prepaid expenses	13	12.555	71.927
Deferred tax assets	11	1.076.742	896.513
Other non-current assets		79	21.434
Total assets		39.909.286	36.198.511

The accompanying notes form an integral part of these consolidated financial statements.

Türk Telekomünikasyon Anonim Şirketi ve Bağlı Ortaklıkları
Consolidated Statement of Financial Position
As at 31 December 2019

(Currency in thousands of Turkish Lira ("TL") unless otherwise stated, all other currencies are also disclosed in thousands)
(Convenience translation of a report and financial statements originally issued in Turkish)

	Notes	Current period Audited 31 December 2019	Prior period Audited 31 December 2018
Liabilities			
Current liabilities		13.693.647	13.496.359
Financial liabilities			
- Bank loans	5	1.321.487	52.216
- Lease liabilities	5	13.421	-
Current portion of long term financial liabilities			
- Bank loans	5	4.674.762	4.106.293
- Lease liabilities	5	326.743	631
- Issued debt instruments	5	72.568	2.601.235
Trade payables			
- Due to related parties	8	87	110
- Trade payables to third parties	6	4.391.610	3.845.124
Employee benefit obligations	12	190.217	166.317
Other payables			
- Due to related parties	8	205.066	204.792
- Other payables to third parties	9	927.887	898.957
Derivative financial instruments	15	537.353	648.934
Contract liabilities	13		
- Contract liabilities from sale of goods and service contracts		372.984	331.150
Current tax liabilities	33	75.238	6.465
Current provisions			
- Current provisions for employee benefits	21	223.552	230.191
- Other current provisions	21	227.548	246.173
Other current liabilities	12	133.124	157.771
Non-current liabilities		16.772.786	15.248.549
Long term financial liabilities			
- Bank loans	5	7.762.066	10.882.470
- Lease liabilities	5	800.597	1.963
- Issued debt instruments	5	5.811.511	2.276.610
Other payables			
- Due to related parties	8	-	170.164
- Other payables to third parties	9	38.881	57.428
Derivative financial instruments	15	173.362	84.004
Contract liabilities			
- Contract liabilities from sale of goods and service contracts	13	637.851	537.281
Non-current provisions			
- Non-current provisions for employee benefits	21	1.044.645	907.172
- Other non-current provisions	21	8.329	8.167
Deferred tax liability	11	380.175	205.257
Other non-current liabilities	12	115.369	118.033
Equity		9.442.853	7.453.603
Paid-in share capital	22	3.500.000	3.500.000
Inflation adjustments to paid in capital	22	(239.752)	(239.752)
Share based payments (-)	22,23	9.528	9.528
Other comprehensive income/expense items not to be reclassified to profit or loss			
Gain/(losses) on revaluation and remeasurement			
- Gains/(losses) on remeasurements of defined benefit plans	22	(692.610)	(628.350)
- Increases/(decreases) in revaluation of property, plant and equipment	22	4.351.897	4.283.816
Gains/(losses) due to change in fair value of financial liability attributable to change in credit risk of liability	22	(132.819)	64.852
Other comprehensive income/expense items to be reclassified to profit or loss			
- Hedging reserves	22	(842.461)	(535.481)
- Gains/(losses) on change in value of time value of options	22	(321.854)	(351.007)
- Foreign currency translation reserve	22	471.382	417.238
Restricted reserves allocated from profits		2.355.969	2.355.969
Other reserves	22	(1.320.942)	(1.320.942)
Prior years profits or losses		(102.268)	1.288.993
Net profit/(loss) for the period		2.406.783	(1.391.261)
Total liabilities and equity		39.909.286	36.198.511

The accompanying notes form an integral part of these consolidated financial statements.

Consolidated Statement of Profit or Loss For the Year Ended 31 December 2019

(Currency in thousands of Turkish Lira ("TL") unless otherwise stated, all other currencies are also disclosed in thousands)
(Convenience translation of a report and financial statements originally issued in Turkish)

		Current Period Audited 1 January – 31 December 2019	Prior Period Audited 1 January – 31 December 2018
	Notes		
Sales	3,27	23.657.108	20.430.900
Cost of sales (-)	28	(12.298.492)	(11.249.445)
Gross profit		11.358.616	9.181.455
General administrative expenses (-)	28	(2.147.447)	(1.784.341)
Marketing, sales and distribution expenses (-)	28	(2.670.891)	(2.409.985)
Research and development expenses (-)	28	(166.491)	(147.779)
Other operating income	30	385.391	231.369
Other operating expense (-)	30	(510.759)	(492.474)
Operating profit		6.248.419	4.578.245
Impairment gain and reversal of impairment gain/(loss) determined in accordance with TFRS 9		(192.525)	(268.034)
Income from investing activities	31	214.111	130.288
Expense from investing activities (-)	31	(1.545)	(12.960)
Operating profit before financial expenses		6.268.460	4.427.539
Financial income	32	855.042	1.422.499
Financial expense (-)	32	(4.388.744)	(7.872.319)
Profit/(loss) before tax	3	2.734.758	(2.022.281)
Tax income/(expense)			
- Current tax expense	33	(205.975)	(20.480)
- Deferred tax (expense)/income	11,33	(122.000)	651.500
Profit/(loss) for the year		2.406.783	(1.391.261)
Earnings/(losses) per shares attributable to equity holders of the parent from (in full Kuruş)	22	0,6877	(0,3975)
Earnings/(losses) per diluted shares attributable to equity holders of the parent from (in full Kuruş)	22	0,6877	(0,3975)

The accompanying notes form an integral part of these consolidated financial statements.

Consolidated Statement of Other Comprehensive Income For the Year Ended 31 December 2019

(Currency in thousands of Turkish Lira ("TL") unless otherwise stated, all other currencies are also disclosed in thousands)
(Convenience translation of a report and financial statements originally issued in Turkish)

		Current Period Audited 1 January - 31 December 2019	Prior Period Audited 1 January - 31 December 2018
	Notes		
Profit/(loss) for the period		2.406.783	(1.391.261)
Other comprehensive income items not to be reclassified to profit/(loss):			
Items not to be reclassified to profit or loss			
Gain from revaluation of property, plant and equipments	19	(193.850)	4.430.008
Actuarial loss from employee benefits	21	76.021	4.758.000
Change in fair value of financial liability attributable to change in credit risk of liability		(79.715)	(126.172)
Deferred tax effect of other value increase funds not to be reclassified from OCI to PL		(247.089)	309.949
- Tax effect of actuarial loss from employee benefits	11		
- Tax effect of revaluation of property, plant and equipment	11	15.455	24.405
- Tax effect of change in fair value of financial liability attributable to change in credit risk of liability	11	(7.940)	(474.184)
Other comprehensive income items to be reclassified to profit or loss		49.418	(61.990)
Change in foreign currency translation differences		(223.683)	(388.618)
Cash flow hedges-effective portion of changes in fair value		54.144	198.318
Gains/(Losses) on hedges of net investments in foreign operations		(316.852)	(121.269)
Change in value of time value of options		(66.872)	(173.643)
Tax effect on other comprehensive income items to be reclassified to profit or loss		36.441	(438.759)
- Tax effect of cash flow hedges-effective portion of changes in fair value	11		
- Tax effect of hedge of net investment in a foreign operation		63.370	24.254
- Tax effect of hedge of time value of options		13.374	34.729
		(7.288)	87.752
Other comprehensive income, net of tax		(417.533)	4.041.390
Total comprehensive income/(expense)		1.989.250	2.650.129

The accompanying notes form an integral part of these consolidated financial statements.

Consolidated Statement of Changes in Equity For the Year Ended 31 December 2019

(Currency in thousands of Turkish Lira ("TL") unless otherwise stated, all other currencies are also disclosed in thousands)

(Convenience translation of a report and financial statements originally issued in Turkish)

					Other comprehensive income items not to be reclassified to profit or loss in subsequent periods		
					Gains/(losses) on revaluation and remeasurement		
	Paid-in share capital	Inflation adjustment to paid in capital	Share based payment reserve	Other gains/ (losses)	Gains/ (losses) on revaluation of property, plant and equipment	Actuarial loss arising from employee benefits	Gains/(losses) due to change in fair value of financial liability attributable to change in credit risk of liability
Balance at 1 January 2018	3.500.000	(239.752)	9.528	(1.320.942)	-	(526.583)	-
Adjustments in accounting policies (net of tax)	-	-	-	-	-	-	(183.107)
Adjusted balance at 1 January 2018	3.500.000	(239.752)	9.528	(1.320.942)	-	(526.583)	(183.107)
Transfers	-	-	-	-	-	-	-
Total comprehensive income	-	-	-	-	4.283.816	(101.767)	247.959
Profit for period	-	-	-	-	-	-	-
Other comprehensive income	-	-	-	-	4.283.816	(101.767)	247.959
Balance at 31 December 2018	3.500.000	(239.752)	9.528	(1.320.942)	4.283.816	(628.350)	64.852
Balance at 1 January 2019	3.500.000	(239.752)	9.528	(1.320.942)	4.283.816	(628.350)	64.852
Transfers	-	-	-	-	-	-	-
Total comprehensive income	-	-	-	-	68.081	(64.260)	(197.671)
Profit for period	-	-	-	-	-	-	-
Other comprehensive income	-	-	-	-	68.081	(64.260)	(197.671)
Balance at 31 December 2019	3.500.000	(239.752)	9.528	(1.320.942)	4.351.897	(692.610)	(132.819)

	Other comprehensive income items to be reclassified to profit or loss in subsequent periods					Retained earnings/(losses)		
	Reserve of gains/(losses) on hedging							
	Gains/(losses) on hedges of net investment in foreign operations	Cash flow hedge reserve	Gains/(losses) on change in value of time value of options	Foreign currency translation reserve	Restricted reserves allocated from profits	Retained earnings/ (losses)	Net profit/ (loss) for the period	Equity
	(211.185)	(88.367)	-	218.920	2.355.969	(278.033)	1.135.532	4.555.087
	-	-	-	-	-	431.494	-	248.387
	(211.185)	(88.367)	-	218.920	2.355.969	153.461	1.135.532	4.803.474
	-	-	-	-	-	1.135.532	(1.135.532)	-
	(138.914)	(97.015)	(351.007)	198.318	-	-	(1.391.261)	2.650.129
	-	-	-	-	-	-	(1.391.261)	(1.391.261)
	(138.914)	(97.015)	(351.007)	198.318	-	-	-	4.041.390
	(350.099)	(185.382)	(351.007)	417.238	2.355.969	1.288.993	(1.391.261)	7.453.603
	(350.099)	(185.382)	(351.007)	417.238	2.355.969	1.288.993	(1.391.261)	7.453.603
	-	-	-	-	-	(1.391.261)	1.391.261	-
	(53.498)	(253.482)	29.153	54.144	-	-	2.406.783	1.989.250
	-	-	-	-	-	-	2.406.783	2.406.783
	(53.498)	(253.482)	29.153	54.144	-	-	-	(417.533)
	(403.597)	(438.864)	(321.854)	471.382	2.355.969	(102.268)	2.406.783	9.442.853

Consolidated Statement of Cash Flows

For the Year Ended 31 December 2019

(Currency in thousands of Turkish Lira ("TL") unless otherwise stated, all other currencies are also disclosed in thousands)
(Convenience translation of a report and financial statements originally issued in Turkish)

		Current Period Audited 1 January - 31 December 2019	Prior Period Audited 1 January - 31 December 2018
	Notes		
Net profit/(loss) for the period		2.406.783	(1.391.261)
Adjustments to reconcile net profit to cash provided by operating activities:			
Adjustments for depreciation and amortisation expense	29	4.715.985	3.717.763
Adjustments for impairment loss/(reversal of impairment loss)			
- Adjustments for impairment loss of receivables		253.964	394.175
- Adjustments for impairment loss of inventories		(3.867)	5.483
- Adjustments for impairment loss of property, plant and equipment	29	29.981	17.431
- Adjustments for other impairment loss		(63.642)	(126.440)
Adjustments for provisions			
- Adjustments for provisions related with employee benefits	21	474.766	356.790
- Adjustments for reversal of lawsuit and/or penalty provisions	21	51.597	82.665
- Adjustments for other provisions	21	162	132
Adjustments for interest expenses and income			
- Adjustments for interest income		(360.169)	(390.996)
- Adjustments for interest expense		2.280.196	1.040.703
- Deferred financial expenses from credit purchases		55.761	49.026
Adjustments for unrealised foreign exchange losses		1.612.395	5.760.962
Adjustments for fair value losses/(gain)			
- Adjustments for fair value loss on derivative financial instruments	32	308.506	439.738
- Adjustments for gains on change in fair value of issued debt instruments		141.109	(131.538)
Adjustments for tax expenses	33	327.975	(631.020)
Adjustments for gains arising from sale of tangible assets	31	(212.566)	(117.328)
Other adjustments for which cash effects are investing or financing cash flow		72.511	115.735
Other adjustments for non-cash items	25	(117.704)	(88.715)
Operating profit before working capital changes		11.973.743	9.103.305
Changes in working capital:			
Adjustments for increase in trade receivable		(983.812)	(781.840)
Adjustments for decrease/(increase) in inventories		677	(50.357)
Adjustments for increase/(decrease) in trade payable		533.596	(339.332)
Increase in other assets related with operations		(41.742)	117.714
Increase in other payables related with operations		68.477	396.888
Cash flow from operating activities:			
Interest received		150.780	120.449
Payments related with employee benefits	21	(423.724)	(323.680)
Payments related with other provisions	21	(6.404)	(370.588)
Income taxes paid		(156.928)	(99.278)
Other inflows/(outflows) of cash	25	68.032	(184.346)
Net cash from operating activities		11.182.695	7.588.935
Investing activities			
Financial assets	14	(2.698)	(155)
Payments related to liabilities arising from acquisition of non-controlling interests		(205.000)	(205.000)
Proceeds from sale of property, plant, equipment and intangible assets		346.579	144.511
Purchases of property, plant, equipment and intangible assets		(4.945.543)	(4.065.306)
Net cash used in investing activities		(4.806.662)	(4.125.950)
Cash flows from financing activities			
Proceed from borrowings			
- Proceeds from loans		1.519.235	831.049
- Proceeds from issued debt instruments		2.623.982	-
Repayments of borrowings			
- Loan repayments		(4.523.608)	(3.222.944)
- Payment of issue of debt instruments		(3.059.616)	-
Payments of lease liabilities, net	25	(788.732)	(826)
Cash inflows/(outflows) from derivative instruments, net	25	220.164	(1.572)
Interest paid		(2.029.859)	(1.062.115)
Interest received		209.389	270.547
Other cash outflows, net	25	(72.471)	(115.735)
Net cash used in financing activities		(5.901.516)	(3.301.596)
NET INCREASE/(DECREASE) IN CASH AND CASH EQUIVALENTS BEFORE CURRENCY TRANSLATION DIFFERENCES		474.517	161.389
EFFECT OF CHANGES IN FOREIGN EXCHANGE RATES IN CASH AND CASH EQUIVALENTS		45.049	48.599
CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE PERIOD		3.898.092	3.688.104
CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD	4	4.417.658	3.898.092

The accompanying notes form an integral part of these consolidated financial statements.

Notes to the Consolidated Financial Statements as at and For the Year Ended 31 December 2019

(Currency in thousands of Turkish Lira ("TL") unless otherwise stated, all other currencies are also disclosed in thousands)
(Convenience translation of a report and financial statements originally issued in Turkish)

1. REPORTING ENTITY

Türk Telekomünikasyon Anonim Şirketi ("Türk Telekom" or "the Company") is a joint stock company incorporated in Turkey. The Company has its history in the Posthane - i Amirane (Department of Post Office) which was originally established as a Ministry on 23 October 1840. On 4 February 1924, under the Telephone and Telegraph, the authorization to install and operate telephone networks throughout Turkey was given to the General Directorate of Post, Telegraph and Telephone ("PTT"). The Company was founded on 24 April 1995 as a result of the split of the telecommunication and postal services formerly carried out by the PTT. All of the personnel, assets and obligations of the PTT pertaining to telecommunication services were transferred to the Company, the shares of which were fully owned by the Republic of Turkey Ministry of Treasury and Finance ("the Treasury").

On 24 August 2005, Oger Telekomünikasyon A.Ş. ("OTAŞ"), entered into a Share Sale Agreement with the Turkey's Privatization Authority for the purchase of a 55% stake in the Company. A Shareholders Agreement and a Share Pledge Agreement for the block sale of the Company were signed on 14 November 2005 and then after, OTAŞ became the parent company of the Company.

Out of TL 3.500.000 nominal amount of capital, 15% of the Company's shares owned by the Treasury corresponding to a nominal amount of TL 525.000 have been issued to the public through an initial public offering with the permission of Directorate of Istanbul Stock Exchange on 15 May 2008. Since then Company shares are traded in Borsa İstanbul with the name of TTKOM.

As per the regulatory disclosure made by Türk Telekom on 15 August 2018, within the scope of the process, which is carried out in relation to takeover of OTAŞ's 55% shares in the Company, Türk Telekom, by a special purpose vehicle ("SPV"), which the creditor banks of OTAŞ will be shareholders, a notification was made to the Company by some of the creditor banks.

Transfer of the Group A shares, which constitutes 55% of the Company's capital, to the afore-mentioned SPV, LYY Telekomünikasyon A.Ş. ("LYY") as of 21 December 2018 has been notified to the Company in accordance with Article 198 of the Turkish Commercial Code. Pursuant to Article 499 of the Turkish Commercial Code, LYY has been registered as a new shareholder in the Company's shareholders' ledger.

As at 31 December 2019, the parent company and controlling party of the Company is LYY Telekomünikasyon A.Ş.

A concession agreement ("the Concession Agreement") was signed by the Company and Turkish Telecommunication Authority (now named the Information and Communication Technologies Authority ("ICTA") as at 14 November 2005. The Concession Agreement covers the provision of all kinds of telecommunication services, establishment of necessary telecommunications facilities and the use of such facilities by other licensed operators and the marketing and supply of telecommunication services for 25 years starting from 28 February 2001. The Concession Agreement will terminate on 28 February 2026 and in the conditions where the Concession Agreement is expired or not renewed, the Company shall transfer all equipment that affects the operation of its systems in full working order and the real estates in its use where these equipment are deployed to the ICTA or to an institution designated by the ICTA.

The Concession Agreement will expire at the end of its time period. However, the Company may apply to the ICTA and request for extension thereof no later than 1 year prior to the expiry of the duration of the Concession Agreement. The ICTA may decide to renew the Concession Agreement at the latest before 180 days of the date of expiration taking into account new conditions and within the scope of the legislation and the regulations of the ICTA.

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(Currency in thousands of Turkish Lira ("TL") unless otherwise stated, all other currencies are also disclosed in thousands)
(Convenience translation of a report and financial statements originally issued in Turkish)

1. REPORTING ENTITY (CONTINUED)

The details of the Company's subsidiaries as at 31 December 2019 and 31 December 2018 are as follows:

Name of Subsidiary	Place of incorporation and operation	Principal activity	Functional Currency	Effective ownership of the Company (%)	
				31 December 2019	31 December 2018
TTNet Anonim Şirketi ("TTNet")	Turkey	Internet service provider	Turkish Lira	100	100
TT Mobil İletişim Hizmetleri A.Ş. ("TT Mobil")	Turkey	GSM operator	Turkish Lira	100	100
Argela Yazılım ve Bilişim Teknolojileri Sanayi ve Ticaret Anonim Şirketi ("Argela")	Turkey	Telecommunication solutions	Turkish Lira	100	100
Innova Bilişim Çözümleri Anonim Şirketi ("Innova")	Turkey	Telecommunication solutions	Turkish Lira	100	100
Assist Rehberlik ve Müşteri Hizmetleri Anonim Şirketi ("AssistTT")	Turkey	Call center and customer relations	Turkish Lira	100	100
Sebit Eğitim ve Bilgi Teknolojileri A.Ş. ("Sebit")	Turkey	Web Based Learning	Turkish Lira	100	100
NETSIA Inc.	USA	Telecommunications solutions	U.S. Dollar	100	100
Sebit LLC	USA	Web based learning	U.S. Dollar	100	100
TT International Holding B.V. ("TT International") ⁽¹⁾	Netherlands	Holding company	Euro	100	100
Türk Telekom International AT GmbH ("TTINT Austria") ⁽¹⁾	Austria	Internet/data services, infrastructure and wholesale voice services provider	Euro	100	100
Türk Telekom International Hu Kft (TTINT Hungary) ⁽¹⁾	Hungary	Internet/data services, infrastructure and wholesale voice services provider	Euro	100	100
S.C. Euroweb Romania S.A. ("TTINT Romania") ⁽¹⁾	Romania	Internet/data services, infrastructure and wholesale voice services provider	Euro	100	100
Türk Telekom International Bulgaria EOOD ("TTINT Bulgaria") ⁽¹⁾	Bulgaria	Internet/data services, infrastructure and wholesale voice services provider	Euro	100	100
Türk Telekom International CZ s.r.o. ("TTINT Czech Republic") ⁽¹⁾	Czech Republic	Internet/data services, infrastructure and wholesale voice services provider	Euro	100	100
Türk Telekom International SRB d.o.o. ("TTINT Serbia") ⁽¹⁾	Serbia	Internet/data services, infrastructure and wholesale voice services provider	Euro	100	100
TTINT Telekomunikacije d.o.o. ("TTINT Slovenia") ⁽¹⁾	Slovenia	Internet/data services, infrastructure and wholesale voice services provider	Euro	100	100
Türk Telekom International SK s.r.o. ("TTINT Slovakia") ⁽¹⁾	Slovakia	Internet/data services, infrastructure and wholesale voice services provider	Euro	100	100
TT International Telekomünikasyon Sanayi ve Ticaret Limited Şirketi ("TTINT Turkey") ⁽¹⁾	Turkey	Internet/data services, infrastructure and wholesale voice services provider	Euro	100	100
Türk Telekom International UA LLC ("TTINT Ukraine") ⁽¹⁾	Ukraine	Internet/data services, infrastructure and wholesale voice services provider	Euro	100	100
Türk Telekom International Italy S.R.L. (TTINT Italy) ⁽¹⁾	Italy	Internet/data services, infrastructure and wholesale voice services provider	Euro	100	100
TTINT International MK DOOEL ("TTINT Macedonia") ⁽¹⁾	Macedonia	Internet/data services, infrastructure and wholesale voice services provider	Euro	100	100
Türk Telekom International RU LLC ("TTINT Russia") ⁽¹⁾	Russia	Internet/data services, infrastructure and wholesale voice services provider	Euro	100	100
Türk Telekomünikasyon Euro GmbH. ("TT Euro") ⁽¹⁾	Germany	Mobil service marketing	Euro	100	100
Türk Telekom International d.o.o. ⁽¹⁾	Croatia	Internet/data services, infrastructure and wholesale voice services provider	Euro	100	100
Türk Telekom International HK Limited ⁽¹⁾	Hong Kong	Internet/data services, infrastructure and wholesale voice services provider	H.K. Dollar	100	100
Net Ekran TV ve Medya Hiz. A.Ş. ("Net Ekran")	Turkey	Television and radio broadcasting	Turkish Lira	100	100
TTES Elektrik Tedarik Satış A.Ş. ("TTES")	Turkey	Electrical energy trading	Turkish Lira	100	100
TT Ödeme Hizmetleri A.Ş. ⁽¹⁾	Turkey	Mobile finance	Turkish Lira	100	100
TT Euro Belgium S.A. ⁽¹⁾	Belgium	Mobile service marketing	Euro	-	100
Net Ekran1 TV ve Medya Hiz. A.Ş. ("Net Ekran1")	Turkey	Television and radio broadcasting	Turkish Lira	100	100
Net Ekran2 TV ve Medya Hiz. A.Ş. ("Net Ekran2")	Turkey	Television and radio broadcasting	Turkish Lira	100	100
Net Ekran3 TV ve Medya Hiz. A.Ş. ("Net Ekran3")	Turkey	Television and radio broadcasting	Turkish Lira	100	100
Net Ekran4 TV ve Medya Hiz. A.Ş. ("Net Ekran4")	Turkey	Television and radio broadcasting	Turkish Lira	100	100
Net Ekran5 TV ve Medya Hiz. A.Ş. ("Net Ekran5")	Turkey	Television and radio broadcasting	Turkish Lira	100	100
Net Ekran6 TV ve Medya Hiz. A.Ş. ("Net Ekran6")	Turkey	Television and radio broadcasting	Turkish Lira	100	100
Net Ekran7 TV ve Medya Hiz. A.Ş. ("Net Ekran7")	Turkey	Television and radio broadcasting	Turkish Lira	100	100
Net Ekran8 TV ve Medya Hiz. A.Ş. ("Net Ekran8")	Turkey	Television and radio broadcasting	Turkish Lira	100	100
Net Ekran9 TV ve Medya Hiz. A.Ş. ("Net Ekran9")	Turkey	Television and radio broadcasting	Turkish Lira	100	100
Net Ekran10 TV ve Medya Hiz. A.Ş. ("Net Ekran10")	Turkey	Television and radio broadcasting	Turkish Lira	100	100
Net Ekran11 TV ve Medya Hiz. A.Ş. ("Net Ekran11")	Turkey	Television and radio broadcasting	Turkish Lira	100	100
Net Ekran12 TV ve Medya Hiz. A.Ş. ("Net Ekran12")	Turkey	Television and radio broadcasting	Turkish Lira	100	100
Net Ekran13 TV ve Medya Hiz. A.Ş. ("Net Ekran13")	Turkey	Television and radio broadcasting	Turkish Lira	100	100
Net Ekran14 TV ve Medya Hiz. A.Ş. ("Net Ekran14")	Turkey	Television and radio broadcasting	Turkish Lira	100	100
Net Ekran15 TV ve Medya Hiz. A.Ş. ("Net Ekran15")	Turkey	Television and radio broadcasting	Turkish Lira	100	100
Net Ekran16 TV ve Medya Hiz. A.Ş. ("Net Ekran16")	Turkey	Television and radio broadcasting	Turkish Lira	100	100
11818 Rehberlik ve Müşteri Hizmetleri A.Ş. ("11818")	Turkey	Call center and customer relations	Turkish Lira	100	100
TT Satış ve Dağıtım Hizmetleri Anonim Şirketi	Turkey	Selling and Distribution Services	Turkish Lira	100	100
TT Ventures Proje Geliştirme A.Ş.	Turkey	Corporate Venture Capital	Turkish Lira	100	100

⁽¹⁾ Hereinafter, will be referred as TTINT Group.

⁽¹⁾ The title of TT Ödeme Hizmetleri A.Ş. was announced on 25 March 2019 by TT Ödeme ve Elektronik Para Hizmetleri A.Ş.

⁽¹⁾ TT Euro Belgium S.A. was dissolved on 6 February 2019.

Notes to the Consolidated Financial Statements as at and For the Year Ended 31 December 2019

(Currency in thousands of Turkish Lira ("TL") unless otherwise stated, all other currencies are also disclosed in thousands)
(Convenience translation of a report and financial statements originally issued in Turkish)

1. REPORTING ENTITY (CONTINUED)

The details of the Company's joint operation as at 31 December 2019 and 31 December 2018 are as follows:

Name of Joint Operation	Place of incorporation and operation	Principal activity	Functional Currency	Effective ownership of the Company (%)	
				31 December 2019	31 December 2018
TT Mobil-Vodafone Evrensel İş Ortaklığı	Turkey	Internet/data services, infrastructure and wholesale voice services provider	Turkish Lira	51	51

Hereinafter, Türk Telekom and its subsidiaries and joint operations together will be referred to as "the Group".

The Group's principal activities include the provision of local, national, international and mobile telecommunication services, internet products and services, as well as call center and customer relationship management, technology and information management.

The Company's registered office address is Turgut Özal Bulvarı, 06103 Aydınlıkevler, Ankara.

The number of personnel subject to collective agreement as at 31 December 2019 is 10.211 (31 December 2018: 10.798) and the number of personnel not subject to collective agreement as at 31 December 2019 is 21.969 (31 December 2018: 22.619). The total number of personnel as at 31 December 2019 and 31 December 2018 are 32.180 and 33.417, respectively.

2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS

2.1 Basis of presentation of the consolidated financial statements

a) Statement of compliance with TAS

The accompanying consolidated financial statements are prepared in accordance with Turkish Financial Reporting Standards ("TFRS") published by Public Oversight Accounting and Auditing Standards Authority ("POA") as set out in the Communiqué numbered II-14.1 "Communiqué on Principles of Financial Reporting in Capital Markets" published in the Official Gazette numbered 28676 on 13 June 2013. TFRSs consist of standards and interpretations which are published as Turkish Accounting Standards ("TAS"), Turkish Financial Reporting Standards, interpretations of TAS and interpretations of TFRS.

The consolidated financial statements are presented in accordance with the TFRS Taxonomy developed based on the Illustrative Financial Statements and User Guide published in the Official Gazette numbered 28676 on 7 June 2019.

Approval of the financial statements

The consolidated financial statements are approved by the Company's Board of Directors on 12 February 2020. The General Assembly of the Company has the right to amend and relevant regulatory bodies have the right to request the amendment of these consolidated financial statements.

b) Correction of financial statements during the hyperinflationary periods

CMB, with its resolution dated 17 March 2005, announced that all publicly traded entities operating in Turkey was not obliged to apply inflationary accounting effective from 1 January 2005. In accordance with this resolution, TAS 29 "Financial Reporting in Hyperinflationary Economies" is not applied to the consolidated financial statements since 1 January 2005.

c) Basis of measurement

The consolidated financial statements have been prepared on the historical cost basis except for the property, plant and equipment other than lands and investment property acquisitions prior to 1 January 2000 for which the deemed cost method was applied in accordance with TAS 29 "Financial Reporting in Hyperinflationary Economies", lands, derivative financial instruments, issued debt instruments which have been measured at fair value through profit or loss. Investment properties and tangible assets other than lands which are recognized with deemed cost method are valued with fair values as of 1 January 2000, lands accounted as property, plant and equipment, derivative financial instruments and issued debt instruments which have been measured at fair value through profit or loss, are valued with fair values as of balance sheet date. The methods used to measure the fair values are discussed further in Note 2.4 (t).

d) Functional and presentation currency

Excluding the subsidiaries incorporated outside of Turkey, functional currency of all entities' included in consolidation is Turkish Lira ("TL") and they maintain their books of account in TL in accordance with Turkish Commercial Code, Tax Legislation and the Uniform Chart of Accounts issued by the Ministry of Finance.

Functional currencies of the subsidiaries and Company's joint operation are presented in Note 1.

The consolidated financial statements are based on the statutory records, with adjustments and reclassifications for the purpose of fair presentation in accordance with the Turkish Accounting Standards published by the POA and are presented in TL.

Notes to the Consolidated Financial Statements as at and For the Year Ended 31 December 2019

(Currency in thousands of Turkish Lira ("TL") unless otherwise stated, all other currencies are also disclosed in thousands)
(Convenience translation of a report and financial statements originally issued in Turkish)

2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.1 Basis of presentation of the consolidated financial statements (continued)

d) Functional and presentation currency (continued)

Additional paragraph for convenience translation to English:

The accounting principles described in Note 2 (defined as Turkish Accounting Standards/Turkish Financial Reporting Standards) to the accompanying consolidated financial statements differ from International Financial Reporting Standards ("IFRS") issued by the International Accounting Standards Board ("IASB") with respect to the application of inflation accounting, classification of some income statement items and also for certain disclosures requirement of the POA.

2.2 Basis of consolidation

The accompanying financial statements include the accounts of the parent company Türk Telekom; its subsidiaries and joint operation. The financial statements of the entities included in the consolidation have been prepared as at the date of the consolidated financial statements.

a) Subsidiaries

As at 31 December 2019, the consolidated financial statements include the financial results of Türk Telekom and its subsidiaries that the Group has control over its financial and operational policies which are listed at Note 1.

Control is normally evidenced when the Company controls an investee if and only if the Company has all the following; a) power over the investee b) exposure, or rights, to variable returns from its involvement in the investee and c) the ability to use its power over the investee to affect the amount of company's returns. The results of subsidiaries acquired are included in the consolidated statements of income from the effective date of acquisition as appropriate.

When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies in line with those used by the Group. The consolidated financial statements are prepared using uniform accounting policies for similar transactions and events and are prepared with the same chart of accounts of the Company.

b) Business combinations

From 1 January 2010 the Group has applied revised TFRS 3 "Business Combinations" standard. The change in accounting policy has been applied prospectively and had no effect on business combinations completed during prior periods.

Business combinations are accounted for using the acquisition method as at the acquisition date, which is the date on which control is transferred to the Group. The cost of an acquisition is measured as the aggregate of the consideration transferred, measured at acquisition date fair value and the amount of any non-controlling interest in the acquirer.

The consideration transferred is measured at fair value, which is calculated as the sum of the acquisition-date fair values of the assets transferred by the Group, the liabilities incurred by the Group to former owners of the entity and the equity interests issued by the Group. When the agreement with the seller includes a clause that the consideration transferred could be adjusted for future events, the acquisition-date fair value of this contingent consideration is included in the cost of the acquisition. All transaction costs incurred by the Group have been recognized in general administrative expenses.

For each business combination, the Group elects whether it measures the non-controlling interest in the acquirer either at fair value or at the proportionate share of the acquirer's identifiable net assets.

When the Group acquires a business, it assesses the financial assets and liabilities assumed for appropriate classification and designation in accordance with the contractual terms, economic circumstances and pertinent conditions as at the acquisition date. This includes the separation of embedded derivatives in host contracts by the acquirer.

Acquisition method requires allocation of the acquisition cost to the assets acquired and liabilities assumed at their fair values on the date of acquisition. Acquired assets and liabilities and contingent liabilities assumed according to TFRS 3 are recognized at fair values on the date of the acquisition. Acquired company is consolidated starting from the date of acquisition.

If the fair values of the acquired identifiable assets, liabilities and contingent liabilities or cost of the acquisition are based on provisional assessment as at the balance sheet date, the Group made provisional accounting. Temporarily determined business combination accounting has to be completed within twelve months following the combination date and adjustment entries have to be made beginning from the combination date.

c) Transactions eliminated on consolidation

Intra-group balances and transactions, and any unrealized income and expenses arising from intra-group transactions, are eliminated in preparing the consolidated financial statements. Unrealized gains arising from transactions with associates are eliminated against the investment to the extent of the Group's interest in the investee. Unrealized losses are eliminated in the same way as unrealized gains, but only to the extent that there is no evidence of impairment.

Notes to the Consolidated Financial Statements as at and For the Year Ended 31 December 2019

(Currency in thousands of Turkish Lira ("TL") unless otherwise stated, all other currencies are also disclosed in thousands)
(Convenience translation of a report and financial statements originally issued in Turkish)

2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.2 Basis of consolidation (continued)

d) Foreign currency

i) Foreign currency transactions

Transactions in foreign currencies are translated to the functional currencies of the Group entities at the exchange rates ruling at the date of the transactions. Monetary assets and liabilities denominated in foreign currencies at reporting date are translated to the functional currency at the exchange rate ruling at the date. Foreign currency differences arising on translation of foreign currency transactions are recognized in the income statement, except for differences arising on qualifying cash flow hedges to the extent the hedge is effective, which are recognized in other comprehensive income.

Non-monetary assets and liabilities denominated in foreign currencies that are measured at fair value are retranslated to the functional currency at the exchange rate at the date that the fair value was determined. Non-monetary items in a foreign currency that are measured based on historical cost are translated using the exchange rate at the date of the transaction.

ii) Foreign operations

The assets and liabilities of foreign operations, including goodwill and fair value adjustments arising on acquisition, are translated to reporting currency at exchange rates at the reporting date. The income and expenses of foreign operations are translated to reporting currency at average exchange rates in the related periods.

Foreign currency differences are recognized in other comprehensive income, and presented in the foreign currency translation reserve (translation reserve) in equity.

The Group entities use USD, Euro or TL, as functional currency since these currencies are used to a significant extent in, or have a significant impact on, the operations of the related Group entities and reflect the economic substances of the underlying events and circumstances relevant to these entities. All currencies other than the functional currency selected for measuring items in the financial statements are treated as foreign currencies. Accordingly, transactions and balances not already measured in the functional currency have been re-measured to the related functional currencies. The Group uses TL as the reporting currency.

The financial statements of subsidiaries that report in the currency of an economy formerly accepted as hyperinflationary (Turkey) are restated to the unit of currency effective at the reporting date until 1 January 2005. As stated above, with the resolution dated 17 March 2005 to end the hyperinflation accounting for the periods starting after 31 December 2004, TL is not assessed as a currency of a hyperinflationary economy effective from 1 January 2005.

The foreign currency exchange rates as of the related periods are as follows:

	Average		Period end	
	31 December 2019	31 December 2018	31 December 2019	31 December 2018
Euro/TL	6,3480	5,6789	6,6506	6,0280
USD/TL	5,6711	4,8301	5,9402	5,2609

iii) Hedge of net investment in a foreign operation

The Company acquires foreign currency bank loans in order to hedge its net investment in a foreign operation. Foreign exchange gain and/or loss resulting from the subsidiary's net investment portion of this loan is reclassified to other comprehensive income. Foreign exchange gain and/or loss resulting from the subsidiary's net investment portion of this loan reclassified to other comprehensive income will be transferred to profit and loss in case of disposal. Tax effects of foreign exchange gain and/or loss resulting from the subsidiary's net investment portion of this loan is recognized under other comprehensive income as well.

2.3 Change in accounting policy

Except for the changes below, the accounting policies applied in these consolidated financial statements are the same as those applied in the Group's last annual consolidated financial statements.

TFRS 16 Leases

The Group has initially adopted TFRS 16 Leases from 1 January 2019. A number of other new standards are effective from 1 January 2019 but they do not have a material effect on the Group's consolidated financial statements.

TFRS 16 introduced a single, on-balance sheet accounting model for lessees. As a result, the Group, as a lessee, has recognised right-of-use assets representing its rights to use the underlying assets and lease liabilities representing its obligation to make lease payments. Lessor accounting remains similar to previous accounting policies.

The Group adopted TFRS 16 using the modified retrospective method of adoption with the date of initial application of 1 January 2019. The details of the changes in accounting policies are disclosed below.

Notes to the Consolidated Financial Statements as at and For the Year Ended 31 December 2019

(Currency in thousands of Turkish Lira ("TL") unless otherwise stated, all other currencies are also disclosed in thousands)
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2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.3 Change in accounting policy (continued)

TFRS 16 Leases (continued)

a) Definition of a lease

Previously, the Group determined at contract inception whether an arrangement is or contains a lease under TFRS Interpretation 4 "Determining Whether an Arrangement contains a Lease". Under TFRS 16, the Group assesses whether a contract is or contains a lease based on the definition of a lease. Under TFRS 16, a contract is, or contains, a lease if the contract conveys a right to control the use of an identified asset for a period of time in exchange for consideration.

On transition to TFRS 16, the Group elected to apply the practical expedient to grandfather the assessment of which transactions are leases. It applied TFRS 16 only to contracts that were previously identified as leases. Contracts that were not identified as leases under TAS 17 and TFRS Interpretation 4 were not reassessed for whether there is a lease. Therefore, the definition of a lease under TFRS 16 was applied only to contracts entered into or changed on or after 1 January 2019.

b) As a lessee

The Group has lease contracts for various items of buildings, site, telecommunication infrastructure, machinery and vehicles.

As a lessee, the Group previously classified leases as operating or finance leases based on its assessment of whether the lease transferred significantly all of the risks and rewards incidental to ownership of the underlying asset to the Group. Under TFRS 16, the Group recognises right-of-use assets and lease liabilities for most leases - i.e. these leases are on-balance sheet.

However, the Group has elected not to recognise right-of-use assets and lease liabilities for some leases of low-value assets. The Group recognises the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

The Group has presented the right-of-use assets in a separate line in the consolidated statement of financial position as "right of use assets".

The carrying amounts of right-of-use assets as of 1 January 2019 and 31 December 2019 are as below:

	Site Rent	Building	Vehicles	Other	Total
Balance at 1 January 2019	925.815	230.401	88.834	72.857	1.317.907
Balance at 31 December 2019	910.710	198.010	178.155	78.650	1.365.525

The Group presents lease liabilities in "current and non-current financial liabilities" in the consolidated statement of financial position.

At transition, lease liabilities were measured at the present value of the remaining lease payments, discounted at the Group's incremental borrowing rate as at 1 January 2019. The right-of-use assets for most leases were recognised based on the amount equal to the lease liabilities, adjusted for any related prepaid and accrued lease payments previously recognised.

The Group used the following practical expedients when applying TFRS 16 to leases previously classified as operating leases under TAS 17.

- Applied a single discount rate to a portfolio of leases with similar characteristics.
- Excluded initial direct costs from measuring the right-of-use asset at the date of initial application.
- Used hindsight when determining the lease term if the contract contains options to extend or terminate the lease.

For leases that were classified as finance leases under TAS 17, the carrying amount of the right-of-use asset and the lease liability at 1 January 2019 are determined at the carrying amount of the lease asset and lease liability under TAS 17 immediately before that date.

c) As a lessor

The Group, classifies each lease as operational lease or finance lease. A lease was classified as a finance lease if it transferred substantially all of the risks and rewards incidental to ownership of the leased asset to the Group; otherwise it was classified as an operating lease.

The Group is not required to make any adjustments on transition to TFRS 16 for leases in which it acts as a lessor. The Group applied TFRS 15 "Revenue from Contracts with Customers" to allocate consideration in the contract to each lease and non-lease component.

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2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.3 Change in accounting policy (continued)

IFRS 16 Leases (continued)

d) Impacts on the consolidated financial statements

The impact on transition to IFRS 16 is summarised below:

	Impact of adopting IFRS 16 at 1 January 2019
Right-of-use asset	1.317.907
Prepaid expenses	(268.196)
Total assets	1.049.711
Lease liabilities	1.049.711
Total liabilities	1.049.711

As a result of initially applying IFRS 16, in relation to the leases that were previously classified as operating leases, the Group recognised TL 1.365.525 of right of use assets and TL 1.138.494 of lease liabilities as at 31 December 2019.

Also in relation to those leases under IFRS 16, the Group has recognised depreciation and interest costs, instead of operating lease expense. During the twelve month ended 31 December 2019, the Group recognised TL 628.220 of depreciation charges and TL 199.700 of financial expense from these leases.

The reclassifications in the consolidated financial statements that are made as at 31 December 2018

Advances received amounting to TL 132.261 as of 31 December 2018 which were previously presented in short term deferred revenue in consolidated financial statements, are reclassified in other current liabilities, advances received amounting to TL 118.033 which were previously presented in long term deferred revenue in consolidated financial statements, are reclassified in other non-current liabilities.

2.4 Summary of significant accounting policies

a) Financial instruments

i. Recognition and initial measurement

Trade receivables are initially recognized when they are originated. All other financial assets and financial liabilities are initially recognized when the Group becomes a party to the contractual provisions of the instrument.

A financial asset (unless it is a trade receivable without a significant financing component) or financial liability is initially measured at fair value plus, for an item not at FVTPL, transaction costs that are directly attributable to its acquisition or issue. A trade receivable without a significant financing component is initially measured at the transaction price.

ii. Classification and subsequent measurement

Financial assets

On initial recognition, a financial asset is classified as measured at: amortized cost, FVOCI - equity investment, or FVTPL.

Financial assets are not reclassified subsequent to their initial recognition unless the Group changes its business model for managing financial assets in which case all affected financial assets are reclassified on the first day of the first reporting period following the change in the business model.

A financial asset is measured at amortized cost if it meets both of the following conditions and is not designated as at FVTPL:

- it is held within a business model whose objective is to hold assets to collect contractual cash flows; and
- its contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

On initial recognition of an equity investment that is not held for trading, the Group may irrevocably elect to present subsequent changes in the investment's fair value in other comprehensive income. This election is made on an investment-by-investment basis. The Group holds 6,84% of shares of Cetel as equity investment and has elected to present changes in fair value of Cetel in other comprehensive income. Cost of Cetel is used as a measure for its fair value since management has insufficient more recent information to measure fair value.

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2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.4 Significant accounting policies (continued)

a) Financial instruments (continued)

ii. Classification and subsequent measurement (continued)

Financial assets (continued)

All financial assets not classified as measured at amortized cost or FVOCI as described above are measured at FVTPL. This includes all derivative financial assets (Note 15) and equity investments measured at FVTPL.

On initial recognition, the Group may irrevocably designate a financial asset that otherwise meets the requirements to be measured at amortized cost or at FVOCI as at FVTPL if doing so eliminates or significantly reduces an accounting mismatch that would otherwise arise.

Financial assets: Business model assessment

The Group makes an assessment of the objective of the business model in which a financial asset is held at a portfolio level because this best reflects the way the business is managed and information is provided to management. The information considered includes:

- the stated policies and objectives for the portfolio and the operation of those policies in practice. These include whether management's strategy focuses on earning contractual interest income, maintaining a particular interest rate profile, matching the duration of the financial assets to the duration of any related liabilities or expected cash outflows or realizing cash flows through the sale of the assets;
- how the performance of the portfolio is evaluated and reported to the Group's management;
- the risks that affect the performance of the business model (and the financial assets held within that business model) and how those risks are managed;
- how managers of the business are compensated - e.g. whether compensation is based on the fair value of the assets managed or the contractual cash flows collected; and
- the frequency, volume and timing of sales of financial assets in prior periods, the reasons for such sales and expectations about future sales activity.

Transfers of financial assets to third parties in transactions that do not qualify for derecognition are not considered sales.

Financial assets that are managed and whose performance is evaluated on a fair value basis are measured at FVTPL.

Financial assets: Assessment whether contractual cash flows are solely payments of principal and interest

'Principal' is defined as the fair value of the financial asset on initial recognition. 'Interest' is defined as consideration for the time value of money and for the credit risk associated with the principal amount outstanding during a particular period of time and for other basic lending risks and costs (e.g. liquidity risk and administrative costs), as well as a profit margin.

In assessing whether the contractual cash flows are solely payments of principal and interest, the Group considers the contractual terms of the instrument. This includes assessing whether the financial asset contains a contractual term that could change the timing or amount of contractual cash flows such that it would not meet this condition. In making this assessment, the Group considers:

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2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.4 Significant accounting policies (continued)

a) Financial instruments (continued)

ii. Classification and subsequent measurement (continued)

Financial assets: Assessment whether contractual cash flows are solely payments of principal and interest (continued)

- contingent events that would change the amount or timing of cash flows;
- terms that may adjust the contractual coupon rate, including variable rate features;
- prepayment and extension features; and
- terms that limit the Group's claim to cash flows from specified assets (e.g. non-recourse features).

A prepayment feature is consistent with the solely payments of principal and interest criterion if the prepayment amount substantially represents unpaid amounts of principal and interest on the principal amount outstanding, which may include reasonable additional compensation for early termination of the contract. Additionally, for a financial asset acquired at a significant discount or premium to its contractual par amount, a feature that permits or requires prepayment at an amount that substantially represents the contractual par amount plus accrued (but unpaid) contractual interest (which may also include reasonable additional compensation for early termination) is treated as consistent with this criterion if the fair value of the prepayment feature is insignificant at initial recognition.

Trade receivables and other receivables meet solely payments of principal and interest test since principal is the present value of the expected cash flows. Those receivables are managed in line with the held to collect business model.

Financial assets: Subsequent measurement and gains and losses

Financial assets at FVTPL	Financial assets at FVTPL are comprised of derivatives. These assets are subsequently measured at fair value. Net gains and losses, including any interest, are recognized in profit or loss.
Financial assets at amortized cost	Financial assets at amortized cost are comprised of cash and cash equivalents, trade receivables, other receivables and other assets. These assets are subsequently measured at amortized cost using the effective interest method. The amortized cost is reduced by impairment losses. Interest income, foreign exchange gains and losses and impairment are recognized in profit or loss. Any gain or loss on de-recognition is recognized in profit or loss.
Equity investments at FVTPL	Equity investments at FVTPL are subsequently measured at fair value. Net gains and losses, including any interest or dividend income, are recognized in profit or loss.
Equity investments at FVOCI	Equity investments at FVOCI include the Group's 6,84% of share of Cetel. These assets are subsequently measured at fair value. Dividends are recognized as income in profit or loss unless the dividend clearly represents a recovery of part of the cost of the investment. Other net gains and losses are recognized in OCI and are never reclassified to profit or loss.

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2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.4 Significant accounting policies (continued)

a) Financial instruments (continued)

ii. Classification and subsequent measurement (continued)

Financial liabilities: Classification, subsequent measurement and gains and losses

Financial liabilities are classified as measured at amortized cost or FVTPL. A financial liability is classified as at FVTPL if it is classified as held-for-trading, it is a derivative or it is designated as such on initial recognition. Financial liabilities at FVTPL are measured at fair value and net gains and losses, including any interest expense, are recognized in profit or loss. The Group does not have any financial liabilities at FVTPL except for derivatives and issued debt instruments.

Other financial liabilities are subsequently measured at amortized cost using the effective interest method. Interest expense and foreign exchange gains and losses are recognized in profit or loss. Any gain or loss on derecognition is also recognized in profit or loss.

Non-derivative financial liabilities

The Group initially recognized debt securities issued and subordinated liabilities on the date that they were originated. All other financial liabilities were recognized initially on the trade date, which was the date that the Group becomes a party to the contractual provisions of the instrument.

The Group classified non-derivative financial liabilities into the other financial liabilities category except for issued debt instruments. Such financial liabilities were recognized initially at fair value less any directly attributable transaction costs. Subsequent to initial recognition, these financial liabilities were measured at amortized cost using the effective interest method.

Other financial liabilities were comprised of loans, trade and other payables, payables to related parties and other payables.

The amount of change in the fair value of the issued debt instruments at FVTPL that is attributable to changes in the credit risk of that liability is recognized in other comprehensive income and the remaining amount of change in the fair value is recognized in profit or loss.

Trade payables were payables to third parties in relation to their capacity as suppliers. Payables stemming from transactions with parties that were not suppliers or customers which were not classified as trade payables and were not a result of financing operations were recognized as other payables.

When a financial instrument gave rise to a contractual obligation on the part of the Group to deliver cash or another financial asset or to exchange another financial instrument under conditions that were potentially unfavorable, it was classified as a financial liability. The instrument was equity instrument if, the following were met:

- The instrument included no contractual obligation to deliver cash or another financial asset to another entity; or to exchange financial assets or financial liabilities with another entity under conditions that were potentially unfavorable to the Group.
- If the instrument would or might be settled in the Group's own equity instruments, it was a non-derivative that included no contractual obligation for the Group to deliver a variable number of its own equity instruments; or a derivative that would be settled only by the Group exchanging a fixed amount of cash or another financial asset for a fixed number of its own equity instruments.

iii. Derecognition

Financial assets

The Group derecognized a financial asset when the contractual rights to the cash flows from the asset expired, or it transferred the rights to receive the contractual cash flows in a transaction in which substantially all the risks and rewards of ownership of the financial asset were transferred. Any interest in such transferred financial assets that was created or retained by the Group was recognized as a separate asset or liability.

Financial liabilities

The Group derecognizes a financial liability when its contractual obligations are discharged or cancelled, or expired. The Group also derecognizes a financial liability when its terms are modified and the cash flows of the modified liability are substantially different, in which case a new financial liability based on the modified terms is recognized at fair value.

On derecognition of a financial liability, the difference between the carrying amount extinguished and the consideration paid (including any non-cash assets transferred or liabilities assumed) is recognized in profit or loss.

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2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.4 Significant accounting policies (continued)

a) Financial instruments (continued)

iv. Offsetting

Financial assets and financial liabilities are offset and the net amount presented in the statement of financial position when, and only when, the Group currently has a legally enforceable right to set off the amounts and it intends either to settle them on a net basis or to realize the asset and settle the liability simultaneously.

v. Impairment

Financial instruments and contract assets

The Group recognizes loss allowances for ECLs on:

- financial assets measured at amortized cost;
- contract assets (as defined in TFRS 15).

Financial instruments and contract assets (continued)

Under TFRS 9, loss allowances are measured on either of the following bases:

- Lifetime ECLs are the ECLs that result from all possible default events over the expected life of a financial instrument; and
- 12-month ECLs are the portion of ECLs that result from default events that are possible within the 12 months after the reporting date (or a shorter period if the expected life of the instrument is less than 12 months).

The Group measures loss allowances at an amount equal to lifetime ECL, except for the following, which are measured as 12-month ECL:

- bank balances for which credit risk has not increased significantly since initial recognition.

Loss allowances for trade receivables, other receivables, other assets and contract assets are always measured at an amount equal to lifetime ECL.

When determining whether the credit risk of a financial asset has increased significantly since initial recognition and when estimating ECL, the Group considers reasonable and supportable information that is relevant and available without undue cost or effort. This includes both quantitative and qualitative information and analysis, based on the Group's historical experience and informed credit assessment and including forward-looking information.

The Group assumes that the credit risk on a financial asset has increased significantly if it is more than 30 days past due.

The Group considers a financial asset to be in default when:

- the borrower is unlikely to pay its credit obligations to the Group in full, without recourse by the Group to actions such as realizing security (if any is held); or
- the financial asset is more than 90 days past due.

The Group considers bank balances to have low credit risk when its credit risk rating is equivalent to the globally understood definition of 'investment grade'.

The maximum period considered when estimating ECLs is the maximum contractual period over which the Group is exposed to credit risk.

12-month expected credit losses are that result from possible default events within the 12 months after the reporting date.

The maximum period considered when estimating expected credit losses is the maximum contractual period over which the Group is exposed to credit risk.

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2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.4 Significant accounting policies (continued)

a) Financial instruments (continued)

v. Impairment (continued)

Measurement of ECLs

ECLs are a probability-weighted estimate of credit losses. Credit losses are measured as the present value of all cash shortfalls.

ECLs are discounted at the effective interest rate of the financial asset.

For trade receivables, other receivables, other assets and contract assets the Group applies the simplified approach to providing for expected credit losses prescribed in TFRS 9, which requires the use of the lifetime expected loss provision for all trade receivables. The Group performed the calculation of ECL rates separately for individual, corporate, public and wholesale customers. The ECLs were calculated based on actual credit loss experience over the past years.

Exposures within each group were segmented based on common credit risk characteristics such as delinquency status.

Actual credit loss experience was adjusted to reflect differences between economic conditions during the period over which the historical data was collected, current conditions and the Group's view of economic conditions over the expected lives of the receivables. Future collection performance of receivables are estimated by considering general economic conditions to incorporate forward looking information to the expected credit loss calculations.

Credit-impaired financial assets

At each reporting date, the Group assesses whether financial assets carried at amortized cost are credit-impaired. A financial asset is 'credit-impaired' when one or more events that have a detrimental impact on the estimated future cash flows of the financial asset have occurred.

Evidence that a financial asset is credit-impaired includes the following observable data:

- significant financial difficulty of the borrower or issuer;
- a breach of contract such as a default or being more than 90 days past due;
- the restructuring of a loan or advance by the Group on terms that the Group would not consider otherwise;
- it is probable that the borrower will enter bankruptcy or other financial re-organization; or
- the disappearance of an active market for a security because of financial difficulties.

Presentation of impairment in the statement of financial position

Loss allowances for financial assets measured at amortized cost are deducted from the gross carrying amount of the assets.

Impairment losses related to trade and other receivables, including contract assets, are presented separately in the statement of profit or loss. Impairment losses on other financial assets are presented under 'general administrative expenses', similar to the presentation under TAS 39, and not presented separately in the consolidated statement of profit or loss due to materiality considerations.

Write-off

The gross carrying amount of a financial asset is written off (either partially or in full) to the extent that there is no realistic prospect of recovery. This is generally the case when the Group determines that the debtor does not have assets or sources of income that could generate sufficient cash flows to repay the amounts subject to the write-off. However, financial assets that are written off could still be subject to enforcement activities in order to comply with the Group's procedures for recovery of amounts due.

Financial assets are written off when there is no reasonable expectation of recovery, such as a debtor failing to engage in a repayment plan with the Group. Where trade receivables, other receivables, other assets and contract assets have been written off, the Group continues to engage in enforcement activity to attempt to recover the receivable due. Where recoveries are made, these are recognized in profit or loss.

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2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.4 Significant accounting policies (continued)

a) Financial instruments (continued)

vi. Derivative financial instruments

Cash flow hedges

The Group has adopted TFRS 9 *Financial Instruments*, replacing TAS 39 in accordance with the risk management strategy and objectives as of 1 July 2018. The high-level aim of the new hedge accounting model is that financial reporting will reflect more accurately how an entity manages its risk and the extent to which hedging mitigates those risks. Specifically, the new model aims to provide a better link between an entity's risk management strategy, the rationale for hedging and the impact of hedging on the financial statements.

The Group enters into participating cross currency swap transactions in order to hedge the changes in cash flows of floating and fixed rate financial instruments. While applying cash flow hedge accounting, the effective portion of the changes in the fair value of the hedging instrument is accounted for under "other comprehensive income/expense items to be reclassified to profit or loss" in equity, and the ineffective portion is recognized in profit or loss. The changes recognized in equity is removed and included in profit or loss in the same period when the hedged cash flows effect the profit or loss. In addition, time value of options included in participating cross currency swaps are accounted for cost of hedging and recognized under other comprehensive income.

Under IFRS 9, a hedging relationship is discontinued in its entirety when as a whole it ceases to meet the qualifying criteria after considering the rebalancing of the hedging relationship. Voluntary discontinuation when the qualifying criteria are met is prohibited. Hedge accounting is discontinued when the risk management objective for the hedging relationship has changed, the hedging instrument expires or is sold, terminated or exercised, there is no longer an economic relationship between the hedged item and hedging instrument or when the effect of credit risk starts dominating the value changes that result from the economic relationship.

When the Group discontinues hedge accounting for a cash flow hedge it shall account for the amount that has been accumulated in the cash flow hedge reserve in accordance as follows;

- if the hedged future cash flows are still expected to occur, that amount shall remain in the cash flow hedge reserve until the future cash flows occur.
- if the hedged future cash flows are no longer expected to occur, that amount shall be immediately reclassified from the cash flow hedge reserve to profit or loss as a reclassification adjustment. A hedged future cash flow that is no longer highly probable to occur may still be expected to occur. The amount recognized in OCI prior discontinuation will be reclassified from OCI to Profit and Loss, in accordance with the contractual cash flow of the hedged item.

The new hedge effectiveness testing model is prospective only and can be qualitative, depending on the complexity of the hedge. Effectiveness range 80%-125% in TAS 39 is replaced by an objectives-based test that focuses on the economic relationship between the hedged item and the hedging instrument, and the effect of credit risk on that economic relation.

b) Property, plant and equipment

i) Recognition and measurement

Property, plant and equipment ("PPE") of the Group other than lands is carried at cost less accumulated depreciation and any accumulated impairment losses. The Group elected to measure property, plant and equipment of the Company on a deemed cost basis in the first period of application of TAS 29 "Financial Reporting in Hyper Inflationary Economy" since detailed records of the acquisition date and costs of items of PPE were not available for the Company prior to 1 January 2000. The deemed cost values for buildings as at 1 January 2000 were appraised by CMB licensed real-estate valuation companies. The network equipment and vehicles values were appraised by Detecon International GmbH (a subsidiary of Deutsche Telecom AG). Other than the PPE for which cost was determined on a deemed cost basis, the cost of PPE generally comprises its purchase price, including import duties and non-refundable purchase taxes and any directly attributable costs of bringing the asset to its working condition and location for its intended use. PPE that are recognized at deemed cost basis or at cost are restated for the effects of inflation until 31 December 2004 in accordance with TAS 29.

Lands accounted as property, plant and equipment are measured at revalued amount. Revalued amount for lands is the fair value at the date of the revaluation less any subsequent accumulated depreciation and subsequent accumulated impairment losses.

Revaluations are performed in regular intervals depending on the changes in fair values of the items of lands being revalued. The increase in carrying amount of lands as a result of revaluation is recognized in components of other comprehensive income component. When land's carrying amount declines as a result of a revaluation, this declined amount is recognized in profit or loss. However, the decline shall be recognized in other comprehensive income to the extent of any credit balance existing in the revaluation surplus. Thus, the relevant decline reduces the accumulated amount in equity under the heading of revaluation surplus.

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2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.4 Significant accounting policies (continued)

b) Property, plant and equipment (continued)

i) Recognition and measurement (continued)

Cost includes expenditure that is directly attributable to the acquisition of the asset. The cost of self-constructed assets includes the cost of materials and direct labor costs are located and capitalized borrowing costs. Purchased software that is integral to the functionality of the related equipment is capitalized as part of that equipment. When parts of an item of property and equipment have different useful lives, they are accounted for as separate items (major components) of property and equipment.

Gains and losses on disposal of an item of property and equipment are calculated as the difference between the net proceeds from disposal and the carrying amount of the item and are recognized net within "income/(expense) from investing activities" in profit or loss.

ii) Subsequent cost

The cost of replacing part of an item of property and equipment is recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Group and its cost can be measured reliably. The carrying amount of the replaced part is derecognized. The costs of the day-to-day servicing of property and equipment are recognized in consolidated statement of profit/(loss) as incurred.

iii) Depreciation

Depreciation is calculated effective from purchase or replacement date to write off the cost of items of property, plant and equipment less their estimated residual values using the straight-line basis over their estimated useful lives. Land is not depreciated.

Useful lives of property, plant and equipment are as follows:

<u>Property plant and equipment</u>	<u>Useful life (years)</u>
Buildings	21-50 years
Outside plant	5-21 years
Transmission equipment	5-21 years
Switching equipment	5-8 years
Data networks	3-10 years
Vehicles	5 years
Furniture and fixtures	3-5 years
Set-top box and satellite receiver	4 years
Other property, plant and equipment	2-8 years

Useful lives and residual values are reviewed at each reporting date and adjusted if appropriate.

The remaining useful lives of the PPE of the Company are limited to the concession periods. Considering the Concession Agreement the remaining useful lives of tangible fixed assets are 7 years at the most.

Leased assets are depreciated by the same method used for property and equipment over the shorter of the lease term and their useful lives.

c) Intangible assets

i) Goodwill

Goodwill that arises on the acquisition of subsidiaries is included in intangible assets.

The Group measures goodwill at the acquisition date as:

- The fair value of the consideration transferred; plus
- The recognized amount of any non-controlling interests in the acquiree; plus
- If the business combination is achieved in stages, the fair value of the pre-existing equity interest in the acquiree; less
- The net recognized amount (generally fair value) of the identifiable assets acquired and liabilities assumed.

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2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.4 Summary of significant accounting policies (continued)

c) Intangible assets (continued)

i) Goodwill (continued)

When the excess is negative, a bargain purchase gain is recognized immediately in profit or loss. The consideration transferred does not include amounts related to the settlement of pre-existing relationships. Such amounts are generally recognized in profit or loss. Transactions costs, other than those associated with the issuance of debt or equity securities, that the Group incurs in connection with a business combination are expensed as incurred.

Subsequent measurement

Goodwill is measured at cost less accumulated impairment losses.

ii) Other intangible assets

Intangible assets acquired separately are measured on initial recognition at cost. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and any accumulated impairment losses. Internally generated intangible assets, excluding capitalized development costs, are not capitalized and expenditure is charged to the consolidated income statement during the year when the expenditure is incurred.

The useful lives of intangible assets are assessed to be either finite or infinite. The Group does not have any intangible assets with infinite useful lives. Intangible assets with finite lives are amortized on a straight line basis over the shorter of their useful economic lives or remaining concession period. Whenever there is an indication that the intangible asset may be impaired it is assessed for impairment. The amortization period and the amortization method for an intangible asset with a finite useful life are reviewed each financial year end at least.

Changes in the expected useful lives or the expected pattern of consumption of future economic benefits embodied in the asset are accounted for by changing the amortization period or method, as appropriate, and treated as changes in estimates. The amortization expense on intangible assets with finite lives is recognized in the consolidated income statement. The amortization periods for intangible assets are between 3 and 25 years. The remaining useful lives of the intangible items are limited to the concession period. Considering the Concession Agreement, the remaining useful lives of intangible assets are 7 years at the most.

iii) Research and development

Research costs are expensed as incurred. Development expenditure on an individual project is recognized as an intangible asset when the Group can demonstrate the technical feasibility of completing the intangible asset so that it will be available for use or sale, its intention to complete and its ability to use or sell the asset, how the asset will generate future economic benefits, the availability of resources to complete the asset and the ability to measure reliably the expenditure during development.

Impairment test is performed periodically in order to identify whether there is any impairment in the development stage. After initial recognition, development costs are recognized at cost less amortization and impairment. Amortization of the asset begins when development is complete and the asset is available for use. It is amortized over the period of expected future benefit. Periodic impairment tests are applied to the assets in order to foresee any probable impairment on the assets in the period that they are not ready for utilization yet.

iv) TV contents

Rights to feature contents such as films, TV shows etc. acquired under license agreements along with related obligations are recorded at the contract value when a license agreement is executed or the license period has begun. The amounts recognized are amortized on the licensing period or a per play basis over the licensing period. To the extent that it is determined that the content has no future programming usefulness and will no longer be exploited, the unamortized cost of the content is written off.

d) Investment properties

Investment properties, which are properties held to earn rent and/or for capital appreciation are measured initially at cost plus all direct transaction costs. The carrying amount includes the cost of replacing part of an existing investment property at the time that cost is incurred if the recognition criteria are met; and excludes the costs of day-to-day servicing of an investment property. The Group decided to measure investment property on a deemed cost basis in the first period of application of TAS 29, since detailed records of the acquisition date and costs of items of investment property were not available prior to 1 January 2000 and restated these deemed cost basis for the effects of inflation until 31 December 2004.

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2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.4 Summary of significant accounting policies (continued)

d) Investment properties (continued)

Investment properties are transferred from/to property, plant and equipment when their utilization purpose is changed. When investment properties are disposed, the difference between sales revenue and the carrying amount is charged to the consolidated income statement.

Market values of the investment properties at 1 January 2000 were determined by CMB licensed independent real-estate appraisers. Following initial recognition, investment properties are carried at costs less any accumulated amortization and any accumulated impairment losses.

Depreciation is charged to investment properties excluding land, over their estimated useful economic lives, using the straight-line method. The useful lives of buildings that are owned by the Group range between 15 - 50 years. The remaining useful life of the investment property is limited by the concession agreement, except for the exception of the concession agreement. When considering the Concession agreement the remaining useful lives of investment property is 7 years at the most.

e) Assets held for sale

The Group classifies a non-current asset as held for sale if its carrying amount will be recovered principally through a sale transaction rather than through continuing use. For this to be the case, the asset (or the group of assets held for sale) must be available for immediate sale in its present condition subject only to terms that are usual and customary for sales of such assets and its sale must be highly probable. For the sale to be highly probable management must be committed to a plan to sell the asset (or the group of assets held for sale) and an active program to set the buyers and complete the plan must have been initiated. Furthermore, the asset (or the group of assets held for sale) must be actively marketed for sale at a price that is reasonable in relation to its fair value. In addition, the sale should be expected to qualify for recognition as a completed sale within one year from the date of classification and actions required to complete the plan should indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn.

In case the period to complete sale of assets is extended due to circumstances which are not under the control of the Group, the assets will continue to be classified as assets held for sale provided that the Group has still an active sales program.

The Group measures assets held for sale at the lower of its carrying amount and fair value less costs to sell. The Group does not depreciate a non-current asset when it is classified as held for sale and the gain or loss arising from the sale of the assets is classified at income/expense from investing activities accounts.

f) Leases

The Group has applied TFRS 16 using the modified retrospective approach and therefore the comparative information has not been restated and continues to be reported under TAS 17 and TFRS Interpretation 4. The details of accounting policies under TAS 17 and TFRS Interpretation 4 are disclosed separately.

Policy applicable from 1 January 2019

At inception of a contract, the Group assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Group uses the definition of a lease in TFRS 16.

This policy is applied to contracts entered into, on or after 1 January 2019.

i. As a lessee

The Group recognises a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the end of the lease term, unless the lease transfers ownership of the underlying asset to the Group by the end of the lease term or the cost of the right-of-use asset reflects that the Group will exercise a purchase option. In that case the right-of-use asset will be depreciated over the useful life of the underlying asset, which is determined on the same basis as those of property and equipment. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Group's incremental borrowing rate. Generally, the Group uses its incremental borrowing rate as the discount rate.

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2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.4 Significant accounting policies (continued)

f) Leases (continued)

Policy applicable from 1 January 2019 (continued)

i. As a lessee (continued)

The Group determines its incremental borrowing rate by obtaining interest rates from various external financing sources and makes certain adjustments to reflect the terms of the lease and type of the asset leased.

Lease payments included in the measurement of the lease liability comprise the following:

- fixed payments, including in-substance fixed payments;
- variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;
- amounts expected to be payable under a residual value guarantee; and
- the exercise price under a purchase option that the Group is reasonably certain to exercise, lease payments in an optional renewal period if the Group is reasonably certain to exercise an extension option, and penalties for early termination of a lease unless the Group is reasonably certain not to terminate early.

The lease liability is measured at amortised cost using the effective interest method. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the Group's estimate of the amount expected to be payable under a residual value guarantee, if the Group changes its assessment of whether it will exercise a purchase, extension or termination option or if there is a revised in-substance fixed lease payment.

When the lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the right-of-use asset, or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

The Group has elected not to recognise right-of-use assets and lease liabilities for leases of low-value assets. The Group recognises the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

ii. As a lessor

At inception or on modification of a contract that contains a lease component, the Group allocates the consideration in the contract to each lease component on the basis of their relative stand-alone prices.

When the Group acts as a lessor, it determines at lease inception whether each lease is a finance lease or an operating lease.

To classify each lease, the Group makes an overall assessment of whether the lease transfers substantially all of the risks and rewards incidental to ownership of the underlying asset. If this is the case, then the lease is a finance lease; if not, then it is an operating lease. As part of this assessment, the Group considers certain indicators such as whether the lease is for the major part of the economic life of the asset.

When the Group is an intermediate lessor, it accounts for its interests in the head lease and the sub-lease separately. It assesses the lease classification of a sub-lease with reference to the right-of-use asset arising from the head lease, not with reference to the underlying asset. If a head lease is a short-term lease to which the Group applies the exemption described above, then it classifies the sub-lease as an operating lease.

If an arrangement contains lease and non-lease components, then the Group applies TFRS 15 to allocate the consideration in the contract.

The Group applies the derecognition and impairment requirements in TFRS 9 to the net investment in the lease. The Group further regularly reviews estimated unguaranteed residual values used in calculating the gross investment in the lease.

The Group recognises lease payments received under operating leases as income on a straight-line basis over the lease term as part of 'other revenue'.

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2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.4 Summary of significant accounting policies (continued)

f) Leases (continued)

Policy applicable before 1 January 2019 (continued)

ii. As a lessor (continued)

Generally, the accounting policies applicable to the Group as a lessor in the comparative period were not different from TFRS 16 except for the classification of the sub-lease entered into during current reporting period that resulted in a finance lease classification.

Policy applicable before 1 January 2019

For contracts entered into before 1 January 2019, the Group determined whether the arrangement was or contained a lease based on the assessment of whether:

- fulfilment of the arrangement was dependent on the use of a specific asset or assets; and
- the arrangement had conveyed a right to use the asset. An arrangement conveyed the right to use the asset if one of the following was met:
- the purchaser had the ability or right to operate the asset while obtaining or controlling more than an insignificant amount of the output;
- the purchaser had the ability or right to control physical access to the asset while obtaining or controlling more than an insignificant amount of the output; or
- facts and circumstances indicated that it was remote that other parties would take more than an insignificant amount of the output, and the price per unit was neither fixed per unit of output nor equal to the current market price per unit of output.

i. As a lessee

In the comparative period, as a lessee the Group classified leases that transferred substantially all of the risks and rewards of ownership as finance leases. When this was the case, the leased assets were measured initially at an amount equal to the lower of their fair value and the present value of the minimum lease payments. Minimum lease payments were the payments over the lease term that the lessee was required to make, excluding any contingent rent. Subsequent to initial recognition, the assets were accounted for in accordance with the accounting policy applicable to that asset.

Assets held under other leases were classified as operating leases and were not recognised in the Group's statement of financial position. Payments made under operating leases were recognised in profit or loss on a straight-line basis over the term of the lease. Lease incentives received were recognised as an integral part of the total lease expense, over the term of the lease.

ii. As a lessor

When the Group acted as a lessor, it determined at lease inception whether each lease was a finance lease or an operating lease.

To classify each lease, the Group made an overall assessment of whether the lease transferred substantially all of the risks and rewards incidental to ownership of the underlying asset. If this was the case, then the lease was a finance lease; if not, then it was an operating lease. As part of this assessment, the Group considered certain indicators such as whether the lease was for the major part of the economic life of the asset.

g) Inventory

Inventories are recognized at the lower of cost and net realizable value. Costs comprise purchase cost and, where applicable and those overheads that have been incurred in bringing the inventories to their present location and condition. Cost is calculated using the weighted average method. Net realizable value is the less marketing, selling and other various expenses to be incurred in order to realize sale.

h) Impairment

Non-financial assets

Property, plant and equipment

At each balance sheet date, the Group assesses whether there is an indication that any of its PPE and intangible assets may be impaired. If such an indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss. Where it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs.

The recoverable amount is the higher of fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money.

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2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.4 Summary of significant accounting policies (continued)

h) Impairment (continued)

Non-financial assets (continued)

Property, plant and equipment (continued)

If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognized in the consolidated income statement.

Where an impairment loss subsequently reverses, the carrying amount of the asset (cash-generating unit) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset (cash-generating unit) in prior years. A reversal of an impairment loss is recognized immediately in the consolidated income statement.

Goodwill

Goodwill is reviewed for impairment, annually or more frequently if events or changes in circumstances indicate that the carrying value may be impaired. Whenever the carrying amount exceeds the recoverable amount, an impairment loss is recognized in the consolidated income statement.

For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the cash-generating units or groups of cash-generating units that are expected to benefit from the synergies of the acquisition, irrespective of whether other assets or liabilities are assigned to these units or groups of units. Each unit or group of units to which the goodwill is allocated represents the lowest level within the Group at which the goodwill is monitored for internal management purposes.

Impairment is determined by assessing the recoverable amount of the cash-generating unit (group of cash generating units), to which the goodwill relates. Where the recoverable amount of the cash-generating unit (group of cash-generating units) is less than the carrying amounts of the net assets assigned to the cash-generating unit, an impairment loss is recognized. Impairment losses relating to goodwill cannot be reversed in future periods.

i) Reserve for employee severance indemnity

Payments to defined contribution retirement benefit plans are charged as an expense in the year in which the contributions relate to. Payments made to the Social Security Institution of Turkey and Turkish Republic Retirement Fund are dealt with as payments to defined contribution plans where the Group's obligations under the plans are equivalent to those arising in a defined contribution retirement benefit plan. The Group pays contributions to the Social Security Institution of Turkey on a mandatory basis. The Group has no further payment obligations once the contributions have been paid. The contributions are recognized as an employee benefit expense in the period to which the employees' service relates.

For defined benefit plans and other long-term employment benefits, the cost of providing benefits is determined using the projected unit credit method, with actuarial valuations being carried out at each balance sheet date. The Company recognizes the service cost of the previous period as expense at the earlier of the dates below:

- The date of the change or reduction in the plan, and
- The date of the recognition of the related restructuring costs (see: TAS 37) or the benefits deriving from the termination of the employment contract,

The retirement benefit obligation recognized in consolidated statement of financial position represents the present value of the defined benefit obligation as adjusted for any unrecognized past service cost. There is no funding requirement for defined benefit plans. The Group recognizes actuarial gains and losses in the other comprehensive income.

j) Provisions

Provisions are recognized when the Group has a present obligation as a result of a past event, and it is probable that an outflow of resources embodying economic benefits will be required to settle that obligation, and a reliable estimate can be made of the amount of the obligation. Provisions are measured at the management's best estimate of the expenditure required to settle the obligation at the balance sheet date, and are discounted to present value where the effect is material.

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2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.4 Summary of significant accounting policies (continued)

k) Contingent assets and liabilities

Possible assets or obligations that arise from past events and for which their existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not entirely within the control of the Group are treated as contingent assets or liabilities. A contingent liability is disclosed, unless the possibility of an outflow of resources embodying economic benefits is remote. If the possibility of transfer of assets is probable, contingent liability is recognized in the financial statements.

A contingent asset is disclosed in consolidated financial statements, when the possibility of an inflow of economic benefits to the entity is probable. If it has become virtually certain that an inflow of economic benefits will arise, the asset and the related income are recognized in the financial statements of the period in which the change occurs.

l) Related parties

- a) Parties are considered related to the Company if a person or a close member of that person's family is related to a reporting entity; if that person:
 - i. Has control or joint control over the reporting entity;
 - ii. Has significant influence over the reporting entity; or
 - iii. Is a member of the key management personnel of the reporting entity or of a parent of the reporting entity.
- b) The entity and the reporting entity are members of the same group.
 - The entity and the company are members of the same group.
 - One entity is an associate or joint venture of the other entity (or an associate or joint venture of a member of a group of which the other entity is a member).
 - Both entities are joint ventures of the same third party.
 - One entity is a joint venture of a third entity and the other entity is an associate of the third entity.
 - The entity is a post-employment benefit plan for the benefit of employees of either the reporting entity or an entity related to the reporting entity. If the reporting entity is itself such a plan, the sponsoring employers are also related to the reporting entity.
 - The entity is controlled or jointly controlled by a person identified in (a).
 - A person identified in (a) (i) has significant influence over the entity or is a member of the key management personnel of the entity (or of a parent of the entity).

m) Revenue

Revenue is measured based on the consideration specified in a contract with a customer and excludes amounts collected on behalf of third parties. The Group recognizes revenue when it transfers control over a product or service to a customer.

i) Fixed line revenues

Revenues from fixed-line telecommunication services like network access, local usage, domestic and international long distance and infrastructure leases are recognized on an accrual basis as services are provided.

Connection fees that are assessed as distinct are recognized as revenue. Connection fees for activities that are an improvement to or an extension of the Group's own network, rather than a transfer of goods or services to the customer are determined as not distinct and no separate revenue is recognized. For distinct connection fees in a bundle, revenue recognized is measured based on their stand-alone selling prices. The stand-alone selling prices of connection fees are estimated based on expected cost plus a margin approach. Distinct connection fees are immediately recognized as revenue when connection services are provided and the cost of connection is also recognized immediately as an expense.

Revenues from sale of indefeasible right of use contracts, which are long term capacity/line rental arrangements, are accounted over the term of the contract.

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2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.4 Significant accounting policies (continued)

m) Revenue (continued)

ii) Mobile revenues

Revenues generated from mobile telecommunication services such as outgoing and incoming traffic, roaming revenues, revenues from value added services and monthly fees which are recognized at the time services are rendered. With respect to prepaid outgoing revenues, the Group generally collects cash in advance by selling scratch cards to dealers and distributors. In such cases, the Group does not recognize revenues until the subscribers use the service and present such amounts under deferred revenues in the consolidated financial statements.

The Group recognizes content revenue based on the agreement between the Group and the content providers. As the Group is the primary obligor of the service, the revenue received from the subscribers is presented on gross basis and the portion paid to the content providers is recognized as operating expense.

iii) Equipment sale revenues

Revenues from sales of phone device, modem and other network equipment are recorded as revenue when control over a product or service is transferred to a customer.

For bundled packages, the Group accounts for individual products and services separately if they are distinct - i.e. if a product or service is separately identifiable from other items in the bundled package and if a customer can benefit from it either on its own or together with other resources that are readily available to the customer. The consideration is allocated between distinct products and services in a bundle based on their stand-alone selling prices. The stand-alone selling prices are determined based on the list prices at which the Group sells those products and services separately. For items that are not sold separately the Group estimates stand-alone selling prices using the expected cost plus a margin approach. Equipment revenues are presented in other revenues. Cost of products and services are recognized as expense when related revenue is recognized.

iv) TV revenues

Revenues from TV subscriptions are charged to contract customers on a monthly basis. Revenues are invoiced and recorded as part of a periodic billing cycle, and are recognized as the services are provided. Pay-per-view revenue is recognized when the movie is rented. Advertising revenue is recognized as the commercials are aired.

v) Subscriber acquisition costs

Subscriber acquisition costs include commissions and premiums incurred for acquisition and retention of subscribers.

The Group capitalizes these commission and premiums as incremental costs of obtaining a contract with a customer and if they are expected to be recovered. Subscriber acquisition costs are amortized consistently during the subscriber life cycle and subscriber retention costs are amortized consistently during the renewal period and amortization expense is recognized in marketing, sales and distribution expenses.

vi) Significant financing component

To estimate the transaction price in a contract, the Group adjusts the promised amount of consideration for the time value of money if that contract contains a significant financing component. Significant financing component exists if the timing of payments agreed to by the parties to the contract (either explicitly or implicitly) provides the customer or the Group with a significant benefit of financing the transfer of goods or services to the customer.

Indefeasible right of use ("IRU") contracts of the Group are adjusted for significant financing component. For bundled contracts where the control of equipment is transferred to the customer upfront but collection is made in installments, no significant financing component is recognized based on materiality considerations.

n) Income from investing activities and expense from investing activities

Income from investing activities are comprised of incomes from scrap and property, plant and equipment sales.

Expense from investing activities are comprised of loss on sales of property, plant and equipment sales.

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2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.4 Summary of significant accounting policies (continued)

o) Financial income and financial expenses

The Group's finance income and finance costs include:

- interest income;
- interest expense;
- transaction cost;
- coupon payments of bond;
- gains and losses on hedging instruments recognized in profit or loss;
- foreign currency gains or losses on financial assets and financial liabilities.

Interest income or expense is recognized using the effective interest method.

The 'effective interest rate' is the rate that exactly discounts estimated future cash payments or receipts through the expected life of the financial instrument to:

- the gross carrying amount of the financial asset; or
- the amortized cost of the financial liability.

In calculating interest income and expense, the effective interest rate is applied to the gross carrying amount of the asset (when the asset is not credit-impaired) or to the amortized cost of the liability. However, for financial assets that have become credit-impaired subsequent to initial recognition, interest income is calculated by applying the effective interest rate to the amortized cost of the financial asset. If the asset is no longer credit-impaired, then the calculation of interest income reverts to the gross basis.

Borrowing costs that cannot be matched with acquisition, construction or production of an asset are recognized in profit or loss by using effective interest rate.

Rediscount, interest and foreign exchange gains and losses arising from trading transactions are recognized in other operating income and expense.

Accounting for significant financing component is disclosed in detail in Note 2.4.(m).

p) Earnings per share

Earnings per share is calculated by dividing the consolidated profit/(loss) for the period attributable to ordinary shareholders by the weighted average number of ordinary shares outstanding during the period.

r) Taxes

Income tax expense is comprised of current and deferred tax. Income tax expense is recognized in the consolidated statement of profit/(loss) except to the extent that it relates to a business combination or items recognized directly in equity or other comprehensive income.

i) Current tax

Current tax is comprised of the expected tax payable or receivable on the taxable income or loss for the year and any adjustment to tax payable or receivable in respect of previous years. It is measured using tax rates enacted or substantively enacted at the reporting date. Current tax also includes any tax arising from dividends. Prepaid corporation taxes and corporate tax liabilities are offset when they relate to income taxes levied by the same taxation authority.

Turkish tax legislation does not permit a parent company and its subsidiary to file a consolidated tax return. Therefore, provisions for taxes, as reflected in the consolidated financial statements, have been calculated on a separate-entity basis.

ii) Deferred tax

Deferred tax is recognized on temporary differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit, and are accounted for using the liability method. Deferred tax liabilities are generally recognized for all taxable temporary differences and deferred tax assets are recognized to the extent that it is probable that taxable profits will be available against which deductible temporary differences can be utilized.

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2 BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.4 Summary of significant accounting policies (continued)

r) Taxes (continued)

ii) Deferred tax (continued)

Deferred tax is not recognized for:

- Temporary differences on the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable profit and loss;
- Temporary differences related to investments in subsidiaries, associates and joint arrangements to the extent that the Group's able to control the timing of the reversal of the temporary differences and it is probable that they will not reverse in the foreseeable future; and
- Taxable temporary differences arising on the initial recognition of goodwill.

The carrying amount of deferred tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

The Company and the other consolidated subsidiaries have reflected their deferred tax asset and liabilities by netting their individual balances; however, there is no netting on a consolidation basis. Deferred tax is calculated at the tax rates that are expected to apply in the period when the liability is settled or the asset realized.

Deferred tax assets are recognized for unused tax losses, unused tax credits and deductible temporary differences to the extent that it is possible that future taxable profits will be available against which they can be used. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realized.

iii) Tax exposures

In determining the amount of current and deferred tax the Group takes into account the impact of uncertain tax positions and whether additional taxes and interest may be due. This assessment relies on estimates and assumptions and may involve a series of judgments about future events. New information may become available that causes the Group to change its judgment regarding the adequacy of existing tax liabilities; such changes to tax liabilities will impact tax expense in the period that such a determination is made.

The Group believes that its accruals for tax liabilities are adequate for all open tax years based on its assessment of many factors, including interpretations of tax law and prior experience.

s) Segment reporting

An operating segment is a component of the Group that engages in business activities from which it may earn revenues and incur expenses, including revenues and expenses that relate to transactions with any of the Group's other components. All operating segments' operating results are reviewed regularly by the Group's board of directors to make decisions about resources to be allocated to the segment and assess its performance, and for which discrete financial information is available.

t) Determination of fair values

A number of the Group's accounting policies and disclosures require the determination of fair value, for both financial and non-financial assets and liabilities. Fair values have been determined for measurement and/or disclosure purposes based on the following methods. When applicable, further information about the assumptions made in determining fair values is disclosed in the notes specific to that asset or liability.

i) Trade and other receivables

The fair value of trade and other receivables is estimated as the present value of future cash flows discounted at the market rate of interest at the reporting date. Short-term receivables with no stated interest rate are measured at the original invoice amount if the effect of discounting is immaterial. This fair value is determined at initial recognition and at the end of each reporting period for disclosure purposes.

ii) Derivatives

The fair value of interest rate swaps and forward exchange contracts are based on broker quotes. Those quotes are tested for reasonableness by discounting estimated future cash flows based on the terms and maturity of each contract and using market interest rates for a similar instrument at the measurement date. Fair values reflect the credit risk of the instrument and include adjustments to take account of the credit risk of the Group entity and counterparty when appropriate.

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2 BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.4 Summary of significant accounting policies (continued)

t) Determination of fair values (continued)

iii) Issued debt instruments

The fair values of issued debt instruments are measured by using quoted market price at the date of valuation.

iv) Other non-derivative financial liabilities

Other non-derivative financial liabilities are measured at fair value, at initial recognition and for disclosure purposes, at each annual reporting date. Fair value is calculated based on the present value of future principal and interest cash flows, discounted at the market rate of interest at the measurement date.

v) Lands

Lands accounted as property, plant and equipment are measured at revalued amount. Revalued amount for lands is the fair value at the date of the revaluation less any subsequent accumulated depreciation and subsequent accumulated impairment losses.

Standards issued but not yet effective and not early adopted as of 31 December 2019

A number of new standards, interpretations of and amendments to existing standards are not effective at reporting date and earlier application is permitted; however the Group has not early adopted are as follows.

The revised Conceptual Framework

The revised Conceptual Framework issued on 27 October 2018 by the POA. The Conceptual Framework sets out the fundamental concepts for financial reporting that guide the POA in developing TFRSs. It helps to ensure that the Standards are conceptually consistent and that similar transactions are treated the same way, so as to provide useful information for investors, lenders and other creditors. The Conceptual Framework also assists companies in developing accounting policies when no TFRS Standard applies to a particular transaction, and more broadly, helps stakeholders to understand and interpret the Standards. The revised Framework is more comprehensive than the old one – its aim is to provide the POA with the full set of tools for standard setting. It covers all aspects of standard setting from the objective of financial reporting, to presentation and disclosures. For companies that use the Conceptual Framework to develop accounting policies when no TFRS Standard applies to a particular transaction, the revised Conceptual Framework is effective for annual reporting periods beginning on or after 1 January 2020, with earlier application permitted.

Amendments to TAS 1 and TAS 8 – Definition of Material

In June 2019 POA issued Definition of Material (Amendments to TAS 1 and TAS 8). The amendments clarify and align the definition of 'material' and provide guidance to help improve consistency in the application of that concept whenever it is used in IFRS Standards. The amended "definition of material" was added to the important definition and it was stated that this expression could lead to similar results by not giving and giving misstating information. In addition, with this amendment, the terminology used in its definition of material has been aligned with the terminology used in the Conceptual Framework for Financial Reporting (Version 2018). Those amendments are prospectively effective for annual periods beginning on or after 1 January 2020 with earlier application permitted.

The Group is assessing the potential impact on its consolidated financial statements resulting from the application of the amendments to TAS 1 and TAS 8.

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2 BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.4 Summary of significant accounting policies (continued)

Standards issued but not yet effective and not early adopted as of 31 December 2019

Amendments to TFRS 3 - Definition of a Business

Determining whether a transaction results in an asset or a business acquisition has long been a challenging but important area of judgement. The IASB has issued amendments to IFRS 3 Business Combinations to make it easier for companies to decide whether activities and assets they acquire are a business or merely a group of assets. In May 2019, POA has also published the Definition of Business (Amendments to TFRS 3). With this amendments confirmed that a business shall include inputs and a process, and clarified that the process must be substantive and the inputs and process must together significantly contribute to creating outputs. It narrowed the definitions of a business by focusing the definition of outputs on goods and services provided to customers and other income from ordinary activities, rather than on providing dividends or other economic benefits directly to investors or lowering costs and added a concentration test that makes it easier to conclude that a company has acquired a group of assets, rather than a business, if the value of the assets acquired is substantially all concentrated in a single asset or group of similar assets. This is a simplified assessment that results in an asset acquisition if substantially all of the fair value of the gross assets is concentrated in a single identifiable asset or a group of similar identifiable assets. If a preparer chooses not to apply the concentration test, or the test is failed, then the assessment focuses on the existence of a substantive process. The amendment applies to businesses acquired in annual reporting periods beginning on or after 1 January 2020. Earlier application is permitted.

The Group is assessing the potential impact on its consolidated financial statements resulting from the application of the amendments to TFRS 3.

Interest Rate Benchmark Reform (Amendments to TFRS 9, TAS 39 and TFRS 7)

Interest Rate Benchmark Reform, which amended TFRS 9, TAS 39 and TFRS 7 issued in September 2019 by IASB and thereon POA issued on 14 December 2018 added Section 6.8 and amended paragraph 7.2.26 of TFRS 9. About this issue, IASB identified two groups of accounting issues that could affect financial reporting. These are:

- pre-replacement issues-issues affecting financial reporting in the period before the reform; and
- replacement issues-issues that might affect financial reporting when an existing interest rate benchmark is either reformed or replaced.

IASB considered the pre-replacement issues to be more urgent and decided to address the following hedge accounting requirements as a priority in the first phase of the project:

- (a) The highly probable requirement;
- (b) Prospective assessments;
- (c) IAS 39 retrospective assessment; and
- (d) Separately identifiable risk components.

All other hedge accounting requirements remain unchanged. A company shall apply the exceptions to all hedging relationships directly affected by interest rate benchmark reform.

The Group shall apply these amendments for annual periods beginning on or after 1 January 2020 with earlier application permitted.

2.5 Significant accounting assessments, estimates and assumptions

In the process of applying the Group's accounting policies, the management has made the following judgments that have the most significant effect on the amounts recognized in the consolidated financial statements (excluding those involving estimations).

- i) *Operating Lease Commitments - Group as Lessor:* The Company has entered into a cross-occupation agreement with PTT. The Group has determined that it retains all the significant risks and rewards of ownership of its properties subject to the agreement which are leased out on operating leases.

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2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.5 Significant accounting assessments, estimates and assumptions (continued)

- ii) *Income from Sales Campaign:* Group makes sales campaigns with suppliers under which they bundle telecommunication services with equipment supplied by the suppliers. The Group management accounts bundled offers as an agent if the sale transaction satisfies the below conditions:
 - Group, has no inventory risk.
 - Group has no responsibility on technical qualifications of equipment delivered to customers and responsibility after sale belongs to supplier.
 - Group does not make any modification on the equipment.
 - Group earns either a fixed rate of commission or zero profit on the transaction.
- iii) *Prepaid Card Sales Agent – Principal Analysis:* Since TT Mobil is primarily responsible for providing the service, has credit and inventory risk and determinant in setting prices; starting from April 2010, TT Mobil recognizes prepaid card incomes on a gross basis.
- iv) *Commission income:* The Group renders intermediary collection services regarding handsets sold by the distributors at the Group exclusive sale channels. Accordingly, the arrangement with the customer includes both handset principal amount and GSM services. Total considerations have been collected from the customers with up to 24 month installments via GSM bills where each benefit is clearly identifiable and separable. The Group does not recognize any revenues from the sale of handsets and acts as an agent since it has no control over price, nor risk on stock. However, the collection risk of handset principal amount is on the Group and the distributors collect this amount from the Group on monthly basis. Apart from the GSM revenues, since customer base and sales channels are made available to the distributors, the Group charges a commission to those distributors. This commission income is classified under other revenues and it is recognized when the handset is delivered to the customer.
- v) *Content Sales:* Since TT Mobil is primarily responsible for providing the service, has credit and determinant in setting prices; TT Mobil recognizes content revenues on a gross basis.
- vi) *Liabilities within the scope of vendor financing:* For capital expenditures, the Group carries out vendor financing with some of its suppliers in accordance with the agreements made with banks and those suppliers. Since the terms are not substantially different with the discounted present value of the cash flows under the new terms of the liabilities, the Group continues to classify those liabilities as trade payables.

Key sources of estimation uncertainty

The key assumptions concerning the future, and other key sources of estimation uncertainty at the balance sheet date, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are discussed below:

- The Group determines whether property, plant and equipment are impaired by estimating the recoverable amount of the assets whenever there is an indication of impairment. This requires an estimation of the value in use of the cash-generating units. Estimating the value in use requires the Group to make an estimate of the expected future cash flows from the cash-generating unit and also to choose a suitable discount rate in order to calculate the present value of those cash flows (Note 16).

The estimates used by the Group in the application of TFRS Interpretation 12 are as follows:

- The Company assesses that approximately 30% of the foreseen network investments related to the replacement of the network equipment which are reclassified to intangible assets and which are then recognized in the financial statements as intangible assets are the contractual replacements as required by the concession agreement. The Group has provided a provision amounting to TL 8.329 (31 December 2018: TL 8.167) (Note 21) in the consolidated financial statements for the foreseen contractual replacements in the future. Aforementioned provision is the present value of the contractual replacement expenses as at 31 December 2019 that will be realized in the future. Discount rate used in the provision calculation is determined as 19,10% (31 December 2018: 20,90%).
- In accordance with TFRS Interpretation 12, the Company has determined the cost of the investments in intangible assets recognized under the scope of TFRS Interpretation 12 by adding the profit margin, which is applied in the market for similar construction services, to the cost of acquiring the related network equipment. The estimated profit margin used in construction services provided in exchange for concession right is 13% (31 December 2018: 13%) for the year ended as of 31 December 2019. The profit margin of property, plant and equipment accounted within the scope of TFRS Interpretation 12 amounting to TL 1.023.117 (31 December 2018: TL 771.141) (Note 20) is TL 117.704 for the year ended as of 31 December 2019 (31 December 2018: TL 88.715) (Note 3).
- A deferred tax asset is recognized only to the extent that it is probable that a tax benefit will be realized in the future. If it is probable that a tax benefit will be realized, a deferred tax asset is recognized on unused tax losses, unused tax credits and other deductible temporary differences. With the expectation to recover certain part of its tax losses carried forward in Türk Telekom, TT Mobil and TTINT group has recognized deferred tax assets on statutory tax losses available for offsetting with future statutory taxable profits. Every year, the Group re-assesses its tax loss carry forwards and if there is a material change in the deferred tax asset recognized in the consolidated financial statements, the deferred tax assets are also changed (Note 11).
- Assumptions used in the impairment test of property, plant and equipment and intangible assets have been explained in Note 16.

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2. BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.5 Significant accounting assessments, estimates and assumptions (continued)

Key sources of estimation uncertainty (continued)

- For trade receivables, other receivables, other assets and contract assets the Group applies the simplified approach to providing for expected credit losses prescribed in TFRS 9, which requires the use of the lifetime expected loss provision for all trade receivables. The Group performed the calculation of ECL rates separately for individual, corporate, public and wholesale customers. The ECLs were calculated based on actual credit loss experience over the past years. Exposures within each group were segmented based on common credit risk characteristics such as delinquency status. Actual credit loss experience was adjusted to reflect differences between economic conditions during the period over which the historical data was collected, current conditions and the Group's view of economic conditions over the expected lives of the receivables. Future collection performance of receivables are estimated by considering general economic conditions to incorporate forward looking information to the expected credit loss calculations.
- Assumptions used by Company in goodwill impairment test are explained in Note 16. The Group determines the useful life of an asset by considering its future economic benefits. This evaluation is driven by the Group's previous experience on similar assets. The Group also considers useful life of the asset from technical and commercial perspectives due to changes and developments in market in order to assess whether additional impairment is required or not.

There are other estimations made by the management during the determination of provisions for litigations (Note 24).

3. SEGMENT REPORTING

The Group has two main segments; fixed line and mobile. Fixed line services are provided by Türk Telekom, TNet, Argela, Innova, Sebit, AssisTT, TTES and TTINT Group whereas mobile service is provided by TTMobil. Group management assesses segment performance over earnings before interest, tax, depreciation and amortization ("Adjusted EBITDA"). Adjusted EBITDA is calculated by adjusting the operating income by i) adding income/expense from investing activities, depreciation, amortization and impairment expenses and ii) deducting exchange gains/losses, interest and rediscount income/expenses on current accounts presented in other operating income and expense. Group management uses adjusted EBITDA as it is comparable with other companies in the sector. As Group management does not monitor Group's performance over geographical segments, geographical segment reporting is not presented. The segment results and balance sheet items are presented below:

	Fixed line		Mobile		Intra-group eliminations and consolidated adjustments		Consolidated	
	1 January - 31 December 2019	1 January - 31 December 2018	1 January - 31 December 2019	1 January - 31 December 2018	1 January - 31 December 2019	1 January - 31 December 2018	1 January - 31 December 2019	1 January - 31 December 2018
Revenue	16.358.177	14.177.217	8.956.853	7.590.420	(1.657.922)	(1.336.737)	23.657.108	20.430.900
Contributive revenue ^(*)	14.779.763	12.927.194	8.877.345	7.503.706	-	-	23.657.108	20.430.900
EBITDA	8.341.206	6.733.328	2.836.232	1.706.390	(7.534)	(3.955)	11.169.904	8.435.763
Contributive adjusted EBITDA ^(**)	7.348.135	5.836.919	3.821.769	2.598.844	-	-	11.169.904	8.435.763
Capital expenditure ^(***)	3.284.037	2.795.930	1.668.388	1.297.930	(12.816)	(7.358)	4.939.609	4.086.502

^(*) "Contributive revenue" represents operating segments' revenues from companies other than those included in the consolidated financial statements. Group management still monitors financial performance of the segments based on their separate financial statements and because of this there is no change at the segment information disclosed. However, contribution of operating segments on the Group's revenue is presented to give additional information to the readers of the financial statements.

^(**) "Contributive EBITDA" represents operating segments' EBITDA arose from transactions with companies other than those included in the consolidated financial statements and revised by allocation of intra-group charges for shared costs. Group management still monitors financial performance of the segments based on their separate financial statements and because of this there is no change at the segment information disclosed. However, contribution of operating segments on the Group's revenue is presented to give additional information to the readers of the financial statements.

^(***) Capital expenditures do not include TL 117.704 (31 December 2018: TL 88.715) amounted profit margin which is capitalized on intangible assets that are accounted within the scope of TFRS Interpretation 12.

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3. SEGMENT REPORTING (CONTINUED)

	1 January – 31 December 2019	1 January – 31 December 2018
Fixed line contributive EBITDA	7.348.135	5.836.919
Mobile contributive EBITDA	3.821.769	2.598.844
EBITDA	11.169.904	8.435.763
Foreign exchange gains, interest income, discount income on current accounts presented in other operating income	152.637	143.539
Foreign exchange losses, interest income, discount income on current accounts presented in other operating expense (-)	(308.115)	(416.569)
Financial income	855.042	1.422.499
Financial expense (-)	(4.388.744)	(7.872.319)
Depreciation, amortisation and impairment	(4.745.966)	(3.735.194)
Consolidated profit/(loss) before tax	2.734.758	(2.022.281)

31 December 2019	Fixed Line	Mobile	Eliminations	Consolidated
Total segment assets	29.529.061	11.266.952	(886.727)	39.909.286
Total segment liabilities	(27.160.226)	(4.184.931)	878.724	(30.466.433)
31 December 2018	Fixed Line	Mobile	Eliminations	Consolidated
Total segment assets	26.745.001	10.058.430	(604.920)	36.198.511
Total segment liabilities	(25.643.545)	(3.696.824)	595.461	(28.744.908)

4. CASH AND CASH EQUIVALENTS

	31 December 2019	31 December 2018
Cash on hand	196	143
Cash at banks- demand deposit	663.895	799.859
Cash at banks- time deposit	4.281.269	3.693.827
Other	710	707
	4.946.070	4.494.536

As of 31 December 2019, time deposits are all short-term, maturing within one month and denominated in both foreign currencies and TL. The interest rates are between 7,00% and 12,50% for TL deposits, between 0,10% and 3,60% for US Dollar deposits and between 0,05% and 1,15% for Euro deposits (31 December 2018: for TL deposits between 5,00% and 24,31%, for US Dollar deposits between 0,10% and 5,00%, for Euro deposits between 0,05% and 2,55%).

Reconciliation of cash and cash equivalents to the statement of cash flows is as follows:

	31 December 2019	31 December 2018
Cash and cash equivalents	4.946.070	4.494.536
Less: restricted amounts		
- Collection protocols and ATM collection	(298.342)	(341.553)
- Other	(230.070)	(254.891)
Unrestricted cash	4.417.658	3.898.092

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4. CASH AND CASH EQUIVALENTS (CONTINUED)

As of 31 December 2019, demand deposits amounting to TL 298.342 is restricted due to collection protocols signed with banks for receipts from the subscribers, under which proceeds are made available to the Group a certain number of days after the cash is collected (31 December 2018: TL 341.553). As of 31 December 2019, other restricted amounts mainly consist of blocked deposits related to Türk Telekom's derivative financial instruments.

As of 31 December 2019, the Group has bank loan amounting to Euro 113.000 (31 December 2018: Euro 59.930) which has been committed to banks and has not been utilized yet, having maturity 30 June 2021.

5. FINANCIAL LIABILITIES

Bank loans

	31 December 2019			31 December 2018		
	Weighted average nominal interest rate (%)	Original amount	TL equivalent	Weighted average nominal interest rate (%)	Original amount	TL equivalent
Short-term borrowings:						
Unsecured TL bank loans with fixed interest rates	10,77	1.241.601	1.241.601	4,51	51.598	51.598
Unsecured USD bank loans with fixed interest rates	2,55	13.000	77.223	-	-	-
Interest accruals:						
Unsecured TL bank loans with fixed interest rates		2.542	2.542		618	618
Unsecured USD bank loans with fixed interest rates		20	121		-	-
Short-term borrowings			1.321.487			52.216
Short-term portion of long-term bank loans:						
Unsecured USD bank loans with fixed interest rates	3,15	4.726	28.076	3,10	16.167	85.054
Unsecured USD bank loans with variable interest rates ^(*)	4,01	472.182	2.804.854	4,62	391.736	2.060.886
Unsecured EUR bank loans with variable interest rates ^(**)	1,18	263.977	1.755.608	1,29	310.007	1.868.725
Interest accruals of long-term bank loans:						
Unsecured USD bank loans with fixed interest rates		6	37		31	163
Unsecured USD bank loans with variable interest rates ^(*)		13.362	79.370		15.344	80.723
Unsecured EUR bank loans with variable interest rates ^(**)		1.025	6.817		1.782	10.742
Current portion of long-term borrowings			4.674.762			4.106.293
Total short-term borrowings			5.996.249			4.158.509
Long-term borrowings:						
Unsecured USD bank loans with fixed interest rates	-	-	-	3,10	4.720	24.837
Unsecured USD bank loans with variable interest rates ^(*)	4,01	890.624	5.290.486	4,62	1.360.641	7.158.194
Unsecured EUR bank loans with variable interest rates ^(**)	1,18	371.633	2.471.580	1,29	613.709	3.699.439
Total long-term borrowings			7.762.066			10.882.470
Total borrowings			13.758.315			15.040.979

^(*) As at 31 December 2019, interest rate varies between Libor+ 0,54% and 3,40% (31 December 2018: Libor + 0,54% and 3,40%)

^(**) As at 31 December 2019, interest rate varies between Euribor+ 0,25% and 2,60% (31 December 2018: Euribor + 0,28% and 2,60%)

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5. FINANCIAL LIABILITIES (CONTINUED)

Bank loans (continued)

The contractual maturities of total borrowings in equivalent of TL are as follows:

	31 December 2019					Total	31 December 2018					Total
	Up to 3 months	3 months to 1 year	1 year to 2 years	2 years to 5 years	More than 5 years		Up to 3 months	3 months to 1 year	1 year to 2 years	2 years to 5 years	More than 5 years	
Unsecured TL bank loans with fixed interest rates	1.235.790	8.353	-	-	-	1.244.143	52.216	-	-	-	-	52.216
Unsecured USD bank loans with fixed interest rates	77.344	28.113	-	-	-	105.457	-	85.217	24.837	-	-	110.054
Unsecured USD bank loans with variable interest rates	736.470	2.147.754	1.640.768	3.409.215	240.503	8.174.710	229.027	1.912.582	2.471.816	3.910.783	775.595	9.299.803
Unsecured EUR bank loans with variable interest rates	28.590	1.733.835	602.137	1.290.504	578.939	4.234.005	29.341	1.850.126	1.587.645	1.395.640	716.154	5.578.906
	2.078.194	3.918.055	2.242.905	4.699.719	819.442	13.758.315	310.584	3.847.925	4.084.298	5.306.423	1.491.749	15.040.979

Issued debt instruments

	31 December 2019			31 December 2018		
	Weighted average nominal interest rate (%)	Original amount	TL equivalent	Weighted average nominal interest rate (%)	Original amount	TL equivalent
Short-term portion of long-term issued debt instruments:						
USD issued debt instruments with fixed interest rates	-	-	-	3,75	494.447	2.601.235
Interest accruals of short-term portion of long-term term issued debt instruments:						
USD issued debt instruments with fixed interest rates	-	12.216	72.568	-	-	-
Short-term issued debt instruments		12.216	72.568		494.447	2.601.235
Long-term issued debt instruments:						
USD issued debt instruments with fixed interest rates	5,88	978.336	5.811.511	4,88	432.742	2.276.610
Long-term issued debt instruments:		978.336	5.811.511		432.742	2.276.610
Total issued debt instruments		990.552	5.884.079		927.189	4.877.845

The sales process of the bond issuances amounted to USD 500.000 with 6 years of maturity, and 6,875% coupon rate based on 7% reoffer yield was completed on February 28th, 2019. The bonds are now quoted at Irish Stock Exchange.

The sales process of the bond issuances amounted to USD 500.000 with 10 years of maturity, and 4,875% coupon rate based on 4,982% reoffer yield was completed on June 19th, 2014. The bonds are now quoted at Irish Stock Exchange.

The bond amounted to USD 500.000 with 5 years of maturity has matured and the amount of interest and principal has been redeemed on June 19th, 2019.

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5. FINANCIAL LIABILITIES (CONTINUED)

Issued debt instruments (continued)

The contractual maturities of issued long term bills, bonds and notes in equivalent of TL are as follows:

	31 December 2019					31 December 2018				
	Up to 3 months	3 months to 1 year	1 year to 5 years	More than 5 years	Total	Up to 3 months	3 months to 1 year	1 year to 5 years	More than 5 years	Total
Issued debt instruments	72.568	-	2.876.254	2.935.257	5.884.079	-	2.601.235	-	2.276.610	4.877.845
	72.568	-	2.876.254	2.935.257	5.884.079	-	2.601.235	-	2.276.610	4.877.845

Lease liabilities

As at 31 December 2019, the details of lease liabilities are as follows:

	Currency	Interest rate type	31 December 2019	
			Nominal interest rate	Carrying amount
Lease liabilities	TL	Fixed	11,0% - 22,0%	1.029.922
Lease liabilities	USD	Fixed	6,0% - 7,0%	33.892
Lease liabilities	EUR	Fixed	2,1% - 4,5%	73.138
Lease liabilities	Other	Fixed	3,3%	3.809
				1.140.761

6. TRADE RECEIVABLES FROM AND PAYABLES TO THIRD PARTIES

Trade receivables

	31 December 2019	31 December 2018
Short-term		
Trade receivables	8.111.653	7.569.664
Other trade receivables	242.899	182.899
Contract assets	892.274	628.766
Allowance for doubtful receivables (-)	(3.490.624)	(3.241.202)
Total short-term trade receivables	5.756.202	5.140.127
Long-term		
Trade receivables	236.402	128.182
Total long-term trade receivables	236.402	128.182

Trade receivables generally have a maturity term of 60 days on average (31 December 2018: 60 days).

The movement of the allowance for doubtful receivables is as follows:

	1 January 2019 - 31 December 2019	1 January 2018 - 31 December 2018
At January 1	(3.241.202)	(2.865.174)
Provision for the year, net	(251.434)	(375.602)
Change in currency translation differences	2.012	(426)
At 31 December	(3.490.624)	(3.241.202)

The Group waits up to 90 days before initiating legal action for overdue receivables. Based on its previous collection performance from overdue receivables, the Company expects to make significant collections from its overdue receivables.

Receivables guaranteed of the Group are amounted to TL 22.661 (31 December 2018: TL 37.073).

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6. TRADE RECEIVABLES FROM AND PAYABLES TO THIRD PARTIES (CONTINUED)

Trade payables

	31 December 2019	31 December 2018
Short-term		
Trade payables	3.765.466	3.268.880
Expense accruals	626.019	575.902
Other trade payables	125	342
Total short-term trade payables	4.391.610	3.845.124

The average maturity term of trade payables is between 30 and 150 days (31 December 2018: 30 and 150 days).

As of 31 December 2019, short term trade payables consists of payables within scope of supplier finance that amounting TL 975.830 (31 December 2018: TL 879.911).

7. RIGHT OF USE ASSETS

The carrying amounts of right-of-use assets as of 1 January 2019 and 31 December 2019 are as below:

	31 December 2019	1 January 2019
Site rent	910.710	925.815
Building	198.010	230.401
Vehicles	178.155	88.834
Other	78.650	72.857
Right of use assets	1.365.525	1.317.907

As at 31 December 2019 the Group capitalized amounting to TL 734.696 right of use asset.

As at 31 December 2019, the Group recognised amounting to TL 628.220 of depreciation charges and TL 199.700 of financial expense from these leases.

8. DUE FROM AND DUE TO RELATED PARTIES

All intra-group transactions and balances including intra-group unrealized profits and losses are eliminated for consolidation purposes and are not disclosed in this note.

Institutions under state control are defined as related parties due to 25% ownership and the golden share of the Treasury. State controlled entities are defined as related parties but in accordance with the exemption provided by the TAS 24 disclosure requirements, state controlled entities are excluded from general reporting requirements.

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8. DUE FROM AND DUE TO RELATED PARTIES (CONTINUED)

Details of balances and transactions between the Group and other related parties as at 31 December 2019 and 31 December 2018 are disclosed below:

	31 December 2019	31 December 2018
Due from related parties (Trade receivables-short term)		
Akbank T.A.Ş. ⁽¹⁾	6.210	4.061
Türkiye Garanti Bankası A.Ş. ⁽¹⁾	4.763	3.748
Türkiye İş Bankası A.Ş. ⁽¹⁾	820	2.680
	11.793	10.489
Due to related parties (Trade payables-short term)		
Akbank T.A.Ş. ⁽¹⁾	87	95
Türkiye Garanti Bankası A.Ş. ⁽¹⁾	-	15
	87	110
Due to related parties (Other payables-short term)		
Türkiye İş Bankası A.Ş. ⁽¹⁾	205.066	204.792
	205.066	204.792
Due to related parties (Other payables-long term)		
Türkiye İş Bankası A.Ş. ⁽¹⁾	-	170.164
	-	170.164
⁽¹⁾ Akbank T.A.Ş., Türkiye Garanti Bankası A.Ş. and Türkiye İş Bankası A.Ş. which are shareholders of LYY Telekomünikasyon A.Ş. are defined as related parties since 21 December 2018.		
As of 31 December 2019, other payables in other short and long term payables is related to discounted payable as a result of share transfer agreement in order to purchase 10,0035% share of TT Mobil's issued capital that will be sold to Group's customers as part of commitment sales.		
Deposits held by related parties	31 December 2019	31 December 2018
Türkiye İş Bankası A.Ş.		
Time Deposit	883.199	266.728
Demand Deposit	173.331	93.497
	1.056.530	360.225
Akbank T.A.Ş.		
Time Deposit	629.349	953.905
Demand Deposit	89.194	52.737
	718.543	1.006.642
Türkiye Garanti Bankası A.Ş.		
Time Deposit	8.670	1.265
Demand Deposit	51.756	66.701
	60.426	67.966
Bank loans from related parties	31 December 2019	31 December 2018
Türkiye İş Bankası A.Ş.	665.000	-
	665.000	-

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8. DUE FROM AND DUE TO RELATED PARTIES (CONTINUED)

Transactions with shareholders:

TT Mobil is required under the terms of the TT Mobil Concession Agreement, to pay 15% share to the Treasury (the Treasury Share) of its monthly gross revenue. Besides, the Company and its other subsidiaries that are operating in the telecommunications sector are required to pay universal service fund at 1% of their net revenues of each year and ICTA share at 0,35% of revenues to the Ministry of Transport, Maritime Affairs and Communications under the law Global Service Act numbered 5369. Also, according to Law numbered 7061 "Legislation on Amendment of Certain Tax Legislation and Other Certain Legislation, TT Mobil is required to pay 5% share (radio fee) of its monthly net revenue to ICTA.

As of 31 December 2019, unpaid portion of Treasury Share, universal service fund and ICTA share are recorded under other short term payables and these expenses are accounted in cost of sales account.

Guarantees provided to related parties:

As of 31 December 2019, guarantees amounting to EUR 108.019, USD 43.333 and EUR 300 are given for financial liabilities of TT Mobil, TTINT Turkey and TTINT Romania, which are amounted to EUR 108.325, USD 50.000 and EUR 300, respectively, by Türk Telekom.

Transactions with related parties:

	1 January - 31 December 2019
Interest income from related parties	
Akbank T.A.Ş.	46.537
Türkiye İş Bankası A.Ş.	5.836
Türkiye Garanti Bankası A.Ş.	2.927
	55.300
	1 January - 31 December 2019
Other income from related parties	
Akbank T.A.Ş.	57.404
Türkiye Garanti Bankası A.Ş.	49.319
Türkiye İş Bankası A.Ş.	31.965
	138.688

Compensation of key management personnel

The remuneration of board of directors and other members of key management were as follows:

	1 January - 31 December 2019	1 January - 31 December 2018
Short-term benefits	161.146	110.327
Long-term defined benefit plans	1.921	2.365
	163.067	112.692

9. OTHER RECEIVABLES AND PAYABLES

Other short term receivable

	31 December 2019	31 December 2018
Other short term receivable	72.936	62.948
Deposits and guarantees given	2.939	4.486
Other doubtful receivables	35.152	42.759
Allowance for other doubtful receivables (-)	(35.152)	(42.759)
	75.875	67.434

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9. OTHER RECEIVABLES AND PAYABLES (CONTINUED)

As of 31 December 2019, TL 34.118 (31 December 2018: TL 29.746) portion of other short term receivables consists of receivables from Ministry of Transport and Communications due to the expenses made under Universal Service Fund.

As of 31 December 2019, other doubtful provision amounting to TL 10.693 (31 December 2018: TL 18.989) is provided while TL 1.905 (31 December 2018: TL 416) is reversed.

Other long term receivables

	31 December 2019	31 December 2018
Deposits and guarantees given	35.529	38.480
	35.529	38.480

Other short term payable

	31 December 2019	31 December 2018
Taxes and duties payable	233.269	236.068
Universal Service Fund ⁽¹⁾	175.292	153.969
ICTA shares	165.374	140.205
Treasury share accruals	140.016	120.145
Other payables ⁽²⁾	213.936	248.570
	927.887	898.957

⁽¹⁾ According to the article numbered 5369 related with -International Service Fund- published on 16 June 2005, Türk Telekom, TTNNet and AssisTT will contribute 1% of their net revenues of each year to the Ministry of Transportation as Universal Service Fund. The contribution is payable by the end of April of the following year.

⁽²⁾ As of 31 December 2019, amounting to TL 189.403 in other short term payables is comprised of guarantees given for undue borrowings of distributors which are utilized in financing of equipment installments that were invoiced to Group's customers as part of commitment sales.

Other long term payables

	31 December 2019	31 December 2018
Deposits and guarantees received	38.795	32.040
Other payables	86	25.388
	38.881	57.428

10. INVENTORIES

The Group has inventory amounting to TL 252.042 as at 31 December 2019 (31 December 2018: TL 248.852). Major part of this balance is composed of modems, computer, tablet, dect phones, cable, cable box and SIM cards.

11. DEFERRED TAX ASSETS AND LIABILITIES

The Group calculates deferred tax assets and liabilities based on temporary differences arising between the carrying amount of assets and liabilities as reported under Turkish Accounting Standards and their tax base for statutory purposes. These temporary differences are mainly due to the timing differences of certain income and expense items in statutory and Turkish Accounting Standards financial statement as disclosed below.

The Group perpetually reassesses unrecognized deferred tax assets and decided to account for deferred tax assets arising from the tax losses carried forward based on the estimated taxable profits according to the business plan.

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11. DEFERRED TAX ASSETS AND LIABILITIES (CONTINUED)

As of 31 December 2019, Türk Telekom, TT Mobil and TTINT Group's unrecognized deductible tax losses that will be utilized upon the existence of a tax base and the expiration dates are as follows:

Expiration years	31 December 2019
2020	843.320
2021	1.437.454
2022	1.307.648
2023	1.605.596
2024	4.381
2025	2.421
2026	1.142
Indefinite	528.517
	5.730.479

As of 31 December 2019, deferred tax assets arising from prior year tax losses of Türk Telekom, TT Mobil and TTINT Group is amounting to TL 1.050.472 (31 December 2018: TL 1.183.983).

In addition, deferred tax assets over deductibles from taxable income determined as 50% of the interest to be calculated over cash capital increase amounts which are registered in Turkish Trade Registry or the interest calculated over the cash capital contributions of the newly established corporations amounting to TL 201.737 is recognized as at 31 December 2019 (31 December 2018: TL 136.591).

As of 31 December 2019, as explained Note 33, TT Mobil has investment allowances amounting to TL 301.141 for which deferred tax asset is not recognized (31 December 2018: TL 278.162).

As at 31 December 2019, 20% and 22% tax rate is used for the calculation of deferred tax assets and liabilities for companies established in Turkey depending on the estimation of on which years temporary differences will reverse (31 December 2018: 20% and 22%).

31 December 2019							
Deferred tax asset/(liability)	Net balance at 1 January 2019	Recognised in profit or loss	Recognised in OCI	Effect of movements in exchange rates	Net balance	Deferred tax asset	Deferred tax liability
Deferred tax asset recognized from tax losses carried forward	1.183.983	(146.885)	13.374	--	1.050.472	1.050.472	--
Deferred tax asset arising from capital increase	136.591	65.146	--	--	201.737	201.737	--
Provision for long-term employee benefits	153.942	6.776	15.455	--	176.173	176.173	--
Provision for doubtful receivables	42.835	(5.598)	--	--	37.237	38.122	(885)
Derivative instruments	102.333	(76.087)	56.082	--	82.328	82.328	--
Other	77.292	74.414	--	--	151.706	196.030	(44.324)
Issued debt instruments	(78.769)	31.541	49.418	--	2.190	2.190	--
Temporary differences on property, plant and equipment/intangible assets	(926.951)	(71.307)	(7.940)	922	(1.005.276)	23.042	(1.028.318)
Deferred tax asset/(liability) before net-off	691.256	(122.000)	126.389	922	696.567	1.770.094	(1.073.527)
Net-off of tax						(693.352)	693.352
Net deferred tax asset/(liability)					696.567	1.076.742	(380.175)

As of 31 December 2019, the total amount of deferred taxes related to transactions recognized directly in equity is TL 126.389 income (31 December 2018: TL 365.034 loss).

As of 31 December 2019, the total amount of the Group's unrecognised deferred tax asset related to subsidiaries is TL 630.752 (31 December 2018: TL 914.712).

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11. DEFERRED TAX ASSETS AND LIABILITIES (CONTINUED)

Deferred tax asset/(liability)	31 December 2018						
	Net balance at 1 January 2018	Recognised in profit or loss	Recognised in OCI	Effect of movements in exchange rates	Net balance	Deferred tax asset	Deferred tax liability
Deferred tax asset recognized from tax losses carried forward	577.482	571.772	34.729	--	1.183.983	1.183.983	--
Deferred tax asset arising from capital increase	75.684	60.907	--	--	136.591	136.591	--
Provision for long-term employee benefits	137.772	(8.235)	24.405	--	153.942	153.942	--
Provision for doubtful receivables	38.634	4.201	--	--	42.835	43.628	(793)
Derivative instruments	(61.455)	51.782	112.006	--	102.333	102.333	--
Other	43.158	34.134	--	--	77.292	137.033	(59.741)
Issued debt instruments	14.499	(31.278)	(61.990)	--	(78.769)	--	(78.769)
Temporary differences on property, plant and equipment/intangible assets	(422.148)	(31.783)	(474.184)	1.164	(926.951)	14.993	(941.944)
Deferred tax asset/(liability) before net-off	403.626	651.500	(365.034)	1.164	691.256	1.772.503	(1.081.247)
Net-off of tax						(875.990)	875.990
Net deferred tax asset/(liability)					691.256	896.513	(205.257)

12. OTHER CURRENT ASSETS, OTHER LIABILITIES AND EMPLOYEE BENEFIT OBLIGATIONS

Other current assets

	31 December 2019	31 December 2018
Value Added Tax ("VAT") and Special Communication Tax ("SCT")	162.719	106.803
Intermediary services for collection ^(*)	102.670	109.982
Advances given ^(**)	31.730	75.781
Other current assets	55.352	41.247
	352.471	333.813

^(*) Intermediary services for collections consist of advances given by the Group to its distributors.

^(**) Advances given mainly consists of advances given to suppliers.

Other current liabilities

	31 December 2019	31 December 2018
Advances received	101.604	132.261
Other liabilities	31.520	25.510
	133.124	157.771

Employee benefit obligations

	31 December 2019	31 December 2018
Employee's income tax payables	73.885	53.067
Social security premiums payable	66.166	52.617
Payables to personnel	50.166	60.633
	190.217	166.317

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12. OTHER CURRENT ASSETS, OTHER LIABILITIES AND EMPLOYEE BENEFIT OBLIGATIONS (CONTINUED)

Other non -current liabilities

	31 December 2019	31 December 2018
Advances received	115.369	118.033
	115.369	118.033

13. PREPAID EXPENSES AND DEFERRED REVENUES

Short-term prepaid expenses

	31 December 2019	31 December 2018
Prepaid rent expenses	4.605	202.754
Other prepaid expenses	153.136	105.123
	157.741	307.877

Other short term prepaid expenses consist of prepaid insurance, prepaid commissions, prepaid advertising and other prepaid expenses.

Long-term prepaid expenses

	31 December 2019	31 December 2018
Prepaid rent expenses	3.047	64.070
Other prepaid expenses	9.508	7.857
	12.555	71.927

Short-term contract liabilities

	31 December 2019	31 December 2018
Contract liabilities from sale of goods and service contracts ⁽¹⁾	372.984	331.150
	372.984	331.150

⁽¹⁾ Short-term contract liabilities mainly consists of invoiced but unconsumed services of deferred monthly fixed fee revenues due to the allocation of total consideration in the contract to all products and services under TFRS 15 and TTINT's indefeasible right of use contracts.

Long-term contract liabilities

	31 December 2019	31 December 2018
Contract liabilities from sale of goods and service contracts ⁽¹⁾	637.851	537.281
	637.851	537.281

⁽¹⁾ Long-term contract liabilities mainly result from TTINT's indefeasible right of use contracts.

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14. FINANCIAL INVESTMENTS

	31 December 2019	31 December 2018
Cetel	11.840	11.840
Other	2.853	155
	14.693	11.995

The Group holds 6,84% of shares of Cetel as equity investment and cost of Cetel is used as a measure for its fair value since management has insufficient more recent information to measure fair value.

15. DERIVATIVE FINANCIAL INSTRUMENTS

Cash flow hedges and derivative financial instruments

Interest rate swaps

As of 31 December 2019 fair value of interest rate derivative transactions amounting to TL 173.362 has been recognized under long term financial liabilities (31 December 2018: TL 84.004 long term financial liabilities). Unrealized loss on these derivatives amounting to TL 86.026 (31 December 2018: TL 29.530 gain) is recognized in other comprehensive income. Unrealized loss on these derivatives' time value amounting to TL 3.332 (31 December 2018: TL 3.855 gain) is recognized in statement of profit or loss.

Company	Notional Amount (US Dollar)	Trade Date	Terms and Maturity Date	Fair Value Amount as at 31 December 2019 (TL)
Türk Telekom	300.000	29 April - 20 May 2014	Pay fixed rates and receive floating rates between June 2016 and June 2024	(151.714)
Türk Telekom	150.000	15 May 2014 - 16 May 2014	Pay fixed rates and receive rates between June 2016 and August 2016, and June 2024 and August 2024	(21.648)
				(173.362)
Company	Notional Amount (US Dollar)	Trade Date	Terms and Maturity Date	Fair Value Amount as at 31 December 2018 (TL)
Türk Telekom	300.000	29 April - 20 May 2014	Pay fixed rates and receive floating rates between June 2016 and June 2024	(76.346)
Türk Telekom	150.000	15 May 2014 - 16 May 2014	Pay fixed rates and receive rates between June 2016 and August 2016, and June 2024 and August 2024	(7.658)
				(84.004)

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15. DERIVATIVE FINANCIAL INSTRUMENTS (CONTINUED)

Cash flow hedges and derivative financial instruments (continued)

Cross currency swap transaction

As of 31 December 2019 fair value of participating cross currency swap transactions amounting to TL 469.515 has been recognized under short term financial liabilities and TL 373.121 has been recognized under short term financial assets (31 December 2018: TL 366.901 short financial liabilities, TL 200.921 short term financial assets). Unrealized loss on these derivatives amounting to TL 211.137 (31 December 2018: TL 150.799 loss) is recognized in other comprehensive income.

Company	Notional Amount (US Dollar)	Trade Date	Amendment Date	Terms	Fair Value Amount as at 31 December 2019 (TL)
Türk Telekom	325.000	13 April 2016 – 15 December 2017	20 July 2018 – 3 August 2018	Pay TL and receive USD at June 2024	164.650
Türk Telekom	125.000	20 December 2018 – 21 March 2019		Pay TL and receive USD between May 2019 – November 2020	45.586
Türk Telekom	168.000 ⁽¹⁾	25 January 2019 – 18 March 2019		Pay TL and receive EUR between May 2019 – November 2020	65.543
Türk Telekom	100.000 ⁽¹⁾	27–28 March 2018	18–19 September 2018	Pay TL and receive EUR between December 2020 – December 2025	43.104
Türk Telekom	66.364 ⁽¹⁾	20 July 2018 – 1 August 2018	12–13 September 2018	Pay TL and receive EUR between November 2018 – November 2022	41.827
Türk Telekom	70.040	27–30 September 2019		Pay TL and receive USD between March 2020 – September 2025	2.094
Türk Telekom	39.016	22–23 July 2019		Pay TL and receive USD between October 2019 and October 2022	1.130
Türk Telekom	50.000	20 November 2019		Pay TL and receive USD between January 2020 – October 2022	9.187
					373.121

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15. DERIVATIVE FINANCIAL INSTRUMENTS (CONTINUED)

Cash flow hedges and derivative financial instruments (continued)

Cross currency swap transaction (continued)

Company	Notional Amount (US Dollar)	Trade Date	Amendment Date	Terms	Fair Value Amount as at 31 December 2019 (TL)
Türk Telekom	150.000	19 September 2018 – 11 October 2018		Pay TL and receive USD between March 2020 and April 2021	(41.788)
Türk Telekom	100.000	27-28 September 2018		Pay TL and receive USD at July 2022	(67.481)
Türk Telekom	100.000	11-12 October 2018		Pay TL and receive USD at January 2021	(33.563)
Türk Telekom	135.000	14 November 2018		Pay TL and receive USD between October 2019 – April 2024	(65.252)
Türk Telekom	85.150	25 October 2018 – 18 July 2019		Pay TL and receive USD between April 2019 – April 2025	(34.002)
Türk Telekom	79.678	13 November 2018 – 19 July 2019		Pay TL and receive USD between September 2019 – September 2025	(26.335)
Türk Telekom	175.000	31 March 2016	11 December 2018	Pay TL and receive USD at June 2024	(166.561)
Türk Telekom	27.000	29 May 2019		Pay TL and receive USD between May 2019 – November 2020	(10.434)
Türk Telekom	42.000	28 June 2019		Pay TL and receive USD at January 2020	(2.105)
Türk Telekom	30.000 ^(*)	4 June 2018	26 September 2018	Pay TL and receive EUR between November 2018 – November 2022	(12.390)
Türk Telekom	35.912 ^(*)	27-28 June 2019		Pay TL and receive EUR between September 2019 – September 2024	(8.710)
Türk Telekom	3.231 ^(*)	27 June 2019		Pay TL and receive EUR between December 2019 – June 2020	(129)
Türk Telekom	6.364 ^(*)	27 June 2019		Pay TL and receive EUR between November 2019 – May 2020	(451)
Türk Telekom	7.692 ^(*)	27 June 2019		Pay TL and receive EUR between December 2019 – June 2020	(314)
					(469.515)

^(*) Nominal amount of indicated operations are Euro.

Company	Notional Amount (US Dollar)	Trade Date	Amendment Date	Terms	Fair Value Amount as at 31 December 2018 (TL)
Türk Telekom	500.000	21 April 2015 – 9 July 2015	19 September 2018 – 8 October 2018	Pay TL and receive USD at June 2019	105.867
Türk Telekom	325.000	13 April 2016 – 15 December 2017	20 July 2018 – 3 August 2018	Pay TL and receive USD at June 2024	60.888
Türk Telekom	100.000 ^(*)	27-28 March 2018	18-19 September 2018	Pay TL and receive EUR between December 2020 – December 2025	16.181
Türk Telekom	94.545 ^(*)	20 July 2018 – 1 August 2018	12-13 September 2018	Pay TL and receive EUR between November 2018 – November 2022	17.985
					200.921

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15. DERIVATIVE FINANCIAL INSTRUMENTS (CONTINUED)

Cash flow hedges and derivative financial instruments (continued)

Cross currency swap transaction (continued)

Company	Notinal Amount (US Dollar)	Trade Date	Amendment Date	Terms	Fair Value Amount as at 31 December 2018 (TL)
Türk Telekom	150.000	19 September 2018 - 11 October 2018		Pay TL and receive USD between March 2020 and April 2021	(97.552)
Türk Telekom	100.000	27-28 September 2018		Pay TL and receive USD at July 2022	(83.141)
Türk Telekom	100.000	11-12 October 2018		Pay TL and receive USD at January 2021	(72.020)
Türk Telekom	138.000	14 November 2018		Pay TL and receive USD between October 2019 - April 2024	(42.849)
Türk Telekom	50.000	25 October 2018		Pay TL and receive USD between April 2019 - April 2025	(30.965)
Türk Telekom	56.600	13 November 2018		Pay TL and receive USD between December 2019 - December 2024	(17.703)
Türk Telekom	50.000	20 December 2018		Pay TL and receive USD between May 2019 - November 2020	(2.322)
Türk Telekom	45.000 (*)	4 June 2018	26 September 2018	Pay TL and receive EUR between November 2018 - November 2022	(20.349)
					(366.901)

(*) Nominal amount of indicated operations are Euro.

Copper hedge transactions

As of 31 December 2019 fair value of participating cross currency swap transactions amounting to TL 19.689 has been recognized under short term financial liabilities (31 December 2018: nil). Unrealized loss on these derivatives amounting to TL 19.689 is recognized in other comprehensive income.

Company	Notinal Amount (Tonnes)	Trade Date	Terms and Maturity Date	Fair Value Amount as at 31 December 2019 (TL)
Türk Telekom	9.047	10-18 October 2019	Pay floating price and receive fixed price between November 2019 and February 2021	(19.689)
				(19.689)

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15. DERIVATIVE FINANCIAL INSTRUMENTS (CONTINUED)

Interest rate derivative instruments which are not designated as hedge

As of 31 December 2019 fair value of the interest rate swap transactions which are not designated as hedge and amounting to TL 35.401 is recognized under long term financial assets (31 December 2018: TL 36.481 assets). Unrealized loss on these derivatives amounting to TL 1.080 (31 December 2018: TL 22.525 loss) recognized in profit or loss.

Company	Notional Amount (US Dollar)	Trade Date	Terms and Maturity Date	Fair Value Amount as at 31 December 2019 (TL)
Türk Telekom	300.000	29 April – 20 May 2014	Pay the difference between floating rate and 4% if floating rate exceeds 4%, between June 2016 and June 2021, and receive fixed premium (0,44%-0,575%) Pay the difference between floating rate and 6% if floating rate exceeds 6%, between June 2021 and June 2024, and receive fixed premium (0,39%-0,45%)	35.401
				35.401

Company	Notional Amount (US Dollar)	Trade Date	Terms and Maturity Date	Fair Value Amount as at 31 December 2018 (TL)
Türk Telekom	300.000	29 April – 20 May 2014	Pay the difference between floating rate and 4% if floating rate exceeds 4%, between June 2016 and June 2021, and receive fixed premium (0,44%-0,575%) Pay the difference between floating rate and 6% if floating rate exceeds 6%, between June 2021 and June 2024, and receive fixed premium (0,39%-0,45%)	36.481
				36.481

Cross Currency swaps instruments which are not designated as hedge

As of 31 December 2019, fair value of derivative transactions amounting to TL 48.149 is recognized under short term financial liabilities (31 December 2018: TL 282.033 short term financial liabilities).

USD/EUR Cross Currency Swaps Instruments

Company	Notional Amount (US Dollar)	Trade Date	Terms	Fair Value Amount as at 31 December 2019 (TL)
Türk Telekom	45.000	26 October 2018	Pay USD and receive EUR at June 2024	(11.934)
Türk Telekom	45.000	30 April 2015	Pay EUR and receive USD between June 2015 and June 2024	(5.435)
TTINT Türkiye	50.000	16 June 2016	Pay EUR and receive USD between December 2016 and June 2026	(1.666)
				(19.035)

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15. DERIVATIVE FINANCIAL INSTRUMENTS (CONTINUED)

Cross Currency swaps instruments which are not designated as hedge (continued)

USD/EUR Cross Currency Swaps Instruments (continued)

Company	Notional Amount (US Dollar)	Trade Date	Terms	Fair Value Amount as at 31 December 2018 (TL)
Türk Telekom	175.000	30 April 2015	Pay EUR and receive USD between June 2015 and June 2024	(66.688)
TTINT Türkiye	50.000	16 June 2016	Pay EUR and receive USD between December 2016 and June 2026	(3.802)
Türk Telekom	45.000	26 October 2018	Pay USD and receive EUR at June 2024	(1.958)
				(72.448)

USD/EUR Foreign Currency Swaps Instruments

Company	Notional Amount (US Dollar)	Trade Date	Terms	Fair Value Amount as at 31 December 2019 (TL)
Türk Telekom	410.000	22 November 2019 - 11 December 2019	Pay EUR and receive USD at January 2020	(29.114)
				(29.114)

USD/TL Cross Currency Swaps Instruments

Company	Notional Amount (US Dollar)	Trade Date	Amendment Date	Terms and Maturity Date	Fair Value Amount as at 31 December 2018 (TL)
Türk Telekom	175.000	31 March 2016	11 December 2018	Pay TL and receive USD at June 2024	(209.585)
					(209.585)

Hedge of net investment in a foreign operation

The Company utilized a loan amounting to Euro 150.000 in order to hedge its net investment in a foreign operation with a Euro functional currency. Foreign exchange gain and/or loss resulting from the subsidiary's net investment portion of this loan is reclassified to reserve for hedge of net investment in a foreign operation under equity.

16. GOODWILL

	31 December 2019	31 December 2018
Goodwill of TT Mobil	29.694	29.694
Goodwill of Innova	7.308	7.308
Goodwill of Argela	7.942	7.942
	44.944	44.944

The Group performs impairment analysis for goodwill and other non-current asset groups annually as at 31 December. The Group has performed impairment analysis for all of the identified cash generating units.

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16. GOODWILL (CONTINUED)

Türk Telekom and TTNET cash generating unit impairment analysis

For cash generating unit impairment analysis of Türk Telekom and TTNET, total assets and liabilities are considered as one cash generating unit. Recoverable amount is calculated through 5 years business plan which is approved by the management.

The discount ratio used for the cash flows is 19,1% (31 December 2018: Corporate tax would pay 22% are 20,8% - 23,7% and between 17,0% - 20,2% for other period), 7% expected growth rate and the weighted average cost of capital (WACC) sensitivity as of +1%/-1% (31 December 2018: +1%/-1%). Cash flow projections after 2024, TL cash flow estimations are not projected with consideration of inflation rate of business plan and expected growth rate of the country. As a result of test, no impairment is identified for the cash generating unit.

TT Mobil cash generating unit impairment test

TT Mobil have been considered as a single cash generating unit and has been tested for impairment together for goodwill and all other assets. Recoverable amount is calculated through based on 5 years business plan which is approved by the management.

The discount ratio used for the cash flows is 18,9% (31 December 2018: Corporate tax would pay 22% are 22,1% - 25,1% and between 18,3% - 21,5% for other period). Cash flow projections after 2024 are estimated by using 11% growth rate, considering the inflation rate used in the business plan and expected growth rate of TT Mobil. Company value of TT Mobil has been tested at a sensitivity of WACC terminal growth rate by +1%/-1% (31 December 2018: 1%/-1%). As a result of the impairment test, it has been noted that there is no impairment is identified on goodwill arising on the TT Mobil acquisition.

Innova and Argela cash generating unit impairment test

Innova and Argela, are both considered as single cash generating unit and are tested for impairment of for goodwill and all of their other assets. Recoverable amount was determined through the usage value which is calculated based on the 5 years business plan approved by the management. The estimated value of the projected cash flows consists of the discounted cash flows until 2024. Cash flow projections beyond 2024 are estimated by using 7% growth rate, for both Innova and Argela, respectively, considering the inflation rate used in the business plan and expected growth rate of the country. The discount ratio used for the cash flows is 23,6% for Innova (31 December 2018: Corporate tax would pay as 22% is 25,5% - 28,5% for Innova and 21,3% - 24,7% for other periods) and 24,6% for Argela (31 December 2018: Corporate tax would pay as 22% is 25,9%-29,1% and 21,7% and 25,1% for other period for Argela). Valuation has been tested at a sensitivity of +1%/-1%. For the WACC calculation, technology companies have been taken as a benchmark for the calculation of the beta coefficient. As a result of the impairment test, no impairment is identified for the cash generating units and the goodwill arising from the acquisition of Argela and Innova.

TTINT cash generating unit impairment test

TTINT cash generating unit recoverable amount is determined over the usage value which had been calculated based on the seven years business plan approved by the management. The estimated value of the projected cash flows consists of the discounted cash flows until 2026. The valuation work has been carried out based on a seven-year business plan so that the company's long-term cash generating capacity can be measured more accurately. The WACC rate used in valuation is 9% (31 December 2018: 9%) and valuation is tested at a sensitivity of +0,5%/-0,5%. For the WACC calculation, telecommunication companies are considered as a benchmark for the calculation of the beta coefficient. As a result of test, no impairment is identified for the cash generating unit.

Sebit cash generating unit impairment test

In cash generating unit impairment analysis for Sebit, total assets and liabilities were considered as one cash generating unit. Recoverable amount was determined through the usage value which had been calculated based on the five years business plan approved by the management. The discount ratio used for the cash flows is 22,9% (31 December 2018: Corporate tax would pay as 22% is 25,6% - 28,6% and between 21,5% - 24,9% for other periods). The estimated value of the cash flows consists of the ones which were discounted until 2024. The growth rate for the current and subsequent terms was foreseen as 11% by considering the inflation rate stated in cash flow estimations business plan and the estimated growth rate of the country. Cash generating unit value was tested with +1%/-1% WACC and growth rate sensitivity of the cash flows (31 December 2018: +1%/-1%). As a result of test, no impairment is identified for the cash generating unit) (Note 20).

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17. ASSETS HELD FOR SALE

The Group measures assets held for sale at the lower of its carrying amount and fair value less costs to sell.

Asset held for sale for the years ended 31 December 2019 and 2018 is given net book value TL 37.361.

18. INVESTMENT PROPERTY

The movement of investment property and the related accumulated depreciation for the years ended 31 December 2019 and 2018 is given below:

	1 January 2019 – 31 December 2019	1 January 2018 – 31 December 2018
Cost		
Opening balance	43.012	43.012
Transfer	(2.965)	-
As at 31 December	40.047	43.012
Accumulated depreciation		
Opening	22.818	20.636
Transfer	(1.897)	-
Depreciation charge for the year	1.427	2.182
As at 31 December	22.348	22.818
Net book value as at 31 December	17.699	20.194

Investment property consists of number of buildings and lands mainly occupied by various corporations.

The Group assesses whether there is any impairment indicator in investment properties. If such indicator exists the Group compares fair values and carrying values of the investment properties on an individual asset basis and records identified impairment of the investment properties.

In accordance with balance between cost and benefit principle the fair values of all investment properties are not determined in each year, instead selected investment properties' fair values have been determined. In this context, fair values of the investment properties as of the balance sheet date are not presented.

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19. PROPERTY, PLANT AND EQUIPMENT

The movement of PPE and the related accumulated depreciation for the years ended 31 December 2019 and 2018 is given below:

	Land	Buildings	Network and other equipment	Vehicles	Furnitures and fixtures	Other fixed assets	Construction in progress	Total
Cost								
Opening balance, 1 January 2019	5.354.613	2.015.354	40.503.612	111.308	837.872	254.684	439.411	49.516.854
Transfer	(3.183)	44.624	301.125	79	35.455	(2.265)	(469.176)	(93.341)
Additions	434	42.760	1.642.050	3.728	46.074	4.356	516.682	2.256.084
Revaluation	76.021	-	-	-	-	-	-	76.021
Disposal	(645)	(13.635)	(916.281)	(6.308)	(49.942)	(266)	-	(987.077)
Foreign currency translation differences	811	2.315	157.391	(230)	1.714	458	1.051	163.510
Closing balance, 31 December 2019	5.428.051	2.091.418	41.687.897	108.577	871.173	256.967	487.968	50.932.051
Accumulated depreciation								
Opening balance, 1 January 2019	-	1.425.815	32.803.564	101.581	708.042	223.799	-	35.262.801
Transfer	-	1.378	(6.023)	-	3.158	(256)	-	(1.743)
Depreciation charge for the year	-	97.156	1.630.223	4.011	45.042	9.122	-	1.785.554
Disposal	-	(13.635)	(895.235)	(6.047)	(44.078)	(191)	-	(959.186)
Impairment	-	10.590	14.491	-	-	-	-	25.081
Foreign currency translation differences	-	642	107.335	77	1.406	425	-	109.885
Closing balance, 31 December 2019	-	1.521.946	33.654.355	99.622	713.570	232.899	-	36.222.392
Net book value, 31 December 2019	5.428.051	569.472	8.033.542	8.955	157.603	24.068	487.968	14.709.659

As of 31 December 2019, net book value of leased assets of Group composes of vehicles and land buildings amounting respectively TL 2.417, TL 4.878 (31 December 2018: land and buildings amounting to TL 40.507).

The Group does not have any capitalized borrowing cost on property, plant and equipment (31 December 2018: nil).

There is no restriction or pledge on the intangible as at 31 December 2019.

For the year ended 31 December 2019, impairment on property, plant and equipment amounting to TL 14.874 is recognized in cost of sales (31 December 2018: TL 10.133), and TL 10.207 is recognized in general administrative expenses (31 December 2018: TL 6.166).

As at 31 December 2019, net increase in carrying amount of lands amounting to TL 76.021 which is valued during the year by real estate valuation companies licensed by CMB is recognized in other comprehensive income. Valuation companies that performed the valuations are Metrik Gayrimenkul Değerleme Danışmanlık A.Ş., Düzey Gayrimenkul Değerleme ve Danışmanlık A.Ş., May Gayrimenkul Değerleme A.Ş., Kuzey Kurumsal Gayrimenkul Değerleme ve Danışmanlık A.Ş., Ekip Taşınmaz Değerleme A.Ş., DE-GA Gayrimenkul Değerleme ve Danışmanlık A.Ş., Değer Gayrimenkul Değerleme ve Danışmanlık A.Ş., Anreva Kurumsal Gayrimenkul Değerleme ve Danışmanlık A.Ş., Net Kurumsal Gayrimenkul Değerleme ve Danışmanlık A.Ş., Lal Gayrimenkul Değerleme ve Müşavirlik A.Ş., Vakıf Gayrimenkul Değerleme A.Ş., Bilgi Gayrimenkul Değerleme A.Ş., Detay Taşınmaz Değerleme ve Danışmanlık A.Ş., Piramit Gayrimenkul ve Değerleme Danışmanlık A.Ş., Vizyon Taşınmaz Değerleme ve Danışmanlık A.Ş., Atak Gayrimenkul Değerleme A.Ş., Epos Gayrimenkul Danışmanlık ve Değerleme A.Ş., Prime Gayrimenkul Değerleme ve Danışmanlık A.Ş., Eksen Gayrimenkul Değerleme ve Danışmanlık A.Ş.

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19. PROPERTY, PLANT AND EQUIPMENT (CONTINUED)

	Land	Buildings	Network and other equipment	Vehicles	Furnitures and fixtures	Other fixed assets	Construction in progress	Total
Cost								
Opening balance, 1 January 2018	526.973	1.781.199	38.740.099	128.031	821.492	245.898	950.365	43.194.057
Transfer	-	159.469	733.567	440	241	420	(1.170.370)	(276.233)
Additions	70.519	75.337	1.267.278	4.089	37.176	7.881	634.984	2.097.264
Revaluation	4.758.000	-	-	-	-	-	-	4.758.000
Disposal	(2.835)	(6.305)	(610.676)	(22.583)	(24.677)	(698)	-	(667.774)
Foreign currency translation differences	1.956	5.654	373.344	1.331	3.640	1.183	24.432	411.540
Closing balance, 31 December 2018	5.354.613	2.015.354	40.503.612	111.308	837.872	254.684	439.411	49.516.854
Accumulated depreciation								
Opening balance, 1 January 2018	-	1.328.827	31.742.826	121.221	672.757	212.906	-	34.078.537
Transfer	-	(10.795)	(10.379)	-	(7)	-	-	(21.181)
Depreciation charge for the year	-	103.355	1.466.753	2.397	53.037	10.595	-	1.636.137
Disposal	-	(4.151)	(597.731)	(22.437)	(19.753)	(653)	-	(644.725)
Impairment	-	6.166	10.133	-	-	-	-	16.299
Foreign currency translation differences	-	2.413	191.962	400	2.008	951	-	197.734
Closing balance, 31 December 2018	-	1.425.815	32.803.564	101.581	708.042	223.799	-	35.262.801
Net book value, 31 December 2018	5.354.613	589.539	7.700.048	9.727	129.830	30.885	439.411	14.254.053

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20. INTANGIBLE ASSETS

	Licence	Customer relationship	Research and Development	Other intangible assets	Subscriber acquisition/retention costs	Concession rights	Total
Cost							
Opening balance, 1 January 2019	4.551.444	1.155.301	414.419	7.211.764	2.256.315	4.584.505	20.173.748
Transfers	2.555	-	4.567	86.185	-	2.281	95.588
Disposals	(155)	-	-	(132.054)	-	(4.220)	(136.429)
Additions ⁽¹⁾	-	-	30.414	982.619	764.917	1.023.117	2.801.067
Foreign currency translation differences	964	28.136	311	118.227	-	-	147.638
Closing balance, 31 December 2019	4.554.808	1.183.437	449.711	8.266.741	3.021.232	5.605.683	23.081.612
Accumulated amortization							
Opening balance, 1 January 2019	1.550.366	1.029.902	269.889	5.045.151	1.231.978	1.308.367	10.435.653
Transfers	-	-	-	641	-	2.281	2.922
Disposals	(155)	-	-	(29.853)	-	(299)	(30.307)
Amortization charge for the year	308.073	18.628	46.664	929.676	562.669	434.997	2.300.707
Impairment	-	-	-	4.900	-	-	4.900
Foreign currency translation differences	449	23.922	310	60.203	-	-	84.884
Closing balance, 31 December 2019	1.858.733	1.072.452	316.863	6.010.718	1.794.647	1.745.346	12.798.759
Net book value, 31 December 2019	2.696.075	110.985	132.848	2.256.023	1.226.585	3.860.337	10.282.853

⁽¹⁾ Additions amounting to TL 1.023.117 (31 December 2018: TL 771.141) comprise intangible assets under scope of TFRS Interpretation 12.

The Group have capitalized borrowing cost on intangible assets amounted TL 1.040 (31 December 2018: TL 1.512).

For the year ended 31 December 2019, impairment on intangible assets amounting to TL 4.900 is recognized in cost of sales and no impairment recognized in general administration expenses (31 December 2018: general administration expenses TL 1.132).

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20. INTANGIBLE ASSETS (CONTINUED)

	Licence	Customer relationship	Research and Development	Other intangible assets	Subscriber acquisition/retention costs	Concession rights	Total
Cost							
Opening balance, 1 January 2018	4.547.210	1.086.949	374.473	6.007.064	-	3.838.973	15.854.669
Adjustments in accounting policies	-	-	-	-	1.595.042	-	1.595.042
Transfers	1.432	-	18.617	337.864	-	(14.993)	342.920
Disposals	-	-	-	(27.810)	-	(10.616)	(38.426)
Additions ^(*)	1.163	-	20.077	624.299	661.273	771.141	2.077.953
Foreign currency translation differences	1.639	68.352	1.252	270.347	-	-	341.590
Closing balance, 31 December 2018	4.551.444	1.155.301	414.419	7.211.764	2.256.315	4.584.505	20.173.748
Accumulated amortization							
Opening balance, 1 January 2018	1.241.907	980.791	221.670	3.988.523	-	984.242	7.417.133
Adjustments in accounting policies	-	-	-	-	751.839	-	751.839
Transfers	-	-	-	93.739	-	(5.871)	87.868
Disposals	-	-	-	(23.676)	-	(10.616)	(34.292)
Amortization charge for the year	307.896	15.317	46.967	887.729	480.139	340.612	2.078.660
Impairment	-	-	-	1.132	-	-	1.132
Foreign currency translation differences	563	33.794	1.252	97.704	-	-	133.313
Closing balance, 31 December 2018	1.550.366	1.029.902	269.889	5.045.151	1.231.978	1.308.367	10.435.653
Net book value, 31 December 2018	3.001.078	125.399	144.530	2.166.613	1.024.337	3.276.138	9.738.095

For the year ended 31 December 2019, depreciation and amortization expense is recognized cost of sales, sales and distribution expenses, general administration expenses and research and development expenses respectively amounting to TL 3.024.297, (31 December 2018: TL 2.359.908), TL 1.089.194 (31 December 2018: TL 890.621) and TL 571.524 (31 December 2018: TL 443.584), TL 30.970 (31 December 2018: TL 23.909), respectively.

Remaining amortization periods after acquisition of significant intangible assets are as follows:

TT Mobil license	9,4 years
TTINT customer relationships	5,8 years
TTINT other	10,8 years

There is no restriction or pledge on the intangible as at 31 December 2019 (31 December 2018: nil).

3G license tender

The tender for authorization of IMT-2000/UMTS services has been held on 28 November 2008 with the participation of all three GSM operators operating in Turkey.

The license fee (including 18% VAT) amounting to TL 539.332 is paid by TT Mobil in April 2009 and ultimately the Concession Agreement is signed on 30 April 2009.

The net book value of the 3G license as at 31 December 2019 225.346 is TL (31 December 2018: TL 249.069).

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20. INTANGIBLE ASSETS (CONTINUED)

GSM 900 additional frequency band tender

The tender for the reallocation of unused 900 MHz Frequency Bands had been held on 20 June 2008 and TT Mobil had obtained C band with the minimum fee of TL 128 year/channel (excluding VAT).

TT Mobil had been granted 5,5 additional GSM 900 MHz frequency channels as a result of the tender and ultimately total number of GSM 900 MHz frequency channels has reached to 12 together with previously-held 6,5 channels.

TT Mobil made TL 14.122 (including VAT) payment as the tender fee for the remaining GSM license duration and amended license agreement has been signed between TT Mobil and ICTA on 25 February 2009.

The net book value of the GSM 900 license as at 31 December 2019 is 4.304 TL (31 December 2018: TL 5.011)

4.5G license tender

Tender of IMT Services and Infrastructures Authorization, also known as 4.5G tender in public has been held in Ankara on August 26, 2015 by ICTA. In the IMT Service and Infrastructure Authorization Tender done by ICTA, TT Mobil has won the following packages: 2x10 MHz bandwidth in 800 MHz frequency for Euro 380.000, 2x7.6 MHz bandwidth in 900 MHz frequency for Euro 216.819, 2x20 MHz bandwidth in 1800 MHz frequency for Euro 310.000, 2x10 MHz bandwidth in 2600 MHz frequency for Euro 25.859, 1x15 MHz bandwidth in 2600 MHz frequency for Euro 22.000. Total spectrum fee is Euro 954.678. IMT Authorization period is valid until 30 April 2029 and will be able to start rendering services starting from 1 April 2016. 900 MHz and services in 1.800 MHz frequency are commenced to be rendered since 1 December 2015. The Company will pay the tender fee (including interest) in four equal installments amounting to Euro 973.396 (excluded VAT).

As of 31 December 2019 net book value of 4.5G license amounts to TL 2.156.662 (31 December 2018: TL 2.387.733) in the consolidated financial statements.

21. PROVISIONS

Other current provisions

The movement of other current provisions is as follows:

	31 December 2019	31 December 2018
Litigation, ICTA penalty and customer return provisions	190.381	145.364
Provision for expected credit losses on loan commitments ⁽¹⁾	37.167	100.809
	227.548	246.173

⁽¹⁾ Consists of expected credit losses are recognized for the guarantees given for borrowings of distributors which are utilized in financing of equipment purchases that will be sold to Group's customers as part of commitment sales.

The movement of provisions is as follows:

	1 January - 31 December 2019	1 January - 31 December 2018
As at 1 January	145.364	433.238
Provisions for the period	109.460	88.524
Settled provisions	(6.404)	(370.588)
Reversals	(57.863)	(5.859)
Foreign currency translation difference	(176)	49
As at 31 December	190.381	145.364

Current provisions for employee benefits

	31 December 2019	31 December 2018
Current provisions for employee benefits		
Personnel bonus provision	223.552	230.191
	223.552	230.191

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21. PROVISIONS (CONTINUED)

The movement of provisions is as follows:

	1 January - 31 December 2019	1 January - 31 December 2018
As at 1 January	230.191	162.906
Provision for the period	297.899	252.453
Provisions paid	(274.148)	(153.578)
Reversals	(29.861)	(32.641)
Foreign currency translation difference	(529)	1.051
As at 31 December	223.552	230.191
Non-current provisions for employee benefits		
	31 December 2019	31 December 2018
Non-current provisions for employee benefits		
Defined benefit obligation	913.107	795.371
Unused vacation provisions	131.538	111.801
	1.044.645	907.172

Defined benefit obligation

In accordance with existing social legislation in Turkey, companies are required to make lump-sum payments to employees whose employment is ended due to retirement or for reasons other than resignation or misconduct. The liability is not funded and accordingly there are no plan assets for the defined benefits as there is no funding requirement.

The retirement pay liability as at 31 December 2019 is subject to a ceiling of full TL 6.379,86 31 December 2019 (31 December 2018: full TL 5.434,42) per monthly salary for each service year.

In addition to retirement benefits, the Group is liable for certain other long-term employment benefits such as business, service, representation indemnity and jubilee.

i) The movement of defined benefit obligation is as follows:

	1 January - 31 December 2019	1 January - 31 December 2018
Defined benefit obligation at January 1	795.371	711.040
Service cost	88.002	53.364
Interest cost	91.679	64.738
Actuarial loss ^(*)	79.715	126.172
Benefits paid	(142.041)	(159.971)
Foreign currency translation difference	381	28
As at 31 December	913.107	795.371

^(*) As at 31 December 2019, actuarial loss amounting to TL 79.715 (31 December 2018: TL 126.172) is recognized in other comprehensive income.

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21. PROVISIONS (CONTINUED)

Non-current provisions for employee benefits (continued)

Defined benefit obligation (continued)

ii) Total expense recognized in the consolidated income statement:

	1 January - 31 December 2019	1 January - 31 December 2018
Interest cost	91.679	64.738
Service cost	88.002	53.364
Total net cost recognized in the consolidated statement of income	179.681	118.102

iii) Principal actuarial assumptions used:

	31 December 2019	31 December 2018
Interest rate	13%	15%
Expected rate of ceiling increases	8%	10%

For the years ahead, voluntary employee withdrawal of the Group is 2,24% (31 December 2018: 2,36%).

As of 31 December 2019, sensitivity analysis is performed for the significant assumptions of defined benefit obligation:

Sensitivity Level	Discount Rate		Salary Increase Rate		Employee Withdrawal Rate	
	0,25% decrease (14,75%)	0,25% increase (15,25%)	0,25% decrease (9,75%)	0,25% increase (10,25%)	0,25% decrease	0,25% increase
No effect to defined benefit obligation	16.420	(14.240)	(14.954)	17.092	(2.572)	3.733

Non-current employee benefits excluding defined benefit obligation

The movement of unused vacation provisions is as follows:

	1 January - 31 December 2019	1 January - 31 December 2018
As at 1 January	111.801	102.353
Provision for the period, net	27.047	18.876
Provisions paid	(7.535)	(10.131)
Foreign currency translation difference	225	703
As at 31 December	131.538	111.801

Other long-term provisions

	31 December 2019	31 December 2018
Provision for the investments under the scope of TFRS Interpretation 12	8.329	8.167
	8.329	8.167

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22. PAID IN CAPITAL, RESERVES AND RETAINED EARNINGS

As of 31 December 2019 and 2018, the shareholders of the Company with their shareholding percentage are as follows:

		31 December 2019		31 December 2018	
	%	TL	%	TL	
The Treasury	25	875.000	25	875.000	
Levent Telekomünikasyon A.Ş.	55	1.925.000	55	1.925.000	
Public Share	15	525.000	15	525.000	
Turkish Wealth Fund ("TWF") ^(*)	5	175.000	5	175.000	
		3.500.000		3.500.000	
Inflation adjustment to share capital		(239.752)		(239.752)	
		3.260.248		3.260.248	

* Council of Ministers decided to transfer 6,68% (5% Group B, 1,68% Group D) of the shares of the Company belonging to the Undersecretariat of Treasury to the Turkish Wealth Fund with regards to Law on Establishment of Turkish Wealth Fund Management Incorporated and on Amending Certain Laws numbered 6741 and dated 19 August 2016.

The Company's share capital is fully paid. Capital of the Company is TL 3.500.000.000, divided into 192.500.000.000 Group "A", 104.999.999.999 Group "B", 1 Group "C", and 52.500.000.000 Group "D" registered shares each with a nominal value of 1 (One) Kuruş. Group D shares are publicly traded. LYY is the holder of all Group A shares; SWF is the holder of Group B shares representing 5 percent of the share capital of the Company and Group D Shares representing 1.68 percent of the share capital of the Company; the Treasury is the holder of Group B shares representing 25 percent of the share capital of the Company and C Group share (Golden Share).

The Treasury is the holder of the Preferred Stock (Golden Share) as per the law. This share is non-transferable. It provides certain rights to Treasury in order to protect national interests regarding economy and security: (a) Any proposed amendments to the Company's articles of association, (b) the transfer of any registered shares in the Company which would result in a change in the management control of the Company and (c) the registration of any transfer of registered shares in the Company's shareholders' ledger can not be realized without affirmative vote of the Golden Share at either a meeting of the board of directors or the general assembly. Otherwise, such transactions shall be deemed invalid. The holder of the Golden Share, the Treasury, has one member, representing the Golden Share, among the Board of Directors.

Number of members and independent board members of the Board of Directors to be nominated by the Group A and Group B Shareholders have been revised by the amendment to the article 8 of the Articles of Association at on the Extraordinary General Meeting dated 25 January 2019 Accordingly;

The board of directors shall be composed of nine (9) members nominated by the Group A Shareholder, Treasury and Turkish Wealth Fund,

- (a) the Group A Shareholder shall be entitled to nominate five (5) persons for election as Directors;
- (b) provided that the Treasury and Turkish Wealth Fund, as Group B Shareholders shall hold:
 - 30% or more of the Shares, the Treasury shall be entitled to nominate three (3) persons for election as Independent Board Members who carry the independence criteria as defined in the Capital Markets legislation; or
 - 15% or more of the Shares (but less than 30% of the Shares) the Treasury shall be entitled to nominate two (2) persons for election as Independent Board Members who carry the independence criteria as defined in the Capital Markets legislation;
 - During the calculation of 15% and 30% of the Shares mentioned in above paragraphs, the amount of Group B Shares and Group D Shares held by the Treasury and Turkish Wealth Fund shall be taken into account together.
- (c) As long as the Treasury and Turkish Wealth Fund holds 15% or more of the Shares (but less than 30% of the Shares), the Group A shareholder shall be entitled to nominate one (1) person, who carry the independence criteria as defined in the Capital Markets legislation, for election as Independent Board Members and five (5) persons for election as Director.
- (d) while the Treasury holds the C Group Privileged Share, the Treasury shall be entitled to nominate, a further one (1) person, for election as Director for the C Group Privileged Share.

The chairman of the board of directors shall be nominated by the directors nominated by the group A shares from among the directors and be elected and removed by the simple majority votes of those present at the meeting of the board of directors.

The Vice Chairman shall be nominated by the directors nominated by the Group B Shares from among the Directors and be elected and removed by the simple majority votes of those present at the meeting of the Board of Directors.

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22. PAID IN CAPITAL, RESERVES AND RETAINED EARNINGS (CONTINUED)

Board resolutions shall be passed by a simple majority of the votes of the directors present at such meeting unless the resolution requires a higher majority vote.

The board of directors shall propose the distribution of the maximum of the Company's profits lawfully available for distribution in each financial year subject to the board of directors making reasonable provisions and transfers to reserves.

Based on the articles of association of the Company, the Board of Directors shall by way of a simple majority of those present at the relevant meeting of the Board propose the distribution of the maximum of the Company's profits lawfully available for distribution in each financial year subject to the Board making reasonable provisions and transfers to reserves and complying with the conditions set out below.

Provided that it is not against the legislation regarding capital markets, the net profit may not be distributed, if:

- the distribution would result in a breach of any covenant or undertaking given by any Group Company (Group Companies are defined in the articles of association) to any lender or would, in the opinion of the simple majority of those present at the relevant meeting of the board of directors, be likely to cause such breach within the following 12 months; or
- the board of directors resolves by way of a simple majority of those present at the relevant meeting of the board that the distribution is materially prejudicial to the interests of any Group Company (as defined in the articles of association of the Company) having regard to: (i) implementation of the investment program approved by the board of directors in the business plan or the budget; or (ii) the trading prospects of the Group Companies (as defined in the articles of association of the Company) and the need to maintain the sound financial standing of the group companies.

In accordance with the Turkish Commercial Code, companies are required to assign legal reserves before profit appropriations. The legal reserve consists of first and second legal reserves, allocated in accordance with the Turkish Commercial Code. The first legal reserve is allocated out of last period's statutory profits at the rate of 5% per annum until the total reserve reaches 1/5 of the paid-in share capital (not indexed to the inflation). The second legal reserve is allocated after the first legal reserve and dividends, at the rate of 10% per annum of all cash dividend distributions

Dividends

During the year ended 31 December 2019 there is no consolidated profit for the year 2018, no amount is determined as available for dividend distribution.

During the year ended 31 December 2018, the Company's 2017 consolidated net income has been compared with its statutory net income and TL 1.135.532 was determined as an amount available for dividend distribution. Company's Board of Directors decided that on 8 February 2018, 2017 net profit in the amount of TL 1.135.532 shall be set aside, as the extraordinary legal reserve in order to further strengthen the balance sheet structure under the provisions of the Company's Articles of Association. This decision has subjected to the Company's Ordinary General Assembly was convened for the year 2017.

Other reserves

The amounts transferred directly to equity, instead of statement of profit or loss as of the reporting date are as follows:

	31 December 2019	31 December 2018
Gains on revaluation of property, plant and equipment	4.351.897	4.283.816
Currency translation differences	471.382	417.238
Share based payment reserve (Note 23)	9.528	9.528
Gains due to change in fair value of financial liability attributable to change in credit risk of liability	(132.819)	64.852
Losses on change in value of time value of options	(321.854)	(351.007)
Reserve for hedge of net investment in a foreign operation	(403.597)	(350.099)
Cash flow hedge reserve	(438.864)	(185.382)
Actuarial loss arising from employee benefits	(692.610)	(628.350)
Other reserves from acquisition of subsidiary	(1.320.942)	(1.320.942)
	1.522.121	1.939.654

Reserves on hedges of net investment in foreign operations

The Company recognizes the differences arising on the translation of monetary items that are associated with the hedge of net investment in a foreign operation in other comprehensive income (Note 15).

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22. PAID IN CAPITAL, RESERVES AND RETAINED EARNINGS (CONTINUED)

Cash flow hedge reserve

The Group entered into interest rate swaps in order to hedge its position against changes in interest rates. Accordingly, effective fair value changes of these instruments are recognized directly in equity at cash flow hedge reserve (Note 15).

Earnings/losses per share

The calculation of the basic earnings/losses per share attributable to the ordinary equity holders of the Company is as follows:

	1 January - 31 December 2019	1 January - 31 December 2018
Weighted average number of ordinary shares outstanding during the year	350.000.000.000	350.000.000.000
Net profit/(loss) for the year attributable to equity holder of the Company	2.406.783	(1.391.261)
Basic earnings/(losses) per share (in full Kuruş)	0,6877	(0,3975)

23. SHARE BASED PAYMENT

According to the Turkish Council of Ministers decision dated 12 December 2007, which was published in the Turkish Official Gazette on 26 December 2007, 52.500.000.000 (45%) shares of Türk Telekom owned by the Treasury, the minority shareholder of Türk Telekom, has been sold as at 15 May 2008, through an initial public offering ("IPO") (such shares correspondence to corresponding to 15% Türk Telekom's shares). During the IPO, 12.299.160.300 of such shares have been allocated to the employees of Türk Telekom, PTT and small investors together with 5.220.503.800 shares allocated to domestic investors with high purchasing power with discounted price varying according to the payment terms and application date (compared to the price applied to the other corporate investors for the remaining shares of 34.980.335.900. The discounts provided to Türk Telekom employees have been considered as within the scope of IFRS 2 ("Share Based Payment") by the management of Türk Telekom considering the fact that Türk Telekom receives services from its employees. The Group has reflected the fair value of the discounts provided to Türk Telekom employees, amounting to TL 9.528, as an expense in the consolidated statement of profit or loss for year ended 31 December 2008 and credited the same amount into the equity as a share based payment reserve.

The market price during the IPO:	TL 4,60
The average price applied to the employees of Türk Telekom:	TL 4,2937
The number of shares sold to Türk Telekom's employees (lot):	31.104.948
Total benefits provided to the employees:	TL 9.528

The management of Türk Telekom decided that the discounts provided to PTT's employees, small investors and domestic investors with high purchasing power are not within the scope of IFRS 2 by considering the fact that;

- Türk Telekom has not received any benefits (goods and services) in exchange for the discounts provided these groups to and
- The Treasury provided these discounts not as a party acting as a shareholder of Türk Telekom but rather as a State Authority in order to increase the number of small investors as it has been done in all other privatization enhanced through an IPO.

The fair value of the discounts provided to these groups amounts to approximately TL 34.000 in 2008, at the year of the transaction.

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24. COMMITMENTS AND CONTINGENCIES

Guarantees received and given by the Group are summarized below:

		31 December 2019		31 December 2018	
		Original currency	TL	Original currency	TL
Guarantees received	USD	143.040	849.687	146.157	768.918
	TL	844.277	844.277	837.781	837.781
	Euro	32.158	213.869	31.190	188.016
		1.907.833		1.794.715	
Guarantees given ^(*)	USD	171.513	1.018.822	172.418	907.075
	TL	589.422	589.422	523.470	523.470
	Euro	75.893	504.734	159.114	959.139
		2.112.978		2.389.684	

^(*) Guarantees given amounting to US Dollar 151.500 (31 December 2018: US Dollar 151.500) is related to the guarantee provided to the ICTA by TT Mobil with respect to the TT Mobil Concession Agreement, guarantees given amounting to Euro 12.840 (31 December 2018: Euro 12.840) is related with the guarantee provided for 3G license and guarantees given amounting to Euro 57.281 (31 December 2018: Euro 57.281) is related with the guarantee provided for 4.5G license.

The Company's guarantee, pledge and mortgage (GPM) position as at 31 December 2019 and 31 December 2018 is as follows:

	31 December 2019	31 December 2018
A. GPMs given on behalf of the Company's legal personality	2.112.978	2.389.684
B. GPMs given in favor of subsidiaries included in full consolidation	977.792	1.531.807
C. GPMS given by the Company for the liabilities of 3 rd parties in order to run ordinary course of business	605.367	1.278.718
Total	3.696.137	5.200.209

Based on law 128/1 of Turkish Code of Obligations, the Group has given guarantee to distributors amounting to TL 605.367 for the financial obligation that would arise during the purchase of devices that will be sold as commitment sales by the Group (31 December 2018: TL 1.278.718). The guarantees has given to the banks TL 34.306, TL 111.433, TL 10.293 Akbank T.A.Ş., Türkiye Garanti Bankası A.Ş. ve Türkiye İş Bankası A.Ş. respectively.

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24. COMMITMENTS AND CONTINGENCIES (CONTINUED)

Other commitments

The Group has purchase commitments for sponsorships, advertising and insurance services at the amounting to USD 5.172 equivalent to TL 30.723 (31 December 2018: TL 34.196) as at 31 December 2019. Payments for these commitments are going to be made in a 1-year period.

The Group has purchase commitments for fixed assets amounting to USD 76.767, Euro 13.723 and TL 224.132, Pound 30 equivalent to TL 771.638 (31 December 2018: TL 864.009) as at 31 December 2019.

Türk Telekom concession agreement

The Concession Agreement was entered into between the Company and ICTA on 14 November 2005 following the privatization of the Company and the resultant reduction in the public shareholding to less than 50%. The Concession Agreement covers:

- the performance of the telecommunications services which are within the scope of the Agreement;
- the establishment and operation of necessary telecommunications facilities and the submission of these facilities to the use of other operators or persons and institutions making a demand as per the law;
- the marketing and provision of telecommunications services.

The Concession Agreement places an obligation on the Company, in the event of termination or non-renewal of the Concession Agreement, to transfer all equipment affecting the operation of the system together with all its functions and in good condition, and all immovable properties where such equipment is installed and which the Company uses, to the ICTA, or to any other institution to be designated by ICTA, at no cost.

In case ICTA determines that the Company has not fulfilled its obligations stemming from the Concession Agreement and has not corrected the situation within a period granted to it, or that there is a court decision on bankruptcy or composition against the Company, the Company is granted a grace period of not less than 90 days commencing from written notification by ICTA, to fulfil its obligations. Within this grace period, the Company submits a remedy program for its abovementioned obligations to ICTA. In case ICTA accepts the remedy program, the matters in dispute shall be re-examined at the end of the program provided. If the program is not accepted, then ICTA may terminate the Concession Agreement upon expiry of the period granted to the Company.

The Concession Agreement places also a number of obligations with respect to delivering services on the Company in relation to the provision of telecommunications services.

The Concession Agreement requires that the Company shall meet all payments accrued as a result of the Concession Agreement and the establishment and operation of the telecommunication network in accordance with the applicable legislation or agreements concluded by the Government of the Republic of Turkey. These payments specifically includes the permit and utilization fees for the use of frequencies. In addition, the Company is required to pay the ICTA 0,35% of its net sales revenue, as contribution share towards ICTA's expenses.

Under the Concession Agreement, requests for access in relation to the infrastructure should be met to the extent technically possible and without discrimination. The Company is further required to publish reference access and interconnection offers approved by the ICTA.

The Concession Agreement also contains an obligation on the Company to provide universal services. According to article 6 entitled "Revenues for Universal Service" of the Universal Service Law No:5369, the Company declares the amount of 1% of its net sales revenue to the Ministry of Transport, Maritime Affairs and Communications until the end of April of the following year and the company inform up to the following month. This amount shall be transferred within the same period to the account of the central accounting department of the Ministry and shall be registered as revenue in the budget under the name of "Revenues for Universal Service".

The tariffs to be charged by the Company are subject to the approval of the ICTA unless expressly provided to the contrary in any regulation issued by the ICTA.

The content of customer bills is governed by relevant laws and regulations. It is possible to issue a separate invoice for each service, as well as to issue one single invoice for more than one service rendered to a subscriber. The cost of each service shall be demonstrated separately, in the event of preparation of one single invoice for more than one service. A detailed bill is sent to the subscribers upon request, to the extent technically possible and subject to the payment of a fee.

Other provisions of the Concession Agreement provide for the confidentiality of communications and the establishment of effective methods to answer customer complaints.

TT Mobil GSM and IMT-2000/UMTS concession agreement and IMT Authorization Certificate

Regarding to Gsm and IMT-2000/UMTS concession agreement and IMT Authorization Certificate, the Company shall provide fixed guarantee by cash and/or letter of bank guarantee amounting to 6% of the Company's Licence fee and right of use fee. In case it is identified that TT Mobil does not fulfill its contractual obligations, ICTA will have the right to record as revenue these guarantees.

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24. COMMITMENTS AND CONTINGENCIES (CONTINUED)

Türk Telekom concession agreement (continued)

Concession Agreement for Licensing of Establishment and Operation of GSM-1800 Digital Cellular Mobile Telephone System

A concession agreement was entered into between TT Mobil and the ICTA ("the TT Mobil Concession Agreement") on 12 January 2005 which replaced and superseded the previous GSM 1800 license agreements in place in relation to Aycell and Aria. After GSM 900 Frequency Band bidding done by ICTA on 20 June, 2008, agreement was rearranged, the contract ("the TT Mobil Concession Agreement") was rearranged after the Authorization Tender for IMT Services and Infrastructures made by ICTA on 26 August 2015.

The TT Mobil concession agreement covers the establishment, development and operation of a GSM 1800 network and delivery of the system to the Authority or the establishment to be designated by the Authority at the end of the contracted term as being in an operating condition.

Pursuant to the TT Mobil Concession Agreement, TT Mobil was granted to use 75 channels in the 1800 MHz band and 12 channels in the 900 MHz band. The term of the TT Mobil Concession Agreement is 25 years from 11 January 2001.

TT Mobil may apply to the ICTA for renewal between dates 24 and 6 months before the end of TT Mobil Concession Agreement. ICTA may renew the license of TT Mobil by evaluating the renewal request according to legislation on that date.

In the event of expiry or non-renewal, TT Mobil is under an obligation to transfer the network management center, being the central operation units of the GSM 1800 system, gateway switchboards and central subscription works systems (including all kinds of technical hardware), together with all equipment affecting the operation of the system and the immovable properties used by TT Mobil to the ICTA or to the establishment to be designated by ICTA at no cost.

TT Mobil is also committed to renew the network in line with technological improvements and international agreements and maintain the adequacy of the network by means of technology until the end of the agreement.

License fees were paid prior to the issuance of the concession agreement by TT Mobil.

TT Mobil provided a performance bond in the amount of US Dollar 151.500. TT Mobil, additional to that bond, provided performance bond amounting TL 760 corresponding to 6% of bidding amount after GSM 900 Additional Frequency Band bidding by ICTA on 20 June 2008. Should the operator is understood to not perform its contractual obligations, the Authority shall record and confiscate the final guarantee as income.

The TT Mobil Concession Agreement provides that the license may be transferred with the approval of the ICTA and within the terms of the Authorization Ordinance. However, no transfer may be made to an entity which already has a GSM 900 or GSM 1800 license in Turkey, or to related parties of such an entity, to the companies or subsidiaries which is owned or managed somehow by shareholders of entity or to the management of such entity and their first and second blood relatives and relative affinities. In cases such issues are determinate; GSM 1800 license given to them by ICTA is cancelled.

Regarding transfer of shares regulation clauses at the date of the transaction will be applied. The approval of the Competition Authority is also required for any change of control, being a transfer of the shares.

Fund payable to the Treasury

TT Mobil will pay an amount equal to 15% of the gross sales on a monthly basis to the Treasury, except for the default interest imposed on their subscribers for their late payments, indirect taxes, financial obligations such as charges and fees, amounts obtained by the operator from other mobile operators regarding the installation and operation of the facilities where the mobile base stations are located, remunerations booked in the legal accounting records, which were corrected within the fiscal year, due to the: mistakes in the form or content of the invoice (such as customer information, type, amount, price and amount of the work), mistakes regarding the periods of the service, duplicated;(double charged) invoices, and the accrual amounts accounted for reporting purposes.

Contribution share to the ICTA

TT Mobil shall pay 0,35% of the annual net sales to the ICTA as contribution share to the ICTA's expenses, latest on the last working day of April of the following year.

Coverage area

TT Mobil has guaranteed and undertook to cover (up to 2 Watt outdoors) at least 50% of the population of Turkey within three years after 11 January 2001 and at least 90% of the population of Turkey within five years after 11 January 2001. However, the localities where there are less than

10.000 inhabitants shall not be taken into consideration. This coverage area refers to the area to be covered by TT Mobil alone, and will not be contributed by national roaming. Upon request of the ICTA, yearly utmost two settling areas shall be covered with priority by TT Mobil. TT Mobil has completed its related liabilities with respect to coverage at 31 December 2004.

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24. COMMITMENTS AND CONTINGENCIES (CONTINUED)

Concession Agreement for Licensing of Establishment and Operation of GSM-1800 Digital Cellular Mobile Telephone System (continued)

Service offerings

TT Mobil agrees and undertakes to provide the services specified within the frame of GSM memorandum of understanding applied by GSM association including, but not limited to the services specified by GSM license agreement (call forwarding, barring of outgoing and incoming calls, technical assistance for subscribers and free call forwarding to police and other public emergency services).

Service quality

TT Mobil will comply with the telephone service quality standards set down in the International Telecommunication Union ("ITU-T") recommendations in the GSM 1800 international standards. These standards require blocking rate of the licensed indoor network to be 5% and the call failure rate not to be more than 2%.

Tariffs

TT Mobil may freely determine its tariffs provided that these tariffs are not contrary to the regulations of the ICTA

Emergencies

TT Mobil will take the necessary measures with priority in order to satisfy the requirements and the needs of subscribers and users in emergencies, provided that the public authorities and enterprises will have priority in the case of health and security emergencies or fire and other disasters. TT Mobil has to provide at least two base stations for the use of Ministry of Transport, Maritime Affairs and Communications in emergency.

Investment plans

TT Mobil pursuant to the relevant regulation, until the first day of December every year, TT Mobil will present its investment plan for the following calendar years to the ICTA. These plans will be valid for 3 years and will contain information about the dynamic demand forecasts, and number and locations of the exchange stations, base stations and base control stations to be established, the period of operation, and the investment costs. Within 120 days of receipt of the investment plan, the ICTA will approve the compliance of plans to the article 6th of the agreement. Investment plan will be presented so as to inform the ICTA after the requirements arising from the article 6th of the agreement are met.

National roaming

TT Mobil may enter into contracts with other licensed GSM networks in Turkey for national roaming purposes. Roaming contracts and the financial clause of the contracts has to be presented to ICTA before signature procedures completed.

Suspension of operations

If deemed necessary for public security and national defense in case of war, general mobilization, etc. the Authority may temporarily or permanently suspend all or a part of the operational activities of TT Mobil and may directly operate the network. The period of suspension as above will be added to the term of the license and the income of such a period, if any, will belong to TT Mobil.

Termination of the agreement by the ICTA

The ICTA may cancel the license or terminate the Agreement for the following reasons;

- i) A final judgment of the competent courts for insolvency of TT Mobil or its composition with creditors,
- ii) Determination of the failure of TT Mobil to perform its contractual obligations hereunder and to remedy its default in a reasonable period of time granted,
- iii) Determination that TT Mobil extends its activities beyond the frequencies allocated hereunder or other frequencies that may be allocated by the ICTA to TT Mobil for use in the GSM 1800 System, and failure of TT Mobil to cease such activities in a reasonable period of time granted,
- iv) Failure of TT Mobil to pay the license fees hereunder.

However, that except for point (iv) above, TT Mobil will be given the opportunity to fulfill its obligations within a period not less than 90 days of written notice by the ICTA. During this period of time, TT Mobil will furnish to the ICTA a corrective action program for fulfillment of its obligations. If this program is accepted by the ICTA, the points of disagreement will be revised at the end of the program. If this program is not acceptable, the ICTA may terminate the Agreement at the end of the time period provided to TT Mobil.

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24. COMMITMENTS AND CONTINGENCIES (CONTINUED)

Concession Agreement for Licensing of Establishment and Operation of GSM-1800 Digital Cellular Mobile Telephone System (continued)

Upon termination of the Agreement, TT Mobil shall transfer all of the GSM 1800 system equipment to the ICTA without any remuneration.

Insurance

TT Mobil will maintain adequate all risk insurance for the telecommunication facilities and services established and operated until the end of the license term.

The Concession Agreement with ICTA has been signed on 30 April 2009 and TT Mobil has been granted with 3G license for an amount of Euro 214.000 excluding VAT. The term of the license is 20 years effective from the signature date of the Agreement. 3G services have been launched on 30 July 2009. The contract ("the TT Mobil Concession Agreement") was rearranged after the Authorization Tender for IMT Services and Infrastructures made by ICTA on 26 August 2015.

According to this Agreement;

- i. TT Mobil shall provide subscribers' and users' 112 calls and other emergency situation calls to public security institutions and other public institutions, and to direct those calls to the centers requested by the said institutions, free of charge bearing all costs.
- ii. TT Mobil shall keep at least 2 units of IMT-2000/UMTS mobile base stations to be used in emergency situations under the request of the Ministry of Transport and Communication.
- iii. Within the first 5 years by the signature of the Agreement, TT Mobil shall obtain the approval of the ICTA for each assignment of TT Mobil shares in ratio exceeding 10% to persons and entities other than the current shareholders and subsidiaries of the current shareholders. Any type of share assignment leading a change in the control of TT Mobil shall be subject to the approval of the ICTA.
- iv. TT Mobil has granted a bank letter of guarantee amounting to EUR 12.840 which is 6% of the license fee, for to act as final guarantee. Should the TT Mobil is understood to not perform its contractual obligations; ICTA shall record and confiscate the final guarantee as income. In such confiscation of final guarantee as income is realized, TT Mobil shall grant new final guarantee within 30 days. Should the new final guarantee not granted within the said period, the Agreement might be terminated.
- v. During the term of the Agreement, TT Mobil shall each year submit its investment plan related to the subsequent calendar year, till 1 December to the ICTA. This plan shall be prepared for three years and shall include such information as the number, location, coverage areas, investment costs with respect to exchange centres, base stations and control stations to be established, as well as the realization ratio of the previous year's investment plan and reasons of deviation, if any.
- vi. TT Mobil will pay an amount equal to 15% of the gross sales on a monthly basis to the Treasury, except for the default interest imposed on their subscribers for their late payments, indirect taxes, financial obligations such as charges and fees, and the accrual amounts accounted for reporting purposes.
- vii. TT Mobil shall pay 0.35% of the annual net sales to the ICTA as contribution share to the ICTA's expenses, latest on the last working day of April of the following year.

Coverage Area Obligations:

Following the signature of the Agreement, TT Mobil shall have under coverage the population within the borders of;

- metropolitan municipalities within 3 years,
- all the municipalities of all provinces and districts within 6 years,
- all the residential locations having a population of more than 5.000 within 8 years,
- residential locations having a population of more than 1.000 within 10 years.

These are the areas which are to be covered by TT Mobil alone and this obligation shall not be fulfilled through roaming.

TT Mobil should maintain service quality in accordance with ICTA regulations, ETSI (European Telecommunications Standards Institute) standards and ITU (International Telecommunication Union) standards, decisions and recommendations given by ITU.

Upon request of the ICTA, yearly utmost two settling areas shall be covered with priority by TT Mobil.

If there is any delay in fulfillment of the coverage area obligations, except the force major conditions, an administrative fine shall be applied within the frame of Relevant Legislation. If there is any delay in fulfillment of the coverage area obligations for a period of more than two years, then the Agreement might be terminated by the ICTA.

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24. COMMITMENTS AND CONTINGENCIES (CONTINUED)

Concession Agreement of the Establishment and Operation of IMT2000/UMTS Infrastructures and Provision of Services (continued)

The Investments for hardware and software being used in the electronic communications network

Except for the investments made in the lease of place, towers, piles, pipes, containers, channels, energy transfer lines and similar infrastructure plants; each year TT Mobil shall fulfill the following requirements for its investments related to electronic communications network (hardware, software etc.);

- a) To procure at least 40% of such investments from vendor companies employing a R&D center established in Turkey and engaged in developing R&D projects in relation with the information and communication technologies provided at least 200 engineers functioning in such company in the first year after the signature of the Agreement, at least 300 engineers in the second year and at least 500 engineers for the third and subsequent years or from vendor companies employing a R&D center with at least 150 engineers functioning in the first year after the signature of the Agreement, at least 250 engineers in the second year and at least 350 engineers for the third and subsequent years however such company to employ also a Technical Assistance Centre with at least 50 engineers in the said first year, at least 100 engineers in the second year and at least 150 engineers in the third and subsequent years.

A vendor company may not establish the R&D center and Technical Assistance Centre together with another vendor company; but may establish with a company, organization or institution resident in Turkey. The vendor company shall have at least 50% share of such centers. Said organization or institution resident in Turkey shall not employ other R&D centers and Technical Assistance Centers that have been established together with other vendor companies functioning in information and communication technologies area.

The university associates may also be employed part time, as engineers to be employed by the vendor company. The number of the university associates may not exceed 5% of the total number of engineers stated above.

TT Mobil is obliged to perform its investments regarding the electronic communications network by auditing and determining whether vendor companies comply with the foregoing terms and conditions.

- b) To procure at least 10% of such investments from the vendors in quality of Small and Medium Sized Entities and established in Turkey for the purpose of product and system development.

All the independent software and hardware units to be used in the network of TT Mobil shall have open interface connections with each other.

ICTA may perform audits regarding the execution of this obligation or may commission another organization or institution to perform such auditing when deems necessary. The costs to arise from such audits shall be paid by TT Mobil.

Should TT Mobil is understood to procure goods and services through methods against the foregoing terms and conditions, an administrative monetary penalty shall be applied to TT Mobil up to 1% of its turnover of the previous calendar year.

Should TT Mobil not perform the said obligations, a penalty as 40% of total amount of its investments in the network (hardware, software etc.), except for the investments for lease of place, towers, piles, pipes, containers, channels, energy transfer lines and similar infrastructure plants, shall be applied separately to TT Mobil for each year. This clause is valid for the first three years following the signature date of the Agreement. Annual periods start with the signing of the concession agreement.

Termination of the Agreement by ICTA:

The Authority might terminate the Agreement for the following reasons;

- A bankruptcy or bankrupt's certificate decision on TT Mobil given by the judicial authorities,
- TT Mobil not performing some of its contractual obligations and not correcting such breach in the given period,
- TT Mobil operating under the frequencies other than the ones allocated to itself by ICTA,
- Termination of TT Mobil Concession Agreement
- TT Mobil not performing national roaming obligation stated in the contract

In such circumstances, ICTA gives TT Mobil the opportunity to fulfill its obligations within 90 days after the written notice. In case TT Mobil cannot fulfill all the obligations within this period, the Agreement will be terminated by ICTA. The license fee or any other fee is not reimbursable in case of a termination of agreement. In the case of cancellation of agreement by ICTA, TT Mobil will alienate all data and documents which constitute system, software affecting the running of system (including tower, beam, blare, container, channel, energy transmission lines, antenna etc), stated and in the usage of TT Mobil to ICTA or to the entity ICTA enounces by making sure that there is no pledge, mortgage, levy and related legal blockages on them and they are free of cost and works free of problems.

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24. COMMITMENTS AND CONTINGENCIES (CONTINUED)

Concession Agreement of the Establishment and Operation of IMT2000/UMTS Infrastructures and Provision of Services (continued)

The Investments for hardware and software being used in the electronic communications network (continued)

The contract ("the TT Mobil Concession Agreement") was rearranged after the Authorization Tender for IMT Services and Infrastructures made by ICTA on 26 August 2015.

TT Mobil has been authorized to provide IMT service and Limited Use Authorization Certificate on 27 October 2015.

According to the Authorization Certificate;

- i. TT Mobil shall provide emergency call services in line with the regulations of ICTA, free of charge bearing all costs and comply with the regulations of ICTA in relation to this matter.
- ii. TT Mobil shall keep at least 2 mobile base stations so as to be used for the provision of IMT services upon the Ministry's request, in the case of disaster and emergency.
- iii. Within the first 5 years by the signature of the Agreement, TT Mobil shall obtain the approval of the ICTA for each assignment of TT Mobil shares in ratio exceeding 10% to persons and entities other than the current shareholders and subsidiaries of the current shareholders. Any type of share assignment leading a change in the control of TT Mobil shall be subject to the approval of the ICTA.
- iv. TT Mobil has granted a bank letter of guarantee amounting to Euro 57.300 which is 6% of the total fee, for to act as final guarantee. Should be understood that TT Mobil to not perform its contractual obligations; ICTA shall record and confiscate the final guarantee as income. In such confiscation of final guarantee as income is realized, TT Mobil shall grant new final guarantee within 30 days. Should the new final guarantee not granted within the said period, the Authorization might be terminated by ICTA.
- v. TT Mobil will pay an amount equal to 15% of the gross sales on a monthly basis to the Treasury, except for the default interest imposed on their subscribers for their late payments, indirect taxes, financial obligations such as charges and fees, and the accrual amounts accounted for reporting purposes.
- vi. TT Mobil shall pay the administrative fee at the rate and in the way determined by ICTA in accordance with the applicable law.

Coverage Area Obligations:

Following the authorization, TT Mobil shall put at least

- 95% of Turkey's population within 8 years
- 90% of the population in each province and district within 8 years
- 99% of highways, high speed and very high speed train routes and tunnels longer than 1 km within 3 years
- 95% of divided highways within 6 years
- 90% of conventional train routes within 10 years
- under coverage. Additionally, following the authorization, TT Mobil shall put at least
- 99% of highways, high speed and very high speed train routes and tunnels longer than 1 km added after the first year within 2 years of its entering into service
- 95% of divided highways added after the fourth year within 2 years of its entering into service
- 90% of conventional train routes added after the eight year within 2 years of its entering into service under coverage

Areas covered by TT Mobil pursuant to the IMT-2000/UMTS Concession Agreement shall be deemed to be also covered under this authorization on condition that the service quality criteria set forth in the respective article are satisfied. Additionally, areas covered by TT Mobil under this authorization for the purpose of provision of IMT services shall be deemed to be covered in the determination of the coverage obligation of IMT-2000/UMTS services.

Coverage obligation shall be fulfilled by TT Mobil on its own and not through national roaming. However, TT Mobil shall be entitled to share radio access network in the areas under the coverage obligation.

Maximum two settlements per year shall be primarily brought by TT Mobil under coverage upon ICTA's request and under the service quality standards determined for such areas.

In the event that the fulfilment of coverage obligation is delayed for any reason other than force majeure events, administrative fine shall be applied pursuant to the applicable law. In the event that the fulfilment of the coverage obligation is delayed for more than two (2) years, the Authorization might be terminated by ICTA.

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24. COMMITMENTS AND CONTINGENCIES (CONTINUED)

Concession Agreement of the Establishment and Operation of IMT2000/UMTS Infrastructures and Provision of Services (continued)

Service quality obligation:

TT Mobil shall ensure data download at minimum 2 Mbps in the areas subject to coverage obligation at a probability of 95% per user. The matters related to the inspection of this obligation shall be determined by ICTA.

These data transmission speeds are minimum values and ICTA shall determine service quality obligations required to be ensured by TT Mobil taking into account ETSI standards, ITU standards, decisions and recommendation, our national development targets, technological improvements and user requirements.

Sharing the Radio Access Network:

On condition that the provisions of the applicable law are not breached, TT Mobil may install and operate the radio access network to be installed for the provision of IMT services together with other operators authorized to provide IMT services and further, lease necessary transmission lines from authorized operators in order to materialize the connections within the radio access network.

This right shall not remove the obligations of TT Mobil under the authorization and shall not constitute a reason for non-fulfilment of such obligations. TT Mobil shall not avoid fulfilling its obligations under the authorization due to reasons arising from the sharing. TT Mobil shall, in the case of sharing, be obliged to take all measures required to prevent any interruption of services it provides under the authorization.

In all settlements having a population less than 10.000, TT Mobil shall, following the authorization, be obliged to:

- install antenna facilities to be installed under the authorization (excluding in-building antenna facilities) in such manner that facilitates active sharing of radio access network with other operators and share such facilities with the operators,
- In the event that there exists any antenna facilities installed by other operators at the settlements in question following the authorization for the antenna facilities to be newly installed by TT Mobil under this authorization, TT Mobil shall use such antenna facility by active sharing of radio access network.

Following this authorization, the antenna facilities newly installed under IMT-2000/UMTS Concession Agreements shall also be subject to the obligation prescribed by this paragraph.

TT Mobil shall be obliged to actively share radio access network in the antenna facilities to be newly installed under this authorization in order to cover highways, high speed railways and divided highways following the authorization. Following this authorization, the antenna facilities newly installed under IMT-2000/UMTS Concession Agreements shall also be subject to the aforementioned obligation.

Investments and communication services related to the hardware and software used in the network

Except investments made for property lease, tower, pole, pipe, container, conduit, power transmission lines and similar infrastructure; TT Mobil shall, following the authorization, be obliged to provide:

- At least 40% of its investments and communication services related to the network (such as hardware, software); Within two (2) years, from supplier companies established in Turkey as to develop R&D projects in the field of information and communication technologies, employing at least 500 engineers and 100 researchers; within four (4) years, from supplier companies having a R&D center, employing 500 engineers and 250 researchers, or within two (2) years, from supplier companies established in Turkey as to develop R&D projects in the field of information and communication technologies, employing at least 350 engineers and 100 researchers and also within two (2) years from supplier companies having a Technical Assistance Center employing at least 150 engineers, within four (4) years from supplier companies having R&D center employing 350 engineers and 250 researchers and within four (4) years from supplier companies having a Technical Assistance Center employing at least 150 engineers.
- At least 10% of its investments from products produced in Turkey and from SMEs established to develop products and systems in Turkey.

Up to 60 within 2 years and up to 150 within 4 years following the authorization, of the personnel of TT Mobil employed in the status of researcher at the R&D center established by TT Mobil for the purpose of developing R&D projects in the field of information and communication technologies shall be taken into account under the obligation related to the number of the researchers set forth in the sub-paragraph (a) of this paragraph provided that such center is organized as an independent unit under TT Mobil's organization or all shares of the center are owned by TT Mobil.

Teaching staff of universities who work part-time at R&D centers under the applicable law or while working at universities carry out academic studies requested by the supplier and/or TT Mobil may be included in the researchers to be employed by the supplier and/or TT Mobil at R&D centers. The number of teaching staff may not exceed 10% of total number of researchers referred to in this subparagraph (a).

A supplier company may establish R&D and technical assistance centers together with institutions or bodies, except other suppliers, established in Turkey, which operate in the field of information and communication technologies and do not have a R&D or technical assistance center established with other suppliers. The supplier companies must hold at least 50% of the shares of such centers.

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24. COMMITMENTS AND CONTINGENCIES (CONTINUED)

Concession Agreement of the Establishment and Operation of IMT2000/UMTS Infrastructures and Provision of Services (continued)

Investments and communication services related to the hardware and software used in the network (continued)

All independent software and hardware units to be used by TT Mobil in the network shall be interconnected through explicit interfaces.

TT Mobil shall be obliged to materialize its investments and communication services relating to the network (such as hardware, software) by checking and verifying whether or not the supplier companies and Small Entities ("SME") fulfil the conditions stated above.

TT Mobil shall be obliged to supply its investments and communication services relating to the network (hardware or software such as base station, switching, router), except investments relating to property lease, tower, pole, container, channel, power transmission lines and similar facilities, from the products determined to be domestic product under the Law No 4734 and applicable law at least by 30% within the first year, at least by 40% within the second year and at least by 45% within subsequent years following the authorization. Such items among the products supplied by the supplier companies and SMEs to TT Mobil, which are determined to be domestic products shall be taken into account under this obligation. TT Mobil contemplating that it will not be able to fulfil its obligations set forth in the this paragraph due to the availability condition of the products determined to be domestic products, supply capacity of the producers and other conditions shall apply to ICTA indicating the reasons, no later than six (6) months before the expiry of the obligation period. ICTA may reduce or terminate the obligation for the respective period if it deems necessary.

Additional to the obligation in the paragraph above; investments specified in the paragraph above, to be measured for periods of 4 years, following the authorization TT Mobil shall be obliged to supply from the products determined to be domestic product under the Law No 4734 and applicable law a minimum average of 30% in the first 4 years, 40% in the second 4 years and 45% in the third 4 years. Such items among the products supplied by the supplier companies and SMEs to TT Mobil, which are determined to be domestic products shall be taken into account under this obligation. TT Mobil contemplating that it will not be able to fulfil its obligations set forth in the this paragraph due to the availability condition of the products determined to be domestic products, supply capacity of the producers and other conditions shall apply to ICTA indicating the reasons, no later than six (6) months before the expiry of the obligation period. ICTA, provided that Ministry's opinion to be taken, may reduce or terminate the obligation for the respective period if it deems necessary.

Whether or not the obligations under this article have been fulfilled shall be evaluated with the obligations of TT Mobil under the IMT-2000/UMTS Concession Agreement.

Cancellation of Authorization:

ICTA may terminate the Authorization Certificate for the following reasons;

- A bankruptcy or bankrupt's certificate decision on TT Mobil given by the judicial authorities,
- TT Mobil not performing some of its contractual obligations and not correcting such breach in the given period,
- TT Mobil operating under the frequencies other than the ones allocated to itself by ICTA and not ceasing these operation within the given period,
- Termination of one of TT Mobil's Concession Agreements signed earlier,
- TT Mobil not performing its obligations stated in the article related to confidentiality of the communication, national security and public order

In such circumstances, ICTA gives TT Mobil the opportunity to fulfill its obligations within 90 days after the written notice. In case TT Mobil cannot fulfill all the obligations within this period, the Authorization Certificate will be terminated by ICTA.

The license fee or any other fee is not reimbursable in case of a termination of agreement. In the case of cancellation of agreement by ICTA, TT Mobil will alienate all data and documents which constitute system, software affecting the running of system (including tower, beam, blare, container, channel, energy transmission lines, antenna etc), stated and in the usage of TT Mobil to ICTA or to the entity ICTA enounces by making sure that there is no pledge, mortgage, levy and related legal blockages on them and they are free of cost and works free of problems.

Legal proceedings of the Group

Disputes between the Company and Municipalities

Regarding the lawsuits for the contribution to the infrastructure investment fund and municipality share of municipalities against the Company; resolutions in favor of the Company in Council of State during the year 2019 state that the infrastructure investment fund and municipality shares shall be requested only for the infrastructure investments agreed in a joint program, and requesting those payments without the submission of a draft investment program and an agreement on a certain and joint investment program are against the law. According to management decision, as of 31 December 2019, the Company has recognized no provision in the consolidated financial statements that has been made for fulfillment of the obligation to the extent that it is not probable that a material outflow of resources embodying economic benefit will have occurred. (31 December 2018: TL 51.059).

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24. COMMITMENTS AND CONTINGENCIES (CONTINUED)

Concession Agreement of the Establishment and Operation of IMT2000/UMTS Infrastructures and Provision of Services (continued)

Investments and communication services related to the hardware and software used in the network (continued)

Disputes between the Group and the ICTA

The Company has filed various lawsuits against ICTA. These lawsuits are related with the sector-specific and tariff legislations and legislations with respect to the other operators in the market. The sector-specific disputes generally stem from the objections with respect to the provisions of interconnection legislation, legislation with respect to telecommunication services and infrastructure. According to the Article 99 of the Law numbered 7061 "Legislation on Amendment of Certain Tax Legislation and Other Certain Legislation" which was published on the Official Gazette numbered 30261 on 5 December 2017 and according to the sub-article 9 added to the Article 60 of the Law numbered 5809; customer returns that are not repaid to the customers within the 2-year period, shall be transferred to the Ministry of Transport and Infrastructure of the Republic of Turkey as revenue under the name of "Revenues for Universal Service". Due to the fact that the 2-year period provided for in the relevant regulations has reached the end and requests for suspension of execution are rejected during this period, TL 127.699 provision provided for ICTA penalties and amounts to be repaid to customers or to the Ministry of Transport and Infrastructure of the Republic of Turkey due to ICTA resolutions as of 31 December 2019 (31 December 2018: TL 37.359).

The Ministry of Customs and Trade administrative fine

The Ministry of Customs and Trade conducted an audit at TT Mobil over the value added services that are provided to the subscribers and as a result of this inspection, an administrative fine amounting to TL 138.173 was imposed against TT Mobil based on the allegation that distant sales rules were disregarded. Upon such administrative fine, applications were filed respectively for the settlement first and then for the abolishment of the said administrative action with The Ministry of Trade. Our application for the abolishment of administrative fine was refused, and the settlement was rejected by TT Mobil in the course of settlement. A cancellation case has been initiated with stay of execution request regarding the penalties claimed. The trial was held on 6 November 2019. The Court accepted the case in favor of TT Mobil and cancelled the administrative fine.

According to management decision, as of 31 December 2019 the Company has recognized no provision in the consolidated financial statements that has been made for fulfillment of the obligation to the extent that it is not probable that a material outflow of resources embodying economic benefit will have occurred.

Other issues

Provision has been provided in the consolidated financial statements for the probable court cases against the Group based on the lawyers' assessments. The provision for such court cases is amounting to TL 62.682 as at 31 December 2019 (31 December 2018: TL 56.946). For the rest of the cases, Group lawyers commented that basis of those cases are not realistic and should be appealed. Therefore, no provision has been provided for these cases.

25. SUPPLEMENTARY CASH FLOW INFORMATION

Other explanations

	31 December 2018	Cash flows	Acquisition	Non-cash flowa		31 December 2019
				Foreign exchange movement	Other non- cash changes	
Financial liabilities (Note 5)	19.918.824	(5.469.866)	2.088.720	2.716.517	388.199	19.642.394
Obligations under finance leases (Note 5)	2.594	(788.732)	191.476	9.257	1.726.166	1.140.761
Derivative financial instruments, net (Note 15)	495.536	220.164	--	--	(413.507)	302.193
Total liabilities from financing activities	20.416.954	(6.038.434)	2.280.196	2.725.774	1.700.858	21.085.348

"Other outflows of cash" in net cash used in operating activities amounting to TL 68.032 represents change in restricted cash. Restricted cash amount is disclosed in Note 4. "Other inflows of cash, net" in net cash used in financial activities amounting to TL 72.471 represents change in other financial payment. "Other adjustment for non-cash items" in adjustments to reconcile net profit to cash provided by operating activities amounting to TL 117.704 represents change in TFRS Interpretation 12.

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26. SUBSEQUENT EVENTS

None.

27. REVENUE

	1 January 2019 - 31 December 2019	1 January 2018 - 31 December 2018
Mobile	8.896.224	7.534.284
Broadband	6.625.258	5.532.700
Fixed voice	2.685.259	2.603.183
Corporate data	1.821.577	1.690.211
International revenue	1.097.539	926.220
IFRIC 12 revenue	1.023.117	771.141
TV	348.456	305.669
Other	1.159.678	1.067.492
	23.657.108	20.430.900

28. OPERATING EXPENSES

	1 January 2019 - 31 December 2019	1 January 2018 - 31 December 2018
Cost of sales (-)	(12.298.492)	(11.249.445)
Marketing, sales and distribution expenses (-)	(2.670.891)	(2.409.985)
General administrative expenses (-)	(2.147.447)	(1.784.341)
Research and development expenses (-)	(166.491)	(147.779)
	(17.283.321)	(15.591.550)

29. EXPENSES BY NATURE

	1 January 2019 - 31 December 2019	1 January 2018 - 31 December 2018
Personnel expenses	(3.435.612)	(3.018.853)
Taxes	(2.316.397)	(2.004.943)
Domestic interconnection	(1.318.675)	(1.270.446)
Repair and maintenance expenses	(927.902)	(836.017)
TFRS Interpretation 12 related fixed assets additions and capex provision expenses	(905.413)	(682.426)
International interconnection	(758.263)	(636.511)
Utilities	(699.259)	(578.716)
Cost of sales and cost of equipment sales of technology companies	(508.106)	(502.519)
Advertisement and sponsorship expenses	(368.016)	(448.171)
Other expenses	(1.299.712)	(1.877.754)
Total operating expenses (excluding depreciation and amortization expense)	(12.537.355)	(11.856.356)
Depreciation, amortization	(4.715.985)	(3.717.763)
Impairment expenses	(29.981)	(17.431)
Total operating expenses	(17.283.321)	(15.591.550)

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30. OTHER OPERATING INCOME/(EXPENSES)

	1 January 2019 – 31 December 2019	1 January 2018 – 31 December 2018
Interest and discount gains	152.230	140.221
Rental income	131.891	35.616
Litigation and indemnity income	43.067	21.649
Other	58.203	33.883
Other operating income	385.391	231.369
Litigation provision compensation and penalty expenses	(166.729)	(92.345)
Foreign exchange losses	(157.367)	(298.763)
Interest expenses on employee benefit obligations (Note 21)	(91.679)	(64.738)
Discount losses	(57.211)	(34.399)
Other	(37.773)	(2.229)
Other operating expense (-)	(510.759)	(492.474)

31. INCOME/(EXPENSE) FROM INVESTING ACTIVITIES

	1 January 2019 – 31 December 2019	1 January 2018 – 31 December 2018
Gain from scrap sales	193.010	105.503
Gain on sales of property, plant and equipment	21.101	24.785
Income from investing activities	214.111	130.288
Losses from sales on property, plant and equipment	(1.545)	(12.960)
Expense from investing activities (-)	(1.545)	(12.960)

32. FINANCIAL INCOME/(EXPENSE)

	1 January 2019 – 31 December 2019	1 January 2018 – 31 December 2018
Foreign exchange gains	609.524	575.308
Interest income on bank deposits	209.389	270.547
Gain on derivative instruments	2.913	444.713
Other	33.216	131.931
Financial Income	855.042	1.422.499
Interest expense	(2.280.441)	(1.050.389)
Foreign exchange losses	(1.583.232)	(5.821.839)
Loss on derivative instruments	(311.419)	(884.451)
Other	(213.652)	(115.640)
Financial expenses	(4.388.744)	(7.872.319)
Financial expenses, net	(3.533.702)	(6.449.820)

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33. TAXATION ON INCOME

	31 December 2019	31 December 2018
Corporate tax payable:		
Current corporate tax provision	206.890	22.725
Prepaid taxes and funds (-)	(131.652)	(16.260)
Tax payable	75.238	6.465
	1 January 2019 - 31 December 2019	1 January 2018 - 31 December 2018
Tax expense:		
Current tax expense:		
Current income tax expense	(206.890)	(22.725)
Adjustments in respect of income tax of previous year	915	2.245
Deferred income (Note 11):		
Deferred tax income	(122.000)	651.500
Tax (expense)/income	(327.975)	631.020

As of 31 December 2019 deferred tax income amounting to TL 126.389 (31 December 2018: TL 365.034 expense) are recognized in the consolidated statement of other comprehensive income.

The Company and its subsidiaries located in Turkey are subject to taxation in accordance with the tax regulations and the legislation effective in Turkey where the Group companies operate. Corporate tax returns are required to be filed by the twenty-fifth day of the fourth month following the balance sheet date and taxes must be paid in one installment by the end of the fourth month.

In Turkey, corporate tax rate is 22% as of 31 December 2019. According to the Article 91 of the Law numbered 7061 "Legislation on Amendment of Certain Tax Legislation and Other Certain Legislation" which was published on the Official Gazette numbered 30261 on 5 December 2017 and according to the provisional clause 10 added to the Corporate Tax Law numbered 5520; corporate tax rate for the taxation periods of 2018, 2019 and 2020 is amended to 22%, which would later be applied as 20% at the end of these periods. During these periods, Council of Ministers is entitled to decrease the corporate tax rate of 22% to 20%.

The tax legislation provides for a temporary tax of 22% to be calculated and paid based on earnings generated for each quarter for the period ended 31 December 2019. The amounts thus calculated and paid are offset against the final corporate tax liability for the year.

In Turkey, the tax legislation does not permit a parent company and its subsidiaries to file a consolidated tax return. Therefore, provision for taxes, as reflected in the consolidated financial statements, has been calculated on a separate-entity basis.

Corporate tax losses can be carried forward for a maximum period of five years following the year in which the losses were incurred. The tax authorities can inspect tax returns and the related accounting records for a retrospective maximum period of five years.

Dividend payments made to resident and non-resident individuals, non-resident legal entities and corporations resident in Turkey (except for the ones exempt from corporate and income tax), are subject to an income tax of 15%.

Dividend payments made from a corporation resident in Turkey to a corporation also resident in Turkey are not subject to income tax. Furthermore, income tax is not calculated in case the profit is not distributed or transferred to equity.

The dividend income (excluding the participation certificates of investment funds and profit shares derived from the share certificates of investment trusts) derived by entities from the participation in the capital of another resident entity is exempt from corporate tax. Furthermore, 50% of the income derived by entities from the sale of participation shares and real estates (immovable property) preferential rights, founders' shares and redeemed shares which are carried in assets at least for two years is exempt from corporate tax as of 31 December 2019.

In order to be able to benefit from the exemption, the relevant income should be kept under a fund account in the liabilities and should not be withdrawn from the enterprise for 5 years. The sales amount should be collected by the end of the second calendar year following the year of sale.

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33. TAXATION ON INCOME (CONTINUED)

The reconciliation between tax expense and the product of accounting profit multiplied by applicable tax is as follows:

	1 January - 31 December 2019	1 January - 31 December 2018
Profit/(loss) before tax	2.734.758	(2.022.281)
Tax at the corporate tax rate of (22%)	(601.647)	444.902
Tax effects of:		
- Expenses that are not deductible in determining taxable profit	(54.354)	(42.663)
- Tax rate difference of subsidiaries	(1.104)	2.999
- Deferred tax asset recognition from cash capital increase	65.146	60.907
- Deferred tax asset recognized from previous years' tax losses carried forward by subsidiaries	192.673	113.845
- Adjustments and tax losses of subsidiaries not subject to deferred tax	71.311	51.030
Tax expense for the year	(327.975)	631.020

Investment Incentives

TT Mobil has obtained investment incentive certificates from the Turkish government authorities in connection with certain major capital expenditures, which entitle TT Mobil, among other things, to:

- A 100% exemption from customs duty on machinery and equipment to be imported,
- An investment allowance of 100% on approved capital expenditures,

The investment allowance indicated in (b) above is deductible from current or future taxable profits for the purposes of corporation tax; however, such investment allowances are subject to a withholding tax. At 31 December 2019, investment allowances amount to TL 11.497.824 (31 December 2018: TL 9.542.318). Unrecognized deferred tax asset is TL 301.141 (31 December 2018: TL 278.162).

The Law foresaw that the taxpayers that have investment allowance rights obtained under the scope of the previous provisions valid before 24 April 2003 and the provisions of the amended article 19 of the Income Tax Law (amended with Law No 4842) that were effective until 31 December 2005 would be able to utilize their investment allowance rights only for their income generated in the years 2006, 2007, and 2008.

However on 15 October 2009, the Constitutional Court decided to cancel the phrases which abolish the investment allowances after 2008 and limit the use of investment allowance incentive allowance with the years 2006, 2007 and 2008. The annulment decision is effective after being published in the Official Gazette no 27456 dated 8 January 2010. Accordingly, TT Mobil may utilize those unused incentive in the future.

34. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES

Financial risk policies of the Group are managed centrally with the support of a committee. All Group companies meet their cash needs determined in business plans approved by their boards, by using credits or capital increase with guidance of the central management. The Group may choose long or short term financing according to their financing needs and market assumptions.

The Group's risk management policies are designed to identify and analyze the risks faced by the Group, to determine appropriate risks limits and controls, and to observe commitment to these limits. Risk management policies and systems are constantly under review to reflect changes in the Group's activities and market conditions.

The Group audit committee oversees how management monitors compliance with the Group's risk management policies and procedures, and reviews the adequacy of the risk management framework in relation to the risks faced by the Group. The Group audit committee is assisted in its oversight role by internal audit. Internal audit undertakes both regular and ad hoc reviews of risk management controls and procedures, the results of which are reported to the audit committee.

Financial risk factors

The Group's principal financial instruments comprise forward market transactions, bank loans, issued debt instruments and cash and short-term deposits. The main purpose of these financial instruments is to raise funds for the Group's operations and to hedge interest rate risk. The Group has various other financial assets and liabilities such as trade receivables and trade payables, which arise directly from its operations. The main risks arising from the Group's financial instruments are cash flow interest rate risk, liquidity risk, foreign currency risk and credit risk. The board reviews and agrees to policies for managing each of these risks.

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34. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES (CONTINUED)

Credit risk

	Receivables						
	Trade Receivables		Other receivables		Deposits at banks	Derivative Instruments	Other
	Related Parties	Third Parties	Related Parties	Third Parties			
31 December 2019							
Maximum credit risk exposed to as at the reporting date (A+B+C+D+E)	11.793	5.992.604	-	111.404	4.945.874	408.522	-
- Guaranteed portion of the maximum risk	-	22.661	-	-	-	-	-
A. Carrying amount of financial assets not overdue or not impaired	11.793	4.504.337	-	111.404	4.945.874	408.522	-
B. Carrying amount of financial assets with rediscussed conditions that are considered overdue or impaired if not rediscussed							
C. Carrying amount of financial assets overdue but not impaired	-	1.488.267	-	-	-	-	-
- Amount secured via guarantees	-	-	-	-	-	-	-
D. Carrying amount of assets impaired	-	-	-	-	-	-	-
- Overdue (gross book value)	-	3.490.624	-	35.152	-	-	-
- Impairment (-)	-	(3.490.624)	-	(35.152)	-	-	-
E. Off balance sheet items with credit risk	-	-	-	-	-	-	-
31 December 2018							
Maximum credit risk exposed to as at the reporting date (A+B+C+D+E)	10.489	5.268.309	-	105.914	4.494.393	237.402	-
- Guaranteed portion of the maximum risk	-	37.073	-	-	-	-	-
A. Carrying amount of financial assets not overdue or not impaired	10.489	3.922.429	-	105.914	4.494.393	237.402	-
B. Carrying amount of financial assets with rediscussed conditions that are considered overdue or impaired if not rediscussed							
C. Carrying amount of financial assets overdue but not impaired	-	1.345.880	-	-	-	-	-
- Amount secured via guarantees	-	-	-	-	-	-	-
D. Carrying amount of assets impaired	-	-	-	-	-	-	-
- Overdue (gross book value)	-	(3.241.202)	-	(42.759)	-	-	-
- Impairment (-)	-	3.241.202	-	42.759	-	-	-
E. Off balance sheet items with credit risk	-	-	-	-	-	-	-

Financial losses due to Group's receivables and financial assets which result from not implementing agreement clauses related to financial assets by a customer or other party constitutes credit risk.

When determining the credit risk exposure as at the balance sheet date, items like guarantees received, which increase the credit worthiness have not been considered. As of 31 December 2019, the maximum credit risk Company exposure is reflected by presenting all financial assets from carrying amount on consolidated balance sheet.

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34. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES (CONTINUED)

Liquidity risk

Liquidity risk is uncertainty to cover future financial obligations.

The Group's objective is to maintain a balance between current assets and liabilities through close monitoring of payment plans and cash projections.

The Group manages current and long-term funding by maintaining adequate reserves, banking facilities, reserve borrowing facilities and loan agreements with suppliers through continuously monitoring forecast and actual cash flows and matching the maturity profile of financial assets and liabilities.

The table below summarizes the maturity profile of the Group's financial liabilities at 31 December 2019 and 2018 based on contractual undiscounted payments (including interest payments not due yet).

Contract based maturities as at 31 December 2019	Book value	Total contract based cash outflow (I+II+III+IV)	Less than 3 months (I)	3 to 12 months (II)	1 to 5 years (III)	More than 5 years (IV)
Non-derivative financial liabilities						
Financial liabilities and issued debt instruments	19.642.394	22.301.494	2.108.407	4.536.553	12.298.790	3.357.744
Obligations under finance leases	1.140.761	1.506.209	155.753	326.441	898.204	125.811
Trade payables	4.391.610	4.391.610	4.305.795	85.815	-	-
Other payables ^(*)	1.253.520	1.253.520	1.214.728	-	38.792	-
Related parties	87	87	87	-	-	-
Derivative financial liabilities	710.715	710.715	122.565	281.158	321.363	(14.371)
Contract based maturities as at 31 December 2018	Book value	Total contract based cash outflow (I+II+III+IV)	Less than 3 months (I)	3 to 12 months (II)	1 to 5 years (III)	More than 5 years (IV)
Non-derivative financial liabilities						
Financial liabilities and issued debt instruments	19.918.824	23.245.870	315.164	7.088.059	14.985.281	857.366
Obligations under finance leases	2.594	2.599	158	476	1.965	-
Trade payables	3.845.124	3.845.124	3.732.338	112.786	-	-
Other payables ^(*)	1.417.484	1.452.543	1.190.109	-	262.434	-
Related parties	110	110	110	-	-	-
Derivative financial liabilities	732.938	737.926	79.697	364.471	325.707	(31.949)

^(*) Other payables item includes other payables, employee benefit obligations and other current liabilities. Taxes and other payables contained within employee benefit obligations and advances contained within other current liabilities are excluded.

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34. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES (CONTINUED)

Market risk

Foreign Currency Risk

		31 December 2019					31 December 2018				
		TL Equivalent	US Dollar	Euro	GBP	Other	TL Equivalent	USD	Euro	GBP	Other
1.	Trade receivables	303.692	32.786	15.102	183	4.470	315.683	22.861	28.884	3	15.201
2a.	Monetary financial assets (Cash and banks accounts included)	4.436.947	230.967	459.369	-	6.235	3.286.197	336.639	250.863	17	2.040
2b.	Non-monetary financial assets	-	-	-	-	-	-	-	-	-	-
3.	Other	174	-	26	-	-	108.766	922	17.232	-	29
4.	Current assets (1+2+3)	4.740.813	263.753	474.497	183	10.705	3.710.646	360.422	296.979	20	17.270
5.	Trade receivables	-	-	-	-	-	-	-	-	-	-
6a.	Monetary financial assets	35.405	5.960	1	-	-	36.481	6.934	-	-	-
6b.	Non-monetary financial assets	-	-	-	-	-	-	-	-	-	-
7.	Other	790	-	119	-	-	-	-	-	-	-
8.	Non-current assets (5+6+7)	36.195	5.960	120	-	-	36.481	6.934	-	-	-
9.	Total assets (4+8)	4.777.008	269.713	474.617	183	10.705	3.747.127	367.356	296.979	20	17.270
10.	Trade payables	2.621.490	339.821	83.327	(66)	31.090	2.044.960	302.973	70.387	-	19.113
11.	Financial liabilities	4.847.846	517.698	266.334	-	844	6.707.528	917.725	311.789	-	-
12a.	Monetary other liabilities	18.564	587	2.267	-	-	9.561	201	1.411	-	-
12b.	Non-monetary other liabilities	-	-	-	-	-	-	-	-	-	-
13.	Short-term liabilities (10+11+12)	7.487.900	858.106	351.928	(66)	31.934	8.762.049	1.220.899	383.587	-	19.113
14.	Trade payables	-	-	-	-	-	-	-	-	-	-
15.	Financial liabilities	13.652.099	1.872.480	379.924	-	1.561	13.159.080	1.798.103	613.709	-	-
16 a.	Monetary other liabilities	174.726	29.312	91	-	-	85.271	16.095	99	-	-
16 b.	Non-monetary other liabilities	-	-	-	-	-	-	-	-	-	-
17.	Long-term liabilities (14+15+16)	13.826.825	1.901.792	380.015	-	1.561	13.244.351	1.814.198	613.808	-	-
18.	Total liabilities (13+17)	21.314.725	2.759.898	731.943	(66)	33.495	22.006.400	3.035.097	997.395	-	19.113
19.	Net asset/(liability) position of off balance sheet derivative instruments (19a-19b)	11.707.212	1.552.884	373.315	-	-	10.070.310	1.824.600	78.180	-	-
19a.	Total asset amount hedged	-	-	-	-	-	-	-	-	-	-
19b.	Total liability amount hedged	(11.707.212)	(1.552.884)	(373.315)	-	-	(10.070.310)	(1.824.600)	(78.180)	-	-
20.	Net foreign currency asset/(liability) position (9-18+19)	(4.830.505)	(937.301)	115.989	249	(22.790)	(8.188.963)	(843.141)	(622.236)	20	(1.843)
21.	Net asset/(liability) position of foreign currency monetary items (IFRS 7.B23) (=1+2a+5+6a-10-11-12a-14-15-16a)	(16.538.681)	(2.490.185)	(257.471)	249	(22.790)	(18.368.039)	(2.668.663)	(717.648)	20	(1.872)
22.	Fair value of FX swap financial instruments	(115.429)	(41.060)	19.318	-	-	(448.013)	(87.785)	2.292	-	-
23.	Hedged amount of foreign currency assets	-	-	-	-	-	-	-	-	-	-
24.	Hedged amount of foreign currency liabilities	(11.707.212)	(1.552.884)	(373.315)	-	-	(10.070.310)	(1.824.600)	(78.180)	-	-

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34. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES (CONTINUED)

Market risk (continued)

Foreign currency risk (continued)

The Group has transactional currency exposures mainly with respect to the financial liabilities and trade payables. Foreign currency denominated borrowings are stated in Note 5.

The following table demonstrates the sensitivity to a reasonably possible change in the US Dollar and Euro exchange rate, with all other variables held constant, of the Group's net profit for the year (due to changes in the fair value of monetary assets and liabilities):

31 December 2019	Profit/Loss		Other comprehensive income	
	Appreciation of foreign currency	Depreciation of foreign currency	Appreciation of foreign currency	Depreciation of foreign currency
Appreciation of USD against TL by 10%:				
1- USD net asset/liability	(1.465.348)	1.465.348	-	-
2- Hedged portion of USD risk (-)	851.645	(530.719)	(330.164)	129.116
3- USD net effect (1+2)	(613.703)	934.629	(330.164)	129.116
Appreciation of Euro against TL by 10%:				
4- Euro net asset/liability	(171.076)	171.076	-	-
5- Hedged portion of Euro risk (-)	332.961	(281.957)	(50.244)	50.385
6- Euro net effect (4+5)	161.885	(110.881)	(50.244)	50.385
Appreciation of other foreign currencies against TL by 10%:				
7- Other foreign currency net asset/liability	(3.415)	3.415	-	-
8- Hedged portion of other foreign currency (-)	-	-	-	-
9- Other foreign currency net effect (7+8)	(3.415)	3.415	-	-
Total (3+6+9)	(455.233)	827.163	(380.408)	179.501

⁽¹⁾Including the fair value differences of cross currency, interest rate swap and option contracts.

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34. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES (CONTINUED)

Market risk (continued)

Foreign currency risk (continued)

31 December 2018	Profit/Loss		Other comprehensive income	
	Appreciation of foreign currency	Depreciation of foreign currency	Appreciation of foreign currency	Depreciation of foreign currency
Appreciation of USD against TL by 10%:				
1- USD net asset/liability	(1.398.652)	1.398.652	-	-
2- Hedged portion of USD risk (-)	287.143	(196.188)	98.573	(70.465)
3- USD net effect (1+2)	(1.111.509)	1.202.464	98.573	(70.465)
Appreciation of Euro against TL by 10%:				
4- Euro net asset/liability	(422.151)	422.151	-	-
5- Hedged portion of Euro risk (-)	186.468	(156.462)	(52.525)	19.659
6- Euro net effect (4+5)	(235.683)	265.689	(52.525)	19.659
Appreciation of other foreign currencies against TL by 10%:				
7- Other foreign currency net asset/liability	(245)	245	-	-
8- Hedged portion of other foreign currency (-)	-	-	-	-
9- Other foreign currency net effect (7+8)	(245)	245	-	-
Total (3+6+9)	(1.347.437)	1.468.398	46.048	(50.806)

Interest rate risk

The value of a financial instrument will fluctuate as a result of changes in market prices. The Group's interest rate risk is primarily attributable to its borrowings.

The interest-bearing financial liabilities have variable interest rates, whereas the interest bearing financial assets have a fixed interest rate and future cash flows associated with these financial instruments will not fluctuate in amount. The Group is subject to interest risk due to financial liabilities and finance lease obligations. Policy of the Group is to manage this risk through fixed and variable rates borrowings. In order to cover for these risks, the Group has entered into interest rate swaps (Note 15).

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34. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES (CONTINUED)

Interest rate risk (continued)

The interest rate risk table is presented below:

	31 December 2019	31 December 2018
Financial instruments with fixed interest rate		
Financial assets	4.281.269	3.693.827
Financial liabilities	(7.233.679)	(5.040.115)
Effect of hedging	(11.407.465)	(7.546.710)
	(14.359.875)	(8.892.998)
Financial instruments with variable interest rate		
Financial liabilities	(12.408.715)	(14.878.709)
Effect of hedging	11.407.465	7.546.710
	(1.001.250)	(7.331.999)

If the base point of denominated interest rates for financial instruments with variable interest rate was higher 0,25%, with all other variables held constant, the Group's income before tax and minority interest would be lower by TL 6.356 (31 December 2018: TL 6.529) and interest rate was lower 0,25%, with all other variables held constant, the Group's income before tax and minority interest would be higher by TL 6.406 (31 December 2018: TL 6.229) as of 31 December 2019.

On the other side because of hedging, if the base point of interest rate higher/lower 0,25%, equity would be higher by TL 54.124 (31 December 2018: TL 57.004), if the base point of interest rate lower 0,25%, equity would be lower by TL 55.601 (31 December 2018: TL 57.858).

Explanation on the presentation of financial assets and liabilities at their fair values

The below table summarizes the carrying and fair values of financial asset and liabilities in the Group's consolidated financial statements.

Due to their short-term nature, the fair value of trade and other receivables represents their book value. The fair value of borrowings with fixed interests is obtained by calculating their discounted cash flows using the market interest rate effective at the reporting date. The fair value of foreign currency denominated borrowings with variable interests is obtained by discounting the projected cash flows using estimated market interest rates.

	Carrying amount		Fair value	
	31 December 2019	31 December 2018	31 December 2019	31 December 2018
Financial assets				
Cash and cash equivalents	4.946.070	4.494.536	4.946.070	4.494.536
Trade and other receivables (including related parties)	6.115.801	5.384.712	6.115.801	5.384.712
Financial investments ^(*)	14.693	11.995	^(*)	^(*)
Derivative financial assets	408.522	237.402	408.522	237.492
Financial liabilities				
Bank loans	13.758.315	15.040.979	13.758.259	15.039.834
Issued debt instruments	5.884.079	4.877.845	6.127.415	4.877.845
Financial leasing liabilities	1.140.761	2.594	1.140.761	2.594
Trade payables and other liabilities (including related parties) ^(**)	5.563.531	5.262.718	5.563.531	5.262.718
Derivative financial liabilities	710.715	732.938	710.715	732.938

^(*) Group's share in financial investments are carried at cost. Information on fair value of share in these investments are not available.

^(**) Trade payables and other liabilities item includes trade and other payables, employee benefit obligations and other liabilities contained within other current liabilities. Taxes and other payables contained within employee benefit obligations and advances contained within other current liabilities are excluded.

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34. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES (CONTINUED)

Explanation on the presentation of financial assets and liabilities at their fair values (continued)

Fair value hierarchy table

The group classifies the fair value measurement of each class of financial instruments according to the source, using the three-level hierarchy, as follows:

Level 1: Market price valuation techniques for the determined financial instruments traded in markets (unadjusted)

Level 2: Other valuation techniques includes direct or indirect observable inputs

Level 3: Valuation techniques does not contains observable market inputs

Fair value hierarchy table as at 31 December 2019 is as follows:

			Fair Value Measurement		
	Date of Valuation	Total	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Financial assets measured at fair value:					
Derivative Financial Assets:					
Cross currency swaps	31 December 2019	373.121	-	373.121	-
Interest rate swaps	31 December 2019	35.401	-	35.401	-
Financial liabilities measured at fair value:					
Issued debt instruments	31 December 2019	2.876.254	2.876.254	-	-
Derivative Financial Liabilities:					
Interest rate swaps	31 December 2019	173.362	-	173.362	-
Cross currency swaps	31 December 2019	517.664	-	517.664	-
Commodity derivative (Copper)	31 December 2019	19.689	-	19.689	-
Other financial liabilities not measured at fair value					
Bank loans	31 December 2019	13.758.259	-	13.758.259	-
Issued debt instruments	31 December 2019	3.251.161	3.251.161		

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34. FINANCIAL RISK MANAGEMENT OBJECTIVES AND POLICIES (CONTINUED)

Explanation on the presentation of financial assets and liabilities at their fair values (continued)

Fair value hierarchy table (continued)

Fair value hierarchy table as at 31 December 2018 is as follows:

			Fair Value Measurement		
	Date of Valuation	Total	Quoted Prices in Active Markets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Financial assets measured at fair value:					
Derivative Financial Assets:					
Cross currency swaps	31 December 2018	200.921	-	200.921	-
Interest rate swaps	31 December 2018	36.481	-	36.481	-
Financial liabilities measured at fair value:					
Issued debt instruments	31 December 2018	4.877.845	4.877.845	-	-
Derivative Financial Liabilities:					
Interest rate swaps	31 December 2018	84.004	-	84.004	-
Cross currency swaps	31 December 2018	648.934	-	648.934	-
Other financial liabilities not measured at fair value					
Bank loans	31 December 2018	15.039.834	-	15.039.834	-

Capital management policies

The primary objective of the Group's capital management is to ensure that it maintains a strong credit rating and healthy capital ratios in order to support its business and maximize shareholder value.

The Group manages its capital structure and makes adjustments to it in light of changes in economic conditions.

To maintain or adjust the capital structure, the Group may adjust the dividend payment to shareholders or return capital to shareholders. No changes were made in the objectives, policies or processes during the years 2019 and 2018.

0-9

3G

Third generation of mobile systems. Provide high-speed data transmissions and higher supporting multimedia applications such as full-motion video, video conferencing and Internet access. See "UMTS".

A

Access Channel

The network element used to connect a subscriber to the nearest switch or concentrator. An access channel generally takes the form of a closed circuit and consists of a pair of copper wires, but may also employ fiber optic cables, microwave links or other technologies.

ACD (Automatic Call Distribution)

A specialized phone system for handling incoming calls which recognizes and answers calls according to instructions from a database and then routes the calls to an operator or agent.

ADSL (Asymmetric Digital Subscriber Line)

A technology for transferring data that uses an access channel to provide faster network access to the Internet and other popular multimedia and data services at speeds of up to two to six Mbps, a transfer speed 50 times faster than narrowband or dial-up Internet access.

ARPL (Average Revenue per Line)

Measures the average monthly revenue generated for each line. The method used to calculate this measure may differ among operators.

ARPU (Average Revenue per User)

Measures the average monthly revenue generated for each customer unit, such as a mobile phone.

ATM (Asynchronous Transfer Mode)

A multiplexing and routing technology for high-speed digital communications that permits data, text, voice, video and multimedia signals to be transmitted simultaneously between network access points at speeds of up to 155Mbps or more. ATM allows for better local area network interconnections, PABX interconnection, data transmission and flexible bandwidth delivery.

B

Base Station

Fixed transceiver equipment in each cell of a mobile telecommunications network that communicates by radio signal with mobile handsets in that cell.

Bit

The smallest unit of binary data.

Bit stream Access

Access to Türk Telekom equipment connecting a provider to the end user to provide high-speed access services. This form of access differs from wholesale in that, in terms of transmission capacity, it provides access at a binary rate and the operator, as the access provider, decides on the technical specifications for the equipment directly connected to the access channel, as well as on the interface offered at the end-user side.

BPS (Bits per Second)

A data transmission rate

Broadband Service

A communications service for content requiring high-speed transmission rates such as video transmission.

C

Call Forwarding

A feature permitting the user to program a phone to ring at an alternate location; call forwarding may be in effect at all times or only in certain designated instances, such as when a particular phone is busy or there is no answer.

Call Waiting

A warning signal received when a person is on a call that there is a second incoming call.

Carrier Pre-Selection

A mechanism that allows customers to select competing operators as that user's default operator without dialing additional codes on the telephone. The customer subscribes to the services of a competing operator and his calls are routed through such operator.

Centrex

An enhanced phone service offered by public exchanges that delivers PBX switchboard-like functions to groups of users without the need for a private exchange within an organization or other group of users.

Churn

A measure of customer turnover due to subscription disconnections as a result of terminations by customers; switching by customers to competing services; terminations by the service provider due to customer non-payment; and, in the case of mobile communications services, expirations of prepaid cards.

CLIP (Call Line Identification Presentation)

A code that is sent over phone lines in certain locations when a person makes a phone call. This code includes the phone number of the person making the call. Certain modems are able to understand this code, and inform the customer of the identity of the person who is calling before the customer answers the phone.

CLIR

Caller Line Identity Restriction

Glossary

Co-Location

The physical or virtual placement of competitors' equipment within the facilities of Türk Telekom for purposes of providing telecommunications services to end users, such as interconnection and unbundling.

CPI

Consumer Price Index

CTI (Computer Telephony Integration)

A system that enables a computer to act as a call center, accepting incoming calls and routing them to the appropriate destination.

D

Digital

A method of storing, processing and transmitting information through the use of distinct electronic or optical pulses that represent the binary digits 0 and 1. Digital transmission and switching technologies employ a sequence of these pulses to represent information as opposed to the continuously variable analog signal. Compared to analog networks, digital networks allow for greater capacity, lower interference, protection against eavesdropping and automatic error correction. Signals are encoded into digits for transmission.

DSL (Digital Subscriber Line)

See "xDSL".

DSLAM (Digital Subscriber Line Access Multiplexer)

Equipment at a phone company's central location that can be used to link many customer DSL connections to a single high-speed ATM line.

DWDM (Dense Wavelength Division Multiplexing)

A technique enabling several independent flows of digital information to co-exist on the same optical fiber.

E

EDGE

Enhanced Data Rates for Global Evolution.

Ethernet

A local area network allowing several computers to transfer data, typically over a coaxial cable.

Exchange

See "switch".

F

Frame Relay

A data transport protocol that divides a physical communications line into several virtual channels. A technology part-way between X25 packet switching and ATM.

Frequency band

A specified range of frequencies. Frequency refers to the number of times per second that a wave (e.g., electromagnetic wave) oscillates or swings back and forth in a complete cycle from its starting point to its end point.

G

GByte

A unit of binary data commonly used to measure data storage or transfer.

Gbps (Gigabits per second)

A data transmission rate. One Gbps equals one billion bps.

G.SHDSL (Global Symmetric High Bit-Rate Digital Subscriber Line)

Service that provides equal bandwidth for both uploads and downloads and transports data at a maximum bit rate of 2.3Mbits/s in both directions.

GMPCS (Global Mobile Personal Communications via Satellite)

A personal communication system providing transnational, regional or global coverage through satellites that are accessible by end users with small and easily transportable terminals.

GPRS (General Packet Radio Service)

A GSM-based packet-switched data transmission technology standard, established by the European Telecommunications Standards Institute, in which base stations can be directly connected to the Internet, thus bypassing the switching systems typically used to connect mobile traffic to fixed networks. GPRS provides users of mobile communications services better data access capability with virtually instant and permanent connections, as well as speeds up to ten times higher than GSM.

GSM (Global System for Mobile Communications)

A digital mobile telecommunications system standardized by the European Telecommunications Standards Institute based on digital transmission and cellular network architecture with roaming in use throughout Europe, Japan and in various other countries. GSM systems operate in the 900 MHz (GSM 900) and 1800 MHz (GSM 1800, also referred to as DCS 1800) frequency bands.

GSM 900 and GSM 1800

See "GSM".

I

Interconnection

The linking of telecommunications networks used by the same or different persons in order to allow the users of the services or networks of one person to communicate with the users of the services or networks of the same person or of another person, or to access services provided by another person.

International Roaming

Provision of roaming services in the domestic market to subscribers of a competing operator's network. See "roaming".

Internet Access Line

The network element used to connect a subscriber to the nearest switch or concentrator. An access channel generally takes the form of a closed circuit and consists of a pair of copper wires, but may also employ fiber optic cables, microwave links or other technologies.

IP (Internet Protocol)

Protocol used in the Internet for communication among multiple networks.

IP-VPN (Internet Protocol Virtual Private Network)

A closed network of encrypted links accessible via Internet protocol

IPTV

Internet Protocol television, a system in which digital television services are delivered by using Internet Protocol over a network infrastructure, which may include delivery via a broadband connection.

ISDN (Integrated Services Digital Network)

A transmission system with the capacity to transmit two streams of information (voice, text, data or graphics) simultaneously on a single access channel based upon end-to-end digitalization and standardized out-of-band signaling.

ISDN-BA

Integrated Services Digital Network Basic Access, comprising two voice channels and one signaling channel.

ISDN-PA

Integrated Services Digital Network Primary Access, comprising 30 voice channels and one signaling channel.

ISP (Internet Service Provider)

A company providing access to Internet and other computer based information networks through its servers.

IT (Information Technology)

The broad subject concerned with all aspects of managing and processing information, especially within a large organization or company.

ITI (Interactive Terminal Interface)

A protocol that allows for the transfer of binary files between terminals across an X.25 network.

IVR (Interactive voice response)

A telecommunications system that uses a pre-recorded database of voice messages to present options to a user, typically over telephone lines.

K

Kbps (Kilobits Per Second)

A data transmission rate. One Kbps equals 2(10) bps.

L

LAN (Local Area Network)

A short distance data transmission network designed to interconnect personal computers, workstations, minicomputers, file servers and other computing devices within a localized environment, for the purpose of sharing files, programs and various devices such as printers and high-speed modems. LANs may have a decentralized communications management or include dedicated computers or file servers that provide a centralized source of shared files and programs.

Leased line

Voice and data circuits leased to connect two or more locations for the exclusive use of the subscriber.

Local Loop

See "access channel".

M

MByte

A unit of computer data commonly used to measure data storage or transfer.

Mbps (Megabits per Second)

A data transmission rate. One Mbps equals 2(20) bps.

MHz (Megahertz)

A measure of frequency. One MHz equals 1,000,000 cycles per second.

MMS (Multimedia Messaging Service)

A standard defined for use in advanced wireless terminals that allows users to send and receive messages containing various kinds of multimedia content, such as images, audio and video clips, with a "non-real-time" transmission.

MNP (Mobile Number Portability)

A service that allows customers to keep their mobile phone numbers when they change service providers.

MNS (Managed Network Services)

The management and provision of operational support for a network environment while the network hardware and associated assets remain on the client's books.

MoU (Minutes of Use)

A measurement of customer activity. Average minutes of use per customer, usually presented on a monthly basis.

MVNO (Mobile Virtual Network Operator)

A company that offers mobile services using another company's network.

MPLS (Multiprotocol Label Switching)

A standards-approved technology for speeding up network traffic flow and making it easier to manage. MPLS involves setting up a specific path for a given sequence of packets, identified by a label put in each packet, thus saving the time needed for a router to look up the address in order to forward the packet to the next node.

N

Narrowband

A channel that provides data transfer rates less than or equal to one voice-grade line. Contrast with broadband speeds of data transfer.

NGN (Next Generation Networks)

IP/MPLS protocol-based digital packet-switched network.

NMT 450

Nordic mobile telephone and one of the earliest first generation mobile networks that operated mostly in the 450 MHz band.

Node

A network element that provides a point at which key telecommunications equipment or computers can access the network. In circuit networks, nodes are switching systems. In packet-switched networks they are often computers.

O

On-Net

Calls that stay on an operator's network or a customer private network from beginning to end.

P

Packet switching

A data transmission process, utilizing addressed packets, whereby a channel is occupied only for the duration of transmission of the packet.

PMR (Private Mobile Radio)/PAMR (Public Access Mobile Radio)

A commercial service using trunking techniques in which multiple groups of users can set up their own closed systems within a shared public network.

PC (Personal Computer)

A small digital computer based on a microprocessor and designed to be used by one person at a time.

Penetration Rate

The total number of subscribers for a carrier divided by the population that it serves expressed as a percentage.

Point-to-Point

A link from one user or network to another using a phone line.

PoP (Point of Presence)

A site where there exists a collection of telecommunications equipment, usually modems, digital leased lines and multi-protocol routers.

Pulses

A unit of measurement of billing intervals

Push-To-Talk

Mobile phone technology that allows a mobile phone to be used for real-time one-to-one and one-to-many voice communication, typically requiring the speaker to push a button on the handset to be heard and to release the button to listen.

PSTN (Public Switched Telephone Network)

The international telephone system based on copper wires carrying analog voice data. This is in contrast to newer telephone networks based on digital technologies, such as ISDN.

PTT

The PTT is the General Directorate of Postal Telegraph and Telephone. Türk Telekom operated as part of the PTT from 1924 to 1995, when it was separated from the PTT and incorporated as a joint stock company under the Undersecretary of the Treasury.

R

Registered line

Registered line refers to a line with a valid and effective subscription agreement between the operator and the customer.

Ringback

When the customer gets a busy tone when calling a number, the caller is invited to punch R5. Once the called party's line is free, the service will call back the customer and will connect them.

RLLO

Türk Telekom's reference local loop offer. Türk Telekom is required by the Local Loop Unbundling Communiqué enacted on 1 July 2005 to publish a reference offer for access to its local loop. The reference local loop offer must be approved by the Telecommunications Authority every year. Türk Telekom submitted its RLLO for approval on 29 September 2005.

Roaming

The mobile telecommunications feature that permits subscribers of one network to use their mobile handsets and telephone numbers when in a region covered by another operator's network.

Router

An inter-network device that relays data packets to networks connected to the router based upon the destination address contained in those data packets being routed.

S

SCT (Special Communications Tax)

A tax imposed on all mobile communications services in Turkey to fund public works in the aftermath of the 1999 earthquake in Turkey's Marmara region. The tax was originally applicable through the end of 2000, but has been extended twice and on 1 January 2004 was made permanent when Law 5035 was enacted. The tax is paid by mobile customers and collected by mobile operators.

SDH (Synchronous Digital Hierarchy)

The European standard for high-speed digital transmission using fibre optic cables.

SIM (Subscriber Identity Module)

An electronic card inserted into a GSM phone that identifies the user account to the network, handles authentication and provides data storage for user data such as phone numbers and network information. It may also contain applications that run on the phone.

SLA (Service Level Agreement)

A contract between a network service provider and a customer that specifies, usually in measurable terms, what services, and in certain cases, the quality of such services that the network service provider will furnish.

SMS (Short Message Service)

A mobile communications system that allows users to send and receive alpha-numeric messages of up to 160 characters from one mobile handset to another via a short message service center.

SOHO

Small Office/Home Office.

Switch

A device used to set up and route telephone calls either to the number called or to the next switch along the path. They may also record information for billing and control purposes.

T

Termination rate

The interconnection fee received by an operator for incoming calls terminating on its network.

U

UMTS (Universal Mobile Telecommunications System)

The third-generation broadband mobile communications standard. UMTS utilizes Code Division Multiple Access, or CDMA, technology and has the speed and capacity to handle multimedia transmissions. A UMTS system offers mobile telephony, messaging services, wireless access to the Internet and other multi-media services at higher speeds than GSM systems.

USO (Universal Service Obligation)

The obligation placed on Türk Telekom by the Universal Service Law enacted on 16 June 2005 to ensure that standard telephone services, pay phones and prescribed carriage services are reasonably accessible to all people in a particular region on an equitable basis, and with affordable pricing, wherever they reside or carry on business.

V

Voicemail

Any system for sending, storing and retrieving audio messages, similar to a telephone answering machine.

VoIP

Voice over Internet Protocol, in which voice traffic is carried over Internet Protocol rather than a circuit-switched network.

VPN (Virtual Private Network)

A data network that shares telecommunications infrastructure but acts as a secure private network, with an architecture based on the use of the TCP-IP (Time Compression Multiplexing—Internet Protocol).

W

WAP (Wireless Application Protocol)

A global open specification that supports Internet Protocols on wireless devices, such as mobile phones, two-way radios, smart phones and communicators, to easily access and interact with Internet-based services. With WAP, a mobile phone user can view mini-pages and interact with a small, multiple choice screen.

Wi-Fi (Wireless Fidelity)

The generic term used to refer to any type of IEEE 802.11 radio frequency network, in which signals are sent over radio frequencies or infrared using wireless network cards and hubs to provide wireless network access.

WiMax (World Interoperability for Microwave Access)

The successor to Wi-Fi. The generic term used to refer to any type of IEEE 802.16 radio frequency network, with a range of up to 80 km and a bandwidth of up to 75bps.

WLAN

A wireless network connecting two or more computers or other devices over a short distance, such as within an office, a home or a hot spot. Wi-Fi and its successor, WiMax, are examples of WLANs.

X

X25

A worldwide protocol for communications services using packet-switched networks.

xDSL

Refers collectively to all types of digital subscriber lines, the two main categories being ADSL and SDSL. Two other types of xDSL technologies are High-data-rate DSL (HDSL) and Very high DSL (VDSL). DSL technologies use sophisticated modulation schemes to pack data onto copper wires. They are sometimes referred to as “last-mile technologies” because they are used only for connections from a telephone switching station to a home or office, not between switching stations.

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