NETAŞ
ANNUAL REPORT
2020

GENEL- PUBLIC

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MESSAGE FROM CHAIRMAN

Esteemed Shareholders,

With the onset of pandemic, 2020 was marked as a year engulfed with global macroeconomic uncertainties where economic activities slowed down in developed and developing world alike. The priority for most companies and countries throughout this period was to sustain business. However, pandemic also showed once again that we can no longer shy away from taking concrete steps to ensure sustainability of life. This period, with carbon footprint on the decline and social awareness surging, proved to be a steppingstone welcoming the transition into circular economy, protection of biological diversity and fight against climate change.

Digitalization, on the hand other hand, provided the medium to address all needs pertaining to sustainability. Brought forward in urgency by the necessities of the pandemic, digital platforms emerged as the backbone of a sustainable life and sustainable economy.

The demand for remote services and applications highlighted the significance of 5G technologies. 2020 saw further strengthening of the initial 5G commercial investments of 2019. With 5G investments attracting more attention worldwide, ZTE continued its efforts full steam to establish 5G as “the driving force for digital economy”. Thanks to these fruitful efforts, ZTE closed off 2020 as the world leader in patented 5G technologies. We are confident that ZTE`s expertise in the area will ensure Netaş to continue and add value to Turkey`s “new normal”.

Growing with ZTE in telecommunication technologies

2020 was the year we started reaping the synergic benefits of ZTE and Netaş working together: Netaş achieved 170% growth last year in telecommunications technologies.

Our localization efforts, conceived in 2019 with FTTx systems, endure with many other products of ZTE. Our goal here is to undertake local production of ZTE staples by way of transferring the knowhow to Turkey and helping to support the robust growth of Turkish economy.

Another joint step in this direction was for the IPTV technologies. Netaş started building ZTE`s new generation IPTV platform in Turkey. We will see more of Netaş and ZTE`s solid efforts in the Turkish IPTV category going forward.

In addition to telecommunications, we took it upon ourselves to respond promptly and efficiently to the digitalization needs of businesses and enterprises within the pandemic’s context. We have expanded our customer portfolio while further deepening our relationship with existing clients with a resulting 31% increase in overall Netaş sales.

Despite the slowdown in global trade, we have managed to boost our overseas sales by 9% in 2020. We have onboarded a very important project in Qatar, the host of the 2022 World Cup. In

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Kazakhstan and TRNC, we have undertaken projects that are key for the digital transformation of these countries.

I have the opinion that digital investments, whose critical importance for the surrounding region is exacerbated by the realities of the pandemic, and which had to be delayed, present an immense potential for Netaş and ZTE. Netaş will respond to these needs in the best possible way particularly in the aftermath of the pandemic.

Netaş is not only providing technological products, solutions and services but also sharing its knowhow with the whole ecosystem via n-telligent institute, in an effort to raise and foster the digitally competent workforce that Turkey and the region needs.

2020 also saw a heightening of efforts at Netaş to ensure export compliance, with all staff excelling in putting high standards into practice.

We want to be the architect of the `new normal` in the neighbouring region

2020 was a benchmark year marked with uncertainty globally. At Netaş, we are proud to have emerged stronger from amidst the unknown.

I would like to take this opportunity to present the Board`s appreciation and thanks to the Executive Committee as well the staff for the brilliant work in fulfilling their responsibilities to our customers and shareholders.

We look to the future in anticipation of the New Normal that will rise through digitalization. Netaş will make the best of its communication and information technologies experience spanning more than half a century as well as of the support extended by ZTE, its main shareholder and pioneer in telecommunications technology.

Without doubt, Netaş will be one of the transformation architects of the New Normal in Turkey and the region, and will continue to add value for its people, customers, investors and the community it thrives within.

Kindest Regards,
Aiguang Peng

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MESSAGE FROM CEO

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Dear Shareholders,

We left behind a challenging year when the whole world struggled socially and economically, due to the constraints imposed by the pandemic. In this period when billions of people have a different experience based on physical distance; digitalization has emerged as a necessity, and as an opportunity as well. Everyone has somehow experienced that digitalization has moved to the very center of life.

It became clear that many digital needs, which were seen solely as a cost center and postponed accordingly, are actually vital for the sustainability of business processes. Despite all the uncertainties and difficulties in these times, Netaş continued its activities without slowing down, with the awareness of its responsibility of providing services in a sector of strategic importance for our country. In 2020, we mobilized all our knowledge and resources to minimize the negative effects of the pandemic for our society and to ensure that the economy and life in our country continue without any interruption.

In this period, we switched to a flexible working model quickly as we prioritized the health of our employees. At Netaş, all processes were continued uninterruptedly as our employees very quickly adapted to the remote working model, which was not used at all before. Our ICT support, including field operations, continued for many critical areas including continuous communication provided by operators, distance education provided by schools, uninterrupted e-commerce, companies' safe remote working, and the rapid organization of our government in case of disaster. We stood by our customers in all areas of digitalization, from critical cloud infrastructure to security. We have provided support to companies and organizations as quickly and professionally as needed so that they can adapt to a world where everything is done remotely.

All these efforts were also reflected in the business results and the year 2020 was closed with a sales increase of as high as 31 percent. This brought the sales revenue to ₺1.7 billion, while the gross profit increased by 11 percent to ₺177 million. Total assets grew by 20 percent from ₺2 billion to ₺2.4 billion TL. The EBITDA margin increased from 2.5 percent to 4.7 percent in the period in question.

Our solution set for telecom operators is expanding

Great progress is recorded in telecommunications technologies, the most powerful muscle of Netaş, together with ZTE in 2020. The diversified services we offer with the software solutions we have developed for telecom operators in our R&D increased our sales volume in the telecom market in 2020. Our localization efforts, which started with ZTE's FTTx fiber infrastructure systems, continued in 2020 with VDSL Modem and Fiber Modem (Home Gateway). We implemented a fixed core network modernization project with one of our operators. The tests of digital services offered to mobile subscribers were tested successfully. Together with ZTE, we aimed to increase our efficiency in the telecom market by focusing on advanced technologies such as the next-generation IPTV platform, as well as our localization activities.

In 2021, telecom R&D will be among our main priorities in order to further strengthen our presence with ZTE before telecom operators. Together, we will accelerate our localization efforts, and we will bring ZTE's leading telecom technologies to our country.

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We will bring our original software products forward

The benefits of our products developed by our R&D team, including remote management of resources such as energy and water, field service management, event management, and IoT platform have become highlighted with the "new normal". In the meantime, the unprecedented increase in e-commerce and online banking volume creates new opportunities for our load performance test, device park, and test automation system products.

In the coming period, we will make a detailed analysis of our existing products and we will work to bring our products and services created by our R&D forward and to expand our customer range.

Managed services will become more important

With remote working becoming new normal, the importance of cybersecurity has increased, and it has become vital for companies to keep their networks stable. In 2020, the "managed services", which include network management and cybersecurity services, were one of our priorities.

This year, we started to provide services to one of Turkey's largest airports. We will focus on ensuring the managed services we provide through BDH, our power in the field with its coverage throughout Turkey, is delivered with the maximum efficiency and professionalism that our customers need.

We continue to be the reliable technology partner of companies

In the world ICT industry, there were notable increases in cloud-based teleconferencing and IaaS expenditures for the necessary infrastructure in 2020. We anticipate that this trend will have a positive impact on the services we provide through our network of the world’s leading technology providers in 2021.

To meet the needs, some of them emerging and some gaining importance we will continue to be the reliable technology partner of Turkey’s leading companies. At the same time, we will work on deepening our business with corporate customers through efficient vendor management and R&D power.

We grew in international markets, despite unfavorable circumstances

In 2020, we recorded an increase in exports primarily in Algeria, Kazakhstan, and Qatar. In international markets, we continue to carry out projects on telecom infrastructure with ZTE. We won new projects with ZTE in Kazakhstan. The process of completing the projects we had previously undertaken in Algeria and the TRNC has begun, and a new project has been received in the TRNC.

We implemented our largest international digital transformation project of 2020 in Qatar. The digital sports and customer experience platform project we have undertaken in Qatar, which is preparing to host the World Cup in 2022, is successfully commissioned in the final match of the Emir of Qatar Cup.

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On the other hand, our international R&D branch NetRD continued to export software to North America. We were among Turkey's top three software services exporters. Despite the ongoing travel restrictions due to the pandemic negatively affecting our field operations, we hope that this upward trend will continue in 2021 with our motivation to export technology, which is marked in our DNA.

BDH sees expanding portfolio

At BDH, all operations have been continued by keeping customer satisfaction at the highest level. While continuing to provide trouble-free service to HP, Lenovo, Samsung, Turkish Football Federation, and 112 Emergency among others, a series of new projects are started during the pandemic. The most prominent ones among the new projects include Vodafone Turkey's Izmir Center infrastructure installation, Borsa Istanbul's Data Center infrastructure maintenance, Şekerbank DRC transport projects, Akbank HCS data center migration, and switch changing project for TEB branches with Turkcell. In addition to these, we became a business partner in Türk Telekom's central repair service. According to the agreement, BDH will provide repair services for devices sold through Türk Telekom's dealer network throughout Turkey.

n-telligent institute: The business partner of sectors in technology training

The n-telligent institute, offering the in-depth and versatile technology experience of Netaş and its experience in agile project management to professionals from all sectors, gained significant experience in 2020. We are working to get n-telligent institute, where the 53 years of ICT knowledge of Netaş was made available to all ecosystem, adopting an educational approach focusing on both technical and social skills, become an advanced technology training center not only in Turkey but also in its region

Netaş listed in the Sustainability Index

The Sustainable Development Goals, consisting of 17 articles within the scope of the United Nations Development Program (UNDP), are among the priorities of all societies and stakeholders. In this context, environmentally and socially friendly and sustainable companies are becoming increasingly important for investors. Working for a sustainable future with the technology it has developed and the social benefit projects it has implemented, Netaş will continue to be listed in the Sustainability Index of Borsa Istanbul this year, just like in 2020.

We are starting to write the success story of the next 50 years

With our belief and passion in the transformative power of technology, we are starting to write the success story of a new 50 years at Netaş together with 2,500 talents. In this period, we will accelerate our efforts to be "Turkey's pioneering innovation and digital transformation company", together with precious talents we have, our heritage, valuable business partners, and global power of ZTE, leading world technology trends.

With the innovativeness embedded in our codes, Netaş will focus on the real needs of the market, innovations that will provide a competitive advantage, and world trends while preserving the values we have. In this new normal, we will continue to increase the value we create for our employees, customers, investors, and the communities of the markets in which we operate.

Best regards,

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Ali Emir Eren
CEO

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SENIOR MANAGEMENT MEMBERS

Ali Emir Eren
CEO

M. İlker Çalışkan
Vice Chief Executive Officer and Chief Financial Officer

Altay Doğu
Carrier Telco Business General Manager

Bilgehan Çataloğlu
Chief Digital Officer

Börgehan Köksal
Chief Compliance Officer

Buket Okumuş
Chief Communications Officer

Burak Şalk
NetRD General Manager

Koray Otyam
BDH General Manager

Mei Bowen
Chief Operations Officer

Bülent Kemal Mutlu
R&D General Manager

Yasemin Akad
Chief People Officer

Selda Parın
Netaş Bilişim General Manager

Sinan Dumlu
Corporate, Public, International Markets Business Unit General Manager

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Dr. Xİ Guang Qing
Chief Technical Officer

* As of January 1, 2021, Ali Emir Eren was named the CEO of the company.

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COMPANY PROFILE

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NETAŞ AT A GLANCE

Every day, we touch the lives of hundreds of millions of people and transform these lives with our technology

Netaş, establishing the foundations of Turkey's telecommunications network, has been playing a role in digital transformation both on a national and global scale for the past 53 years, with its passion for R&D, and its belief that the technology will make our world better.

With its versatile expertise in telecommunication technologies, Netaş today has R&D experience, IT ecosystem, vendor network, service competence, project expertise, and financial capacity to meet all information and communication needs of any organization, regardless of the industry. This way, it realizes holistic digital transformation projects for leading companies and public institutions of different countries.

The software solutions of Netaş, a subsidiary of leading global telecom company ZTE, are serving hundreds of millions of people in dozens of countries from the US to Australia, from Algeria to Malaysia, and from Kazakhstan to Switzerland.

Netaş technology is used in a football match played in Qatar between the world's most competitive teams, in the telecommunication infrastructure of Istanbul Airport, when you safely transfer money online, in a case of emergency, in a school in Anatolia, or a naval frigate, or even in an oil well in the middle of the Sahara Desert. Thanks to the base band unit it developed, Netaş made Turkey one of the world's four countries using its domestically developed 4G. The company has provided $4 billion of savings to its home country through locally supplying authentic and localized products.

Competent global systems integrator

Serving in such a wide range and geographical coverage, Netaş has nearly 120 global and domestic business partners, an IT support services company with experience in all field conditions, and an R&D center that hosts nearly a thousand engineers. On the other hand, with its high-tech training center, n-telligent institute, Netaş aims to equip human resources with high technology competencies in Turkey and the neighboring region. Also having a technology production center, Netaş is Turkey's most competent systems integrator on a global scale with all its muscle.

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Authentic and localized telecommunications technologies

In order to build Turkey's communications infrastructure with local capacity, Netaş began its operations in 1967, with a partnership agreement signed between PTT and Northern Electric It established the country's first private telecom R&D in 1973, and it became one of the pioneers of the technology localization movement.

Once founded to bring Turkey capable of supplying its own telecommunication technology needs, Netaş today is contributing to Turkey's technological transformation by localizing ZTE's global pioneering new-generation telecommunication infrastructure systems.

The localization work, which started with ZTE's FTTx fiber infrastructure systems in 2019, continued with VDSL Modem and Fiber Modem (Home Gateway) in 2020.

Having Turkey's most established R&D, Netaş today is focusing on technologies including IoT, VoIP, big data analytics, cloud computing, multimedia, broadband communications, GSM-R, cybersecurity, unified communications, 5G and Beyond. In addition, it has products and solutions to increase efficiency with its own smart solutions for efficient management of energy and water resources, event management, and field service management.

Made its knowledge available to its ecosystem

Netaş has made its in-depth knowledge available to its ecosystem with the n-telligent institute. Netaş has started to offer 20 different courses under 6 main topics, designed in order to help all the constituents of its ecosystem, from its own employees to companies from every sector, and from start-ups to university students, keep their skills updated in its n-telligent institute

Known as "Turkey's engineering school", Netaş aims to be a "business partner" in human resources training for companies from different verticals. As a next step, Netaş seeks to export its training on a global scale, with ZTE.

Netaş, a public company listed on Borsa Istanbul (BIST) and in its Sustainability Index, which includes companies with high corporate sustainability performance, continues to add value to society and all its stakeholders with the transformative power of technology.

NETAŞ COMPETECIES

- GLOBAL SYSTEMS INTEGRATOR
- STRONG R&D EXPERTISE
- GLOBAL TECHNOLOGY ECOSYSTEM
- BROAD SERVICE NETWORK & DIGITAL CONSULTANCY COMPETENCY
- MANUFACTURING CAPACITY
- HIGH TECHNOLOGY TRAINING CENTER

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SERVICE MAP

TECHNOLOGIES

- 4/5G
- MOBILE BROADBAND
- UNIFIED COMMUNICATIONS
- IoT
- CYBERSECURITY
- CLOUD COMPUTING
- BIG DATA ANALYTICS

DIGITAL TRANSFORMATION CONSULTANCY

- DIGITAL TRANSFORMATION READINESS
- NETWORK COMMUNICATION
- NEXT-GEN VoIP SOLUTIONS
- CYBERSECURITY
- DATA CENTER SOLUTIONS
- BUSINESS INTELLIGENCE & ANALYTICS
- BUSINESS SOLUTIONS

SERVICES

- NETAŞ TEST CENTER
- MANAGED SERVICES
  - CYBERSECURITY OPERATIONS CENTER (CSOC)
  - NETWORK OPERATIONS CENTER (NOC)
- MICROSOFT OPERATION CENTER
- MANUFACTURER GUARANTEE SERVICES
- ADVANCED PROFESSIONAL SERVICES
- SUPPORT SERVICES

INNOVATION & PRODUCTS

- NEOS ENERGY MANAGEMENT SOLUTIONS
- NOVA S-COM
- MOBI-FI FIELD SERVICE MANAGEMENT
- ION IoT PLATFORM
- SMART EVENT MANAGEMENT PLATFORM
- SERVICE VIRTUALIZATION PLATFORM
- TEST PRODUCTS VISIUMLAB
- STRATEGIC COMMUNICATION SOLUTIONS
- BROADBAND MOBILITY APPLICATIONS
- AUTHENTIC SOFTWARE APPLICATION SOLUTIONS

INDUSTRIES

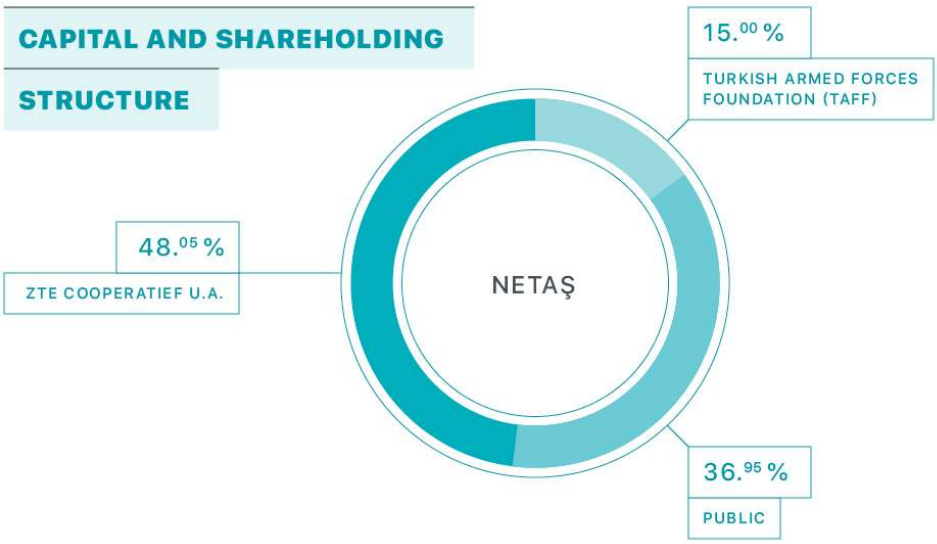
- TELECOM SERVICE PROVIDERS
- FINANCE
- TRANSPORTATION
- PUBLIC
- ENERGY
- SPORTS
- ENTERTAINMENT
- RETAIL
- FMCG
- CONSTRUCTION
- EDUCATION
- STRATEGIC COMMUNICATION
- HEALTHCARE

LOCALIZATION

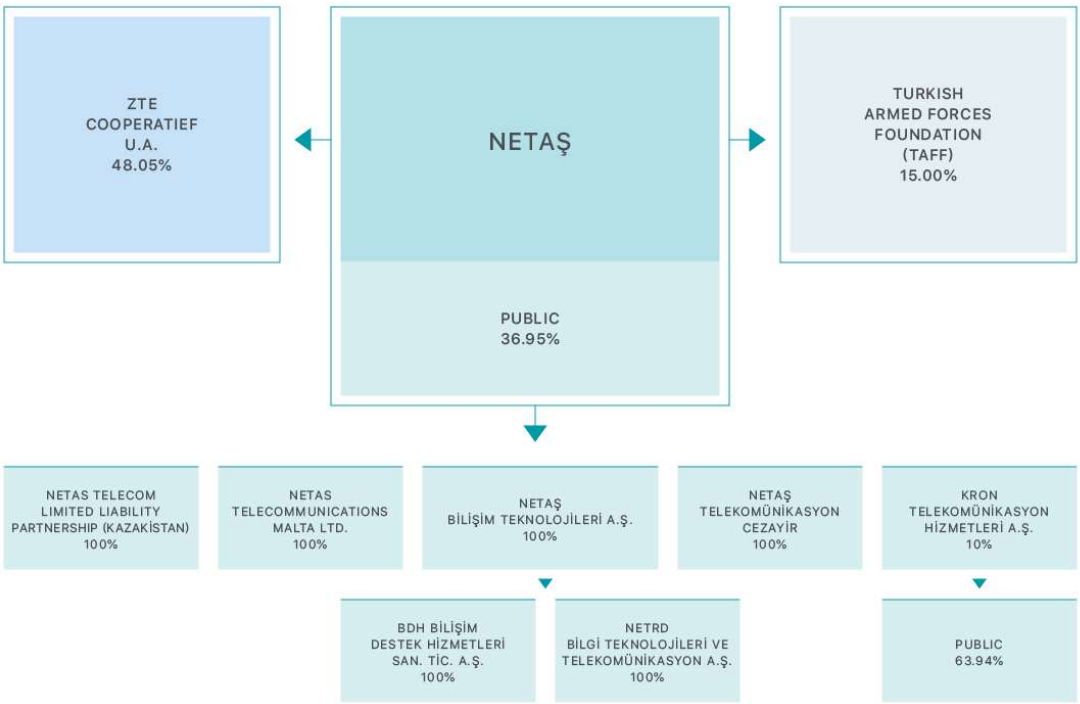
TRAINING

- N-TELLIGENT INSTITUTE

CAPITAL AND SHAREHOLDING STRUCTURE



OPERATIONAL STRUCTURE



MILESTONES

1967
Establishment of Netaş under the partnership agreement between PTT and Northern Electric. 51 percent of shares owned by Northern Electric and 49 percent by PTT.
Capacity at the time of establishment was 40,000 lines.

1969
Commissioning of the factory.

1970
The first exports of the company start with Lebanon.
500 automatic telephone units are exported.

1971
The number of employees reaches 1,000.

1973
Establishment of Turkey's first private telecom R&D.
Manufacturing of exchanges and telephone units by Netaş helps save more than TL 100 million equivalent of foreign currency.

1975
Annual production capacity: 190,000 telephones, 160,000 lines

1977
Commissioning of the 500,000th line in Ankara.

1978
First exports to Ireland and Canada.

1979
First automatic international call.
Production of the 1 millionth telephone unit.

1981
Commissioning of the 1 millionth telephone line.
Designing of Turkey's first rural exchange.

1982
Development of the first electronic exchange of Turkey: "SpaceNet."

1983
Netaş switches into digital technologies.
Establishment of Printed Circuit Board plant.

1984
DMS 10, Turkey's first digital exchange is manufactured.
Introduction of Efes touch-tone telephone set.
DMS 200, Turkey's first long-distance digital exchange commissioned in Tahtakale, followed by Ankara.

1985
The number of active lines exceeds 2 million.

1986
Commissioning of Netaş Training Center featuring computer-aided training facilities and modern test devices.

1987
Turkey steps into a fully-digital communications era.
The number of lines delivered to PTT exceeds 3.5 million.

1989
Global design ownership of digital DMS 100i product.
Dicle (DRX-4), the first digital rural exchange is designed, developed, and commissioned in Yalova and Istanbul.

1990
Production of the 1.5 millionth DMS line.
Expansion of exports territory: Soviet Union, Azerbaijan, Nigeria, Turkish Republic of Northern Cyprus, and Canada.

1991
Netaş establishes the data network to be used within the scope of the interbank Electronic Fund Transfer (EFT) project.
The largest R&D department in the private sector - 200 employees.

1992
NATO AQAP-110 quality certification.
Begins multiplexer production for the transmission network.

1994
Design of the first ASIC

1995
Start of production for the first project for Turkish Air Force: Identification Friend-or-Foe System
Commissioning of the 1 millionth PABX line.

1996
Started the production of TASMUS (Tactical Field Communications System) for Turkish Land Forces.

1997
Netaş becomes the first Turkish information technology company to receive ISO 14001 environmental certificate.

1998
Software exports totaling USD 10 million.

2000
Netaş signs a contract for the sale and delivery of SDH transmission products.
40 percent year-on-year growth in Russia, Morocco, Bangladesh, and Kazakhstan.

2001
As Turkey's largest supplier of telecommunications equipment infrastructure, Netaş manufactures carrier optical and data network equipment worth USD 70 million.

2002
Commissioning of the state-of-the-art SDH optical system for Türk Telekom, with a data transmission capacity of 10GB/s.
The signing of Aycell GSM 1800 mobile telecommunication network contract worth USD 145 million. 400 base stations installed in 35 cities across Turkey.
Establishment of fiber optic transmission network for local and central data/voice traffic of TEIAS.
R&D program of Nortel Networks focusing on international switching fully entrusted to Netaş.

2003
The signing of a USD 40 million contract for the modernization of Türk Telekom's fixed-line network.

2004
TN-1XE, a domestic product of Netaş, was introduced in the transmission infrastructure of Türk Telekom.

2005
Next-generation exchange - soft switch installed as an international exchange in Türk Telekom network.

2006

New projects in defense communications: New patrol boat, as part of MILGEM, search and rescue boat projects.

Two separate transmission projects were completed and commissioned in Bangladesh.

2007

Nortel Global High Technology Development and Solution Center established: 800 R&D engineers working for the development of next-generation communication networks.

2008

'R&D Center' status granted within the scope of the relevant law.

2009

Begins developing third-generation (3G) mobile core technologies.

2010

OEP RHEA Türkiye Teknoloji BV acquires 53.13 percent of Nortel's shares in Netaş.

Partnership and R&D cooperation contracts signed with global technology giants including Genband, Avaya, Ciena, Kapsch, and CarrierCom.

2011

Acquisition of Probil.

Named as the first Cisco Cloud Infrastructure Provider of Turkey.

The continuing growth of Strategic Partnership Network with the participation of global technology companies such as Microsoft, Cisco, HP, Motorola, Oracle, Fujitsu, Hitachi, and Mitel.

2012

Development of Turkey's first '4G -LTE/ Mobile and Fixed Wireless Broadband Access Technology'.

Design and development of 'Through the Wall Imaging System' based on ultra-broadband radar technology.

E-census system commissioned in Turkish Republic of Northern Cyprus.

The Largest Voice and Video Network Project of Turkey: Contract with the Ministry of Justice for Voice and Video IT System (SEGBIS) interconnecting courts and prisons.

Smart Classrooms project with the Ministry of Education: Implementation of smart classroom concept in 110 classrooms nationwide, enabling centralized training facility for teachers.

Named as 'Genband R&D Center of Excellence'.

Netaş Kazakhstan office established.

2013

Acquisition of 10 percent Group A shares of Kron.

Celebrating the 40th anniversary in R&D, Netaş moves to its new technology base in Kurtköy.

Awarded the contract for the fourth generation (4G) communications technology development project (ULAK) for military, public security, and civilian applications under the leadership of the Undersecretary for Defence Industries.
Netaş increases Aydem's productivity through the Automatic Meter Reading System Project.
Deployment of technology infrastructure for Odeabank.
Finance sector's largest project for cloud transition - Netaş moves all branches of Akbank to cloud.
Implementation of network, IP telephone and call center project covering all branches and ATMs of Ziraat Bank.
First smart stadium project of Turkey – Deployment of e-ticketing infrastructure for 31 stadiums within the scope of Smart Stadium project awarded by Turkish Football Federation.
Becomes the highest growing company in the Turkish information technologies industry.

2014
A first in the history of technology exports of Turkey: Digital Rural Exchange, developed and manufactured by Netaş for 10 years, exported to Canada.
Signed a five-year contract for the improvement of 2G and 3G transmission infrastructure of and delivery of radiofrequency (RF) optimization solutions for ATM Mobilis, an Algerian mobile operator.
Signed a contract with Bangladesh's national service provider BTCL (Bangladesh Telecommunications Company Ltd.) for the capacity upgrade of the national transmission backbone and renewal of devices & software.
Signed a contract with Ucell, mobile operator of Uzbekistan, for the nationwide completion of IP-based infrastructure.
Deployed the network infrastructure for the new Primary Data Center of the Istanbul Stock Exchange.
Signed a contract for the delivery of radio and wire communications in the Haydarpasa-Gebze-Köseköy section of Marmaray and Ankara-Istanbul High-Speed Rail Line.

2015
With the assistance and guidance of the Under Secretariat for Defence Industries (SSM), the Fourth Generation (4G) Communications Technology Development Project's (ULAK) prototype, locally developed by Turkish engineers, was presented.
Under the FATIH Project, '2nd Phase Local Area Network Installation Work' including the infrastructure installation for schools awarded to Netaş by the Turkish Ministry of Education.
Foundation of Netaş Wesley Clover Technology Fund (NWCTF), in collaboration with Wesley Clover, owned by the Canadian investor Sir Terrence H. Matthews and TRPE Capital, in order to invest in start-up companies and entrepreneurs, as well as to promote high value-added technology projects.
Launched the "Netaş Remedy Forest" project in collaboration with the Ministry of Forests and Water Affairs, General Directorate of Forestry, and the Provincial Directorate of Forestry of Istanbul.

Launched Turkey's first locally developed cybersecurity solutions under NOVA brand; NOVA Cyber Security Solutions to ensure safety in online audio and video conference for VoIP and multimedia technologies.

2016

The '5G Technologies Consortium Cooperation Agreement' is signed with Aselsan and Havelsan, under the leadership of the Turkish Armed Forces Foundation (TSKGV).

USD 44.2 million digital transformation project agreement signed with Sonatrach, the largest oil company of Algeria and Africa, and the 11th largest oil company in the world.

The number of its employees since its foundation exceeds 10,000 people.

Elected to the board of directors of NetWorld2020, which aims to contribute to and steer the research of future mobile and fixed communication systems to be used in 2020 and beyond.

2017

Celebrated its 50th anniversary with the motto of "Proud of its Past, Ready for the Future".

World leader in telecommunication technologies ZTE acquired 48.04 percent of Netaş shares through its subsidiary ZTE Cooperatief U.A.

First orders received from Turkey's three operators for ULAK, the first locally developed base station in the country, where Netaş designed the base band unit.

Launch of a horizontal cloud-based IoT (Internet of Things) platform, ION by Netaş that provides the infrastructure for the IoT applications of objects.

Awarded the contract from IGA Havalimanı İşletmesi A.Ş. to deploy all wired and wireless communication networks of Istanbul Airport, expected to become the world's largest airports, in cooperation with Cisco and to manage its operation for five years.

Signed a set of business partnership protocols with TÜBİTAK BİLGEM for the development of new generation cybersecurity products and projects.

Signed a memorandum of understanding with Istanbul Metropolitan Municipality's company for smart city applications (ISBAK) for the development of projects within "Istanbul, a Smart City", and for the establishment and management of network and operation management centers.

Opening of Netaş Cyber Security Operations Center, in order to provide cybersecurity operation services (SOC), network operation services (NOC), consultancy, and managed services.

2018

Foundation of a representative office in Azerbaijan.

86 patents and 19 brand applications are made.

Domestic Product Certificate is obtained with a 100% domestic participation rate for two software products/solutions: Nova V-Gate and Mobi-fi.

2019

Foundation of a local subsidiary in Algeria.

Netaş is listed in Borsa İstanbul's Sustainability Index, formed with companies with a high level of sustainability performance.

Netaş participates in European Union’s Health 5G Consortium, thanks to its expertise in cloud computing, IoT, and digital transformation.
Reigniting its localization efforts, Netaş obtained Domestic Product Certificate from the Istanbul Chamber of Industry, in order to manufacture ZTE’s FTTx fiber infrastructure systems.

2020
Renewed its corporate logo with a new icon, with the motto "Future is at our core", referring to its core values and technology.

Became the company contributing the most in Turkey to the digital transformation of the offices with Microsoft Modern Workplace product family including Teams, which features secure teleconferencing.

According to Turkey Patent Map Report, ranked in the top 10 among institutions with 358 applications, ranked fourth in the Computer Technologies section with 101 applications, and ranked fifth in the Communication Technologies section with 173 applications.

AWARDS

1996
European Quality Achievement Award

1998
European Quality Achievement Award

2007
'Software Export Champion' of Turkey

2008
'Software Export Champion' of Turkey

2010
'Software Export Champion' of Turkey

2011
Microsoft - Enterprise Sales Partner of the Year Award

2012
Named as the "Most successful R&D Center in telecommunications business" by the Ministry of Science, Industry, and Technology.

2013
Awarded 'Best Global Partner in Enterprise Business' by Cisco.

Named as the "Most successful R&D Center in telecommunications business" by the Ministry of Science, Industry, and Technology.

Ranked 2nd in the telecommunications industry category of Turkish Patent Institute's "Companies with the Highest Number of National Patent Applications in 2013' and 7th in the country overall list with 34 patent applications.

Crowned 'The Turkish Systems Integrator Partner of the Year' award by Microsoft.

2015
Ranked 1st at BT Haber Yayıncılık's ICT 500-Top 500 ICT Company survey in the following categories: 'Network Hardware of the Year', 'Software Export of the Year', and 'Systems Integrator and Hardware of the Year'.

Ranks first in two different categories at the 4th Private Sector R&D Centers Summit organized by the Ministry of Science, Industry, and Technology: ‘R&D Employment’ and ‘Most Successful R&D Center in the Telecommunications Industry in 2014’.

“Highest Volume of Investment in the Expertise of the Year” and the “Fastest-growing Business Partner in Server Business of the Year” awards by HP.

2017
Received the grand prize in the Competition for Energy Efficiency in Industry of the Directorate General of Renewable Energy of the Ministry of Energy and Natural Resources in the category of ‘The Most Efficient Industrial Facility’.

2018
NEOS OSOS (Automatic Meter Reading and Energy Monitoring System), which is offered within the scope of smart city solutions was awarded the "Commercialization of Innovation" award in Turkish Electronics Industrialists Foundation (TESİD) 16th Innovation and Creativity Awards, in "Large-Scale Corporation" segment.

Chosen as the Systems Integrator of the Year within the research of Turkey's First 500 IT Companies, in "Hardware" and "IoT and M2M", "Network Hardware", "Service Exports", "Data Backup and Storage Hardware" categories. As to the "IT Service Exports" category, the company was awarded a Contribution to Economy Special Award.

Received the "2018 - The Corporate Business Partner of the Year" and in the corporate segment "Architectural Excellence" awards from Cisco, a world leader in network technologies.

Ranked among the top 10 companies of Turkey within the Turkishtime R&D 250, Turkey's Top R&D Spending Companies research. Netaş was also named as one of the top 10 companies with the most R&D staff employment. As for Information Technologies, the company maintained its leadership.

According to Turkey's 500 Large-Scale Service Exporter Research conducted by the Turkish Exporters Assembly (TİM), Netaş is named the second-largest information services exporter of Turkey.

2019
In Turkey’s Top 500 ICT Companies survey, Netaş was named as “ICT Services Export Champion of 2018”, as was granted awards for “Business Applications”, “Network Hardware” and “500+ Systems Integrator, IoT & M2M” categories.

Chosen as the second-largest ICT services exporter in annual Turkey’s 500 Largest Service Exporters survey of Turkish Exporters Assembly (TİM).

Crowned with the "Commercialization of Innovation" award in Turkish Electronics Industrialists Foundation's (TESİD) 17th Innovation and Creativity Awards for its cloud-based multimedia communication platform Talki, which was also exported to Australia.

Received the "Qualified Training" award during the 11th Corporate Social Responsibility Summit and SDG Awards with Netaş NextCoders and Coding Hour.

Its successful licensing projects in the public sector in 2019 brought the company "Digital Transformation of the Public Sector" Award during Microsoft Business Partners Summit 2019.

Qualified in the first place in the 4th Quarter of 2018, and third place in 2018 as a result of a survey measuring the service quality and customer satisfaction in Europe, the Middle East and Africa, during the 2018 EMEA Customer Care Cup of Hitachi Vantara, of which Netaş acts as the service partner through BDH.

Its blockchain-based project management and operation system project brought Netaş the "5th Supply Chain Professionals Award" from Supply Chain Professionals Club.

Crowned with "Enterprise Partner of the Year" Award from Fortinet, as a recognition of the highest annual turnover and the business volume across different customers Netaş achieved.

Received "Best Progress in Supplier Excellence Program 2019" award with the "Saving Spare Parts Used in Repairs" project of its BDH teams in the HP Supplier Excellence contest, aiming to extend the usage of "Lean Six Sigma" methodology in the project management and quality systems across country service partners of HP in the CEMA region.

BDH is chosen as the "Best Guarantee Service Provider" of 2018 by Vatan Computer.

2020

Significant success in R&D Top 250

According to Turkishtime's R&D Top 250 survey based on 2019 data, Netaş ranked 14th in terms of R&D spending, ranked second with 36 patent filing, and ranked sixth in terms of the number of women employees working in R&D.

Three awards in Top 500 ICT Companies

Netaş received awards in three categories during the 21st Top 500 ICT Companies Awards.

Netaş was granted the "Distinctive Contribution to Turkish Economy" award in the Systems Integration and Partnership category, "IoT & M2M" for its successful work as the architect of digital transformation in its region, marked by its milestones including the establishment of Turkey's first private telecom R&D and the country's first software exports. The company won

an award in the “Network Hardware” category for a second consecutive year with its projects, each more important than the other, and won its third award in the “Telecommunication Infrastructure Hardware” category in 2019, where it accelerated its localization efforts.

Software and IT Services Award to NetRD

Netaş was deemed worthy of a meaningful award at the "Service Export Champions of the Year 2019" event organized by the Service Exporters Association, the first and only representative of the service exporters industry. NetRD ranked third in the "Software and Information Services" category at the event, where the top three companies that contributed to the sector's exports totaling around 64 billion dollars with their successful performance in 2019 were announced.

NETAŞ IN 2020

2020 HIGHLIGHTS

Leaving an efficient and successful year behind

Continuing its proud journey since 1967, Netaş left a busy year behind with successful works and projects. Here are some of the projects in the 2020 agenda of Netaş...

Netaş signs three contracts with Turkcell

Netaş has signed three contracts with Turkcell Sales and Digital Business Services, including the infrastructure installation work services and purchase of goods for the new generation 112 emergency call center projects covering 13 provinces. The agreement, which was made on December 30, 2020 with a total value of ₺138,000,000, covers the period January-June 2021.

Netaş signs a contract with NVIGM

Netaş undertook the central and provincial general maintenance, development and updating services of the General Directorate of Population and Citizenship Affairs (NVIGM) for the year 2021, with a contract signed with the Ministry of Interior on December 30, 2020. The contract with a total value of ₺184,780,000 covers the period January-December 2021

Netaş renewed its logo

Founder of Turkey's first private telecom R&D on domestic engineering force, Netaş added its new emblem, symbolizing its 53 years of values and technology, to its logo. With the motto "Future is at our core", referring to its core values and technology, Netaş accelerated its branding efforts with its new corporate film.

Netaş has become one of the companies securing Turkey’s R&D culture with the steps it took, including Turkey’s first software exports, the foundation of first private telecom R&D, and the country’s largest global excellence center, as well as the indelible marks it left in the technology memory of many countries. This legacy built by its 10 thousand employees in the past 53 years gifted the company with a set of values, now symbolized with an emblem added to its logo.

Today, as the architect of transformation in Turkey and its region, thanks to its domestic engineering power and its strength in system integration, Netaş presented the values behind its contribution to Turkey, through its new emblem.

Inspired by tree and water

The tree and the water that gave life to it became the inspiration for the new Netaş emblem. The “water drop” symbolizes its touching lives with the technology at its core in verticals such as

telecom, education, health, finance, public, defense, entertainment, and sports. Age rings of the tree that grows and roots with each drop of water day by day became the symbol of courage, passion, determination, sharing, being a family, patriotism and innovation, in brief, the values created by 10 thousand employees of Netaş in the past 53 years.

Kolay Payroll with Kolay İK

As part of the "Netaş as a platform" application, which Netaş provides R&D support to start-ups, the digital payroll system Kolay Payroll, developed in cooperation with Kolay İK, was put into the service of companies. Developed domestically, the application will support the digital transformation of SMEs, while significantly lowering human resources management costs.

The biggest advantage over its competitors of Kolay Payroll, Turkey's first cloud-based personnel management and HR platform, is that it is designed in full compliance with the Turkish HR legislation. Therefore, companies using Kolay Payroll also save on the labor and cost they would have to spend to adapt HR applications purchased from abroad to their domestic legislation. With Kolay Payroll, companies can save 82 percent time and achieve a 59 percent increase in operational efficiency.

Netaş is in Qatar for the World Cup

The digital sports and customer experience platform project that Netaş undertook in Qatar, the country preparing to host the 2022 World Cup, was successfully commissioned in the final match of the Emir of Qatar Cup. The system was later used successfully during the 2020 FIFA Club World Cup final between Bayern Munich and Tigres.

Mark of ZTE and Netaş in TRNC

All traffic infrastructure of the Turkish Republic of Northern Cyprus Telecommunication Department will be provided over ZTE Transmission equipment. Thanks to the Backbone OTN project, which has been successfully launched, all kinds of voice and data traffic demands of the people of the TRNC will be responded to immediately by providing ultra-high capacity through new-generation transmission systems.

BDH becomes Türk Telekom's central repair service business partner

BDH has become Türk Telekom's central repair service business partner. According to the agreement, BDH started to provide repair services for devices sold through Türk Telekom’s dealer network throughout Turkey.

Three-year Salesforce agreement with Epsan

Netaş signed a 3-year Salesforce license and service agreement with Epsan Plastik, a manufacturer supplying primarily to automotive, as well as to electricity, white goods, defense, agriculture, and health industries. Epsan Plastik is providing its products to more than 40 countries through its network of logistics hubs and dealers. Netaş performs the Salesforce integration of the entire CRM infrastructure of Epsan within the scope of the project.

Education of Bilfen Schools will run on Netaş infrastructure

In Bilfen Schools, education continued uninterruptedly with Microsoft's digital work platform in the second period of 2019-2020, when education was carried out remotely. As a result of the smooth implementation of all necessary PoCs by the Netaş Microsoft Solution team in a very short time, and all the necessary installations by BDH teams, Bilfen students can easily meet all their digital needs with solutions such as Teams, OneNote, Minecraft for Education.

Financial Screen Transformation project

Netaş went on collaboration with Ziraat Bank on the “Financial Screen Transformation” project. Within the scope of the project, Netaş ensured that the screens on which Ziraat Bank branch employees operate were replaced with new technologies and that the necessary developments were carried out with the Ziraat Technology infrastructure. Thus, faster and more efficient service will be provided to bank customers in branches. There will be an increase in Ziraat Teknoloji's new release and publishing speed.

MARKET OUTLOOK

A game changer year for information and communication technologies

The COVID-19 pandemic, which has spread around the world since the first months of 2020, has caused a massive movement in the information and communication technologies sector. Due to the closure of offices around the world, the obligatory transition to the remote working model, the transition to the distance education system of all small and large educational institutions, the obligatory shift to cloud computing, digitalization and digital transformation on both personal and corporate level with the changes in consumption preferences, the digital transformation entered our lives much faster than in previous years.

Digitalization in many areas from daily working life to trade, and from logistics to supply chain has increased the demand for technology investments. The software industry, which is the building block of digital transformation, has also seen increasing demand in line, and it seems that this need for digitalization will continue unabated in the coming period.

This trend, which started in the information and communication technologies sector in recent years, but turned into an inevitable form in 2020, is expected to double the total size of the global digital sectors in the next five years to 4 trillion dollars.

On the other hand, it is estimated that the market addressed by Netaş shrank by 20% in 2020 due to the ongoing pandemic in 2020 and the effects caused by the depreciation of the Turkish lira. The main reason behind the contraction in the IT market was the downsizing effect of the pandemic on economic growth, especially in the second quarter of the year, and many companies restricting their IT spending.

In the first half of 2020, the measures taken by countries against the Covid-19 pandemic and epidemic became the center of the global economic agenda. In this process, with the decrease in social mobility and the concept of social isolation, the countries closing their borders in order to prevent the spread of the epidemic and restricting the activities in some sectors caused serious economic effects all over the world. The total closure of many sectors, especially the service sectors, resulted in the slowdown in economic activities and an increase in unemployment. The quarantine measures taken caused a serious decrease in production indices, loss of workforce and a decline in confidence indices all over the world. Governments implemented unprecedented fiscal incentives and monetary expansion policies to prevent the pandemic from causing economic collapse. In this process, while central banks made interest rate cuts in many countries, countries, including developing ones, implemented asset purchases, liquidity

supports, loan programs and support programs of unprecedented dimensions for the sectors and households affected by the epidemic.

Digital transformation projects make a significant contribution to customers by making a difference

Trending in line with global technology trends, it is observed that applications and developments in broadband internet services, fiber infrastructure, 5G, cloud computing, internet of things, artificial intelligence, blockchain and robotics are accelerating.

It is seen that companies have achieved significant economic benefits by implementing comprehensive digital transformation projects to create innovative business models, suppress operational expenses and increase competitiveness by better responding to increasing customer demands. In this transformation process we are in, the following dynamics are expected to be effective;

- In 2021, the highest growth in terms of investment in information technologies is expected to be in the education, health, retail and energy sectors. The pandemic, which has different effects on different sectors, has created a leap in the e-commerce sector, while it has caused difficult shrinkage in the aviation and tourism sectors.

- Although the education, health, retail and energy sectors are expected to whow the highest growth in 2021, the finance, public and manufacturing industries are expected to maintain their size, in terms of total expenditure in the IT sector.

- A market of US $350 million is foreseen with a 24% growth in cloud computing technologies. The shift to hybrid cloud will increase. With the shift to cloud computing, the cyber security is expected to gain great importance.

- Due to both developing digital applications and increasing cyber security threats, 65% of companies are expected to renew their infrastructure investments and make them suitable for digital transformation until 2023.

  (Source: IDC)

Continuing to deepen in telecom with its deep-rooted knowledge and innovative technologies of ZTE

By establishing Turkey's first private telecom R&D, Netaş initiated Turkey's "localization" move in telecommunications technologies. And to this day, it has continued to deepen in the field of telecom with its main shareholder ZTE, one of the leading telecommunication technologies companies and the world 5G patent leader.

On the one hand, while continuing to work with its engineering R&D capability, Netaş is also providing Turkey with ZTE's world-leading telecom technologies through domestic production. Netaş offers technologies of integrated communication solutions, such as instant messaging, status information, voice communication, mobile capabilities, voice/web/video conferencing, convergence, desktop sharing, call center applications, voice recording and analysis, voice signature, converting text to voice and converting voice to text, in the form of real-time integrated solutions. Focusing on areas such as telecom systems modernization, integrated communication/multimedia communication, and moving telecom to the cloud, Netaş carries out intensive infrastructure works.

LOCALIZATION

Netaş accelerates its localization efforts

Since the day it was founded, Netaş saw localization as one of its primary goals. Accordingly, it has ensured that nearly $4 billion of national capital remains in the country in 53 years.

Netaş has always worked in order to supply Turkey's information and communications technology needs with domestically produced products. With this goal in mind, it has implemented dozens of major projects including the design and manufacturing switches and first local 4.5G base band units. As such, it has made an important contribution to the national capital's staying in the country, by not only localizing technology but also exporting them to countries considered as the world's technology centers.

Now, Netaş is taking this contribution further, by producing its main shareholder ZTE's world-leading telecom technologies. In 2019 it took the first step and started to produce ZTE's FTTx

systems, which provide an efficient solution for operators to develop their fiber infrastructures, at its Istanbul Orhanlı production facility, as the company obtained the required “Domestic Goods Certificate”.

Netaş continued its localization work with VDSL Modem and Fiber Modem (Home Gateway) in 2020 and received domestic goods certificates; and started to produce ZTE's products in Turkey according to telecom needs and priority. In 2021, the company aims to expand its domestic product portfolio and increase its contribution to the national economy by offering domestic products to its customers.

The localized product portfolio expanding

Continuing its localization efforts swiftly, Netaş started to present the products it localized and planned to localize at the N-visionLab booth, its new generation communication technologies center.

Broadband flexibility: FTTx

FTTx, the first locally produced ZTE product, has its core the Fiber to the X technology, which enables fiber speed internet to be served to homes and businesses. Where X is variable; FTTC (Fiber to the Cabinet) equipment located at the farthest distance to the end-user provides the least bandwidth and FTTH (Fiber to the Home) can provide the highest bandwidth. As a result of the advancement of PON technologies, FTTx is constantly increasing the bandwidth that can be provided to the end-user.

WIFI5 Home Gateway

ZTE's Home Gateway devices, namely ZXHN H298A and ZXHN H267A, were localized and added to Netaş product portfolio as NET H298A and NET H267A models. Both devices with the Domestic Goods Certificate have an advanced home gateway feature that provides a total of 1.167 Gbps Wi-Fi access simultaneously, in the 2.4 GHz and 5 GHz bands. NET H298A and NET H267A devices provide high-speed internet, IPTV, and Voice (VoIP) services over Gigabit Ethernet connection.

VDSL Modem

The ZTE ZXHN H168A VDSL modem, which enables operators' traditional copper infrastructures to be transformed into services such as the internet, IPTV, and telephone at the end-user home and workplace, was localized and added to the domestic product portfolio of Netaş as NET H168A model. NET H168A device can provide high-speed internet, IPTV, and Voice (VoIP) services over both VDSL2 / ADSL2 + and Gigabit Ethernet connections. In addition, the NET H168A model can simultaneously provide a total of 1.167 Gbps Wi-Fi access in 2.4 GHz and 5 GHz bands.

WIFI6 Home Gateway

Netaş continues to work on the localization of WIFI6 Home Gateway, the new version of WIFI5's fiber modems with WIFI6 technology, which is faster, has less latency, and can provide stable service simultaneously to many more devices. In 2023, the rate of WIFI6 devices worldwide is

expected to exceed 50 percent. With the domestic manufacturing of this product, a significant amount of savings is aimed to be achieved in our country.

Localized server for virtualization and big data

Within the scope of localization projects, steps were also taken for the ZTE server R5300 G4, which was selected to be used in virtualization and big data applications. Rack-type servers can be offered in three different types and a wide variety of configurations. It has wide usage areas including public, banking, defense, cloud architectures, and virtualization. Prototyping and production planning were completed, and now the application for the Domestic Goods Certificate will be made. With the knowledge and infrastructure acquired from this project, Netaş aims to increase the localization rate through server localization by using different methods (CKD model) in the future and to design and manufacture high technology products with local resources.

IPTV

IPTV technology makes life easier

In a world that is almost completely digital now, we spend our lives connected to the internet. With its IPTV technology, Netaş offers innovations that make life easier and the highest experience quality for users.

Although IPTV technology is defined as the delivery of broadcasts to various clients over an IP-based network, it should not be defined or restricted as broadcasting over a closed network. In a world that is now almost completely digital, IPTV technology - OTT technology in the case of the open internet - enables high-quality content to be delivered to various clients (mobile, Smart TV, or STB) with high bandwidths, along with value-added services.

This technology aims to provide users with the highest experience quality. In a conventional IPTV structure, the quality guarantee is provided over a closed network over a bandwidth reserved for this broadcast. Broadcasting on the open internet, on the other hand, requires a solid bandwidth requirement.

In its laboratory environment, Netaş primarily offers features such as live broadcasting, Catch-up TV, Time Shift TV, on-demand content, stopping and advancing them as desired, adding bookmarks, recording to the network environment, suggestions, and search engines. In addition, with the PoP points established, it ensures that the contents are delivered to the client at high quality are less affected by the delays on the network and without any bottlenecks.

In addition to these basic features, a system that can be integrated with various advertising platforms is offered. These platforms can consist of in-platform ad servers or can be integrated with independent advertising platforms such as Google. In this way, Netaş makes the necessary integrations to deliver original and correct advertisements to the target audience at the right time and in the right way (banner, video).

Voice commands make life easier

Another innovation that makes life easier is voice commands. In particular, programs that can be managed with voice commands given over the STB and mobile client are among the habits that users prefer more. Netaş offers systems that can be integrated with third-party voice control units via both Google, Android and remote control.

Applicable to hospitals and educational institutions

Operators now prefer the wholesale or multimedia management model to other downstream operators. In this way, an operator has the opportunity to lease its own platform and infrastructure to other operators, each managerially and logically isolated from the other, and thus benefit from wholesale. Large organizations such as hospitals and educational institutions can also be included in this model. Netaş fully offers multimedia support on ZTE infrastructure.

Cloud Core Network Solutions

A leading and competent solution provider

Netaş aims to be a pioneering and competent solution provider that can offer innovative solutions to telecom operators to realize network transformation and quickly and securely address the difficulties they encounter during the transformation. On this path, it achieved significant results with regards to Cloud Core Network solutions in 2020.

Expectations from telecommunication networks are increasing every day. Operators are demanding networks to provide more functionality and carry denser traffic with less investment. Users have less tolerance for downtime. While increasing the total revenue of telco with new, high-value customer services, it is also necessary to produce solutions that will reduce costs by using technology efficiently.

However, today's traditional networks rely heavily on fixed functions, dedicated devices that are often costly to procure and difficult to manage and scale. A transformation is required for the network to be agile and more cost-effective.

Software-Defined Network (SDN) and Network Function Virtualization (NFV) have been developed as two main catalysts for network transformation, with studies since 2014. SDN separates the control plane and the data plane within network infrastructure devices, allowing user traffic to be carried over a lower cost and less complex data layer. NFV establishes a three-layer communication architecture consisting of network management, network functions, and network resources, enabling each layer to be created using modular, independent, open interfaces within the framework of standards. With NFV, network functions are virtualized, providing both cost and operational efficiency. Thanks to the new modular structure of the network, the variety of producers increases, and innovative solutions can be achieved in a shorter time.

NETAS

R&D

Turkey’s most rooted R&D in telecommunication technologies

Founded Turkey’s first private telecom R&D in 1973 and made the country’s first software exports in 1992, Netaş today develops globally competitive products and solutions in its R&D Center, home to over 800 engineers.

With its multi-tech competency, R&D power, innovation culture, vast knowledge base, and expertise, the company, home to the most established private telecom R&D center, is pioneering its corporate and public clients across all the verticals from different regions in their digital transformation journeys, offering products and solutions, improving the efficiency, communication and mobility.

Standing out with its simultaneous multi-project management capacity, Netaş has been filing patent applications for planned and ongoing projects and products on mobile telecommunication, cybersecurity, defense, multimedia, cloud computing, data centers, managed services and IoT. The Netaş R&D aims to improve its international activities in the coming years, introducing solutions particularly on Big Data, 5G and smart cities.

Technological Expertise

- Cyber Security
- IoT
- Multimedia
- Mobility 4.5 / 5g
- Test Services
- Big Data & Business Analytics
- Network Solutions & Applications

Active participation in international workgroups

One of Turkey’s most important enterprises empowering the country’s telecommunication leap thanks to its local R&D culture and manufacturing strength, Netaş is proudly representing Turkey in the international arena as well.

In order to closely following technological developments in the European Union and contribute, Netaş participates in 5G workgroups, as a member of ETSI and 3GPP, regarding standardization efforts. In addition, Netaş is a board member of NetWorld2020 Platform, one of the most active platforms guiding 5G and Beyond studies of the European Union, and a member of the 5G IA-Infrastructure Association. The company is also the vice-chair of Celtic Plus, the organization managing technological partnerships in the ICT and telecom fields.

National and international collaborations

- Celtic Plus Vice Chairmanship
- European Union Networld 2020 Board Membership
- ETSI membership / oneM2M studies 5GIA Membership
- 4 x Celtic Plus, 4 x ITEA3, H2020 projects already accepted
- 4.5G Base Station "ULAK" Consortium
- About 90 collaborations (with 60 corporations and 28 universities) with 18 European countries within the scope of European Union Collaboration

Collaboration with universities

Maintaining its uninterrupted collaboration with the aim of increasing university-industry cooperation, the number of universities in which Netaş signed the Framework Agreement to institutionalize relations and to identify the scope of the joint works reached 19.

BAU-NETAŞ Techno Academy Computer Engineering Post-Graduate and Ph.D. Program, that Netaş started in 2014, continues. In 2020, Artificial Intelligence Master's program was added to the Techno Academy program in cooperation with BAU. In order to support the education of the university students, Netaş continues to provide supports, such as short and long-term internships, scholarships, and doctoral dissertations, and also forms platforms on which Netaş engineers support students. Netaş also takes consultancy to benefit from the knowledge and researches of academic staff in the projects it carries out. Since 2015, the number of academic consultations that Netaş has received from universities has reached 42.

Innovative products and ideas are registered

As Netaş prioritizes the protection of intellectual property of the original products and ideas and sharing the results of its R&D studies on scientific platforms, the Company filed 9 patent applications, one of which is international, in 2020. As such, the total patent applications of Netaş since 2012 reached 506, while the number of its registered patents totaled 117. In 2020, Netaş filed 9 brand applications. The number of its brand applications increased to 134, while the number of its registered trademark to 59, both since 1984.

As a reputable R&D center, Netaş researchers published 108 scientific publications over the past four years, 23 of which are national, while the number of scientific publications since 2014 reached 165.

The scope of activity of the Netaş R&D

International R&D
Cyber Security R&D
ICT Technologies R&D
Netaş Test Center

47 Years of R&D in numbers

- 5,000 projects
- 10,000+ R&D engineers in 47 years
- Solutions used in over 80 countries
- The regional leader in digital signal processing
- 100+ Signalization protocols
- Over 200 million lines of code
- Software solutions delivered to 200+ operators around the globe
- 1,000+ Circuit board design
- Over $4 billion savings to the national economy through local designs

ICT TECHNOLOGIES R&D

Globally competitive local products

Proudly developing local software development and continue to be Turkey's largest software exporter, Netaş aims to keep its innovative and creative solutions sustainable, as they result from a strong innovation and R&D culture.

Designing solutions in line with the software needs of large-scale projects and integrating them when needed, Netaş is providing strength and value to Turkey with the products it develops. With the leverage it has thanks to its ICT ecosystem, the company brings innovation to every project it implements, with its R&D knowledge and innovative approach.

The Netaş R&D is developing authentic technologies tailored for industries ranging from finance to entertainment, from the public sector to defense, as well as for energy, transportation, and education. With its experience coming from offering local defense telecommunication solutions for the army, navy, and air force, Netaş developed the base band unit for Turkey’s local base station ULAK. Now, the company is working on developing 5G and Beyond technologies.

Internet of Things (IoT)

ION

Developed by Netaş engineers, ION provides all underlying IoT device and data services for massive IoT networks and can be used on cloud or local systems. Ensures end-to-end security and offers automated elastic scalability for ever-changing traffic conditions. ION is based on a horizontal model allowing multiple providers to work with a common framework. Having a customizable structure, ION offers an easy-to-use interface to IoT network and service managers.

Service Management

Mobi-fi

With its long-standing expertise in the field of service management and its know-how in software technologies, Netaş designed a powerful service management software: Mobi-fi. Mobi-fi has multi-language support, and it allows the easy management of deployment, maintenance, and repair processes of large-scale businesses and projects, as well as providing internal and external communication, inventory, workforce and client management, and monitoring on a single system. Thanks to its user-friendly interface, the Mobi-fi platform provides the ability to manage business and customers via web or mobile devices. It offers advantages such as integration with known ERP or CRM systems, simplified end-to-end solution, multi-language option, and user roles or customization of pages according to needs.

Smart event management and ticket sales

The ticketing technology Netaş previously used in all smart stadium projects eliminates paper tickets. With the platform, large-scale events can be managed in any scenario, from a world cup to any sports league or concert. Providing solutions to all variable needs with modules that offer flexible end-to-end solutions on Microsoft Azure Cloud, also allows crafting of custom-tailored sales and loyalty campaigns based on insights.

Energy Management

NEOS Photon

We are in a critical time where efficient use of energy determines how we will live in the future. With this approach, Netaş has designed NEOS Photon, a lighting platform that prevents waste of resources and increases energy efficiency for smart cities with this understanding. Developed to save electricity and increase work efficiency in urban lighting, the platform provides electricity savings of up to 75 percent with the use of LED bulbs. Thanks to the support of LoRa or NB-IoT communication technologies, urban lighting levels and timing can be managed remotely. In this way, it also supports urban security.

Water Meter Management

NEOS Hydro

Water index values can be read anytime, anywhere with NEOS Hydro, a smart water meter system that can greatly prevent the problem of loss/leakage in water consumption. NEOS Hydro, which has a design that can be used in all meters that provide inductive rotation, eliminates the monthly reading fee paid per meter with long-distance wireless communication technology. Since water leaks and pipe bursts are immediately detected and reported with the platform, the damage to be caused by possible floods is prevented. With NEOS Hydro, which allows designing special campaigns for consumers by monitoring water consumption, illegal use is also prevented by instantly detecting and reporting illegal interventions.

Meter Reading Management
NEOS OSOS

Developed by Netaş to increase efficiency with the highest automation in electricity distribution, NEOS OSOS enables electricity meters to be automatically read and managed remotely, to transfer meter data to the central system, and to receive reports and storing the data. The system also includes features such as a specially designed panel for street lighting, Netaş's low-cost communication protocol, geolocation, and time adjustment for modem readings. Approximately 14 percent of Turkey's electricity distribution is managed through NEOS OSOS, the cloud-based meter data management system developed by Netaş.

High-Security Media Platform
NOVA S/COM

Today, changes in the working conditions of companies have increased the need for remote communication tools. Employees have to mutually share any business secrets through these communication tools, while service providers gain access to communication contents with data usage permission agreements. Netaş has developed the High-Security Media Platform NOVA S / COM, which allows companies to become service providers for their employees and guarantee the security of communication even in unsecured open networks.

TEST SERVICES CENTER

Netaş Test Services grow by deepening in different sectors

Providing its test services and the products developed in its R&D with over 300 engineers, Netaş continued to deepen in testing in 2020, providing services to Turkey's three telecom operators and 30 companies in total, including the country's four largest banks.

Testing outsourcing service

The testing outsourcing service reduces project costs and allows for the efficient use of resources and technologies. It also helps organizations to manage and control testing activities and processes more efficiently.

Software testing services

Software Testing service offers software tests for various platforms, including web, desktop, server, embedded software ad business applications software.

Test automation

Test automation service increases the speed and efficiency of the test stage using the most suitable automation method.

M2M and mobile terminal tests

Testing of phones, tablets, M2M devices, PCs, modems, and routers, with operators' existing and new SIM cards.

Penetration tests (Pentest) services

The penetration testing (Pentest) service analyses the status of the IT infrastructure and the steps to be taken in order to create a secure IT infrastructure, and provides a holistic solution. Accordingly, vulnerabilities in web applications and VoIP systems are identified and an analysis report is offered, including the security measures. In addition to using a rich mix of testing tools, Netaş experts work on test scenarios specific to the client. Security checks with Netaş Pentest are recommended periodically.

Mobile application tests

Mobile application testing service ensures increased end-user satisfaction through comprehensive tests on different mobile devices, using the maximum number of mobile devices available.

Performance tests

Performance tests allow to define the performance of software, whether they respond under the heavy traffic and if so, their lagging time. The results provide the maximum load possible of software, then it is tested under the maximum load. As a result, performance-improving suggestions are made.

Continuous integration service

Within the continuous integration service, an efficient and manageable software development setting is offered. Continuous Integration (CI) and Continuous Deployment (CD) processes allow an efficient and manageable software development and form an important part of the agile software development business model.

Environmental tests service

The environmental tests allow identifying accurately the resilience of military and civilian purpose systems under natural environmental conditions.

Original test products: VisiumLab

Test products developed by Netaş R&D were moved to the cloud platform under VisiumLab. VisiumLab offers the best test products in its field.

Performance and Load Test: Visium Load

With Visium Load, the scalable load and performance test platform, the performance of applications can be tested quickly and reliably in the development process. Visium Load, which can raise the cloud environment, adjust the traffic components and provide detailed reports by running tests, can perform the load test of applications with the most effective resources.

Listed in Microsoft's Azure Market Place, Visium Load offers the opportunity to observe and test the behavior of applications under very high load. With the power of the cloud, it lifts test environments that will simulate 10 thousands of virtual users only in minutes and allows different user scenarios to run in parallel. To achieve the most realistic test results, it can simulate users connecting from geographically different locations, using Azure datacenter regions scattered around the world. Visium Load provides businesses with a noticeable cost advantage in load and performance tests with the ability of customers to use their existing Azure accounts and pay as you go subscription model.

Mobile Device Farm: Visium Farm

Visium Farm, a device farm service, enables applications developed for Android, iOS, or the web, to be tested on hundreds of different mobile devices of different brands and models and to perform preferred tests, identify and fix problems, and generate detailed reports.

BDD-Based Test Automation: Visium Go

Developed as a BDD-based test automation tool, Visium Go allows anyone to easily write, read and run test automation scenarios.

EU PROJECTS

Representing Turkey in the EU with technologies it develops

Netaş continues to play an active role in the European Union R&D programs with the smart technologies it has developed for a sustainable life.

RELIANCE

The RELIANCE project, in which Netaş is included within the scope of the CELTIC-NEXT cluster, was initiated to carry out advanced R&D studies on network slicing technologies that will gain widespread use with 5G. Within the scope of the project, involving 10 organizations from Turkey, Spain, and Sweden, Netaş is working on the development of techniques required to provide uninterrupted and high-quality video conferencing services using network slicing methods.

Within the scope of the project, Netaş is cooperating with Turkcell and ULAK A.Ş., and techniques developed by Netaş in the field of video conferencing are being tested in the 5G network established by Turkcell for testing purposes. Netaş is also contributing to studies on how video conferencing services will transform with the upcoming 5G by completing the integration between ULAK's software-based network controller and Netaş video conferencing platform VIO.

BIMy

Developed within the scope of the European Union industry-oriented software innovation fund ITEA3, the BIMy project is for the management of digital models of buildings on a digital platform using cloud computing, modeling, ontology, AR / VR and big data technologies.

Today, digital BIM models are created while buildings are being built and these models are updated simultaneously as the construction continues. In these models, where the exterior and interior view of the building is scaled, detailed information is included such as where the hall is, what the materials used in its windows frames are. With the BIMy project, which can control all processes from the construction phase of the building to ecological balance, from information exchange to real estate purchase and sale via the cloud, the entire organization comes together under a single software.

With the BIMy project, discrete and non-standardized BIM models have been integrated with GIS information and opened to the controlled access of stakeholders via the BIMy cloud platform kept in the Netaş data center.

Project benefits

Scenarios that may benefit end-users after the project is completed;

- With BIMy, all kinds of information about buildings are stored in Netaş's data center and transferred to the cloud. Changing data during the construction period is updated simultaneously.
- The project provides ease of access to all kinds of information with the real estate to be invested, including the foundation of the building, the strength of the building, and the materials used in its construction.
- It provides one-click convenience in notarization processes, with the ability to carry out the necessary legal processes for real estate purchases over the cloud.
- The building can be tested by simulating earthquakes and other disaster scenarios.
- The materials harmful to nature that may arise during the demolition processes of the building can be calculated in advance and measures can be taken.

5G PERFECTA

The 5G Perfecta project, in which Netaş is included within the scope of the CELTIC-NEXT cluster, was initiated in order to carry out advanced R&D studies on the solutions required for the measurement of service and experience quality in 5G networks. In this project, Netaş works in partnership with 16 organizations from Spain, Turkey, Portugal, Sweden, and Poland. It develops

necessary features for the network automation solution of its R&D, Visium 5G, so it can simulate network functions in a 5G network and can be used in traffic tests.

Smart Farming Project for Qatar

The 5GPPGreenhouse project of Netaş, upon the joint call from the Scientific and Technological Research Council of Turkey (TÜBİTAK) and Qatar National Research Fund (QNRF), aims to process data coming from greenhouses through ION and increase the efficiency and digitalization, in order to secure the sustainability of the agricultural production. As a pilot study, a greenhouse in Qatar will be controlled through ION set up on the cloud in Istanbul.

5G-MEDIA

Within the scope of Horizon 2020, the research and innovation program of the European Union, the 5G-MEDIA project, which aims to develop innovative applications for the media sector in order to provide users with high quality, high resolution, and uninterrupted experience, has been completed.

In the project where agile software development, validation, and regulation systems will be designed, it was aimed to develop network functions and applications for various use scenarios. Netaş took part in this project as the leader of Work Package 5 called 5G-Media Service Development Software Tools. With the software development kit and service visualization platform, it is aimed that the developed 5G-MEDIA platform will benefit companies that develop, combine, verify and run media applications using 5G networks.

Blockchain

The H2020 EU Project of Netaş, namely “IoT & Blockchain-Enabled Security System for New Generation Critical Cyber-Physical Systems in Finance Sector” or Critical-Chains” in short, is qualified to receive a grant.

The project in question aims to eliminate obstacles across the European Union, created by unhealthy or off-the-books transactions, cybersecurity threats, non-user friendly, inefficient or inadequate banking processes, complicated contracts, cumbersome finance, and insurance infrastructures.

The basic innovative idea of the project is to create a unified infrastructure in order to offer efficient, trackable, accessible, fast, secure, and private financial contracts and transactions, by using new developing technologies including block-chain, cyber-physical security, and modeling of inter/infra-organizational information flow together on a cloud-based structure and in an “as-a-service” manner. Within the scope of the project, Netaş will provide its services, for the establishment of the cloud infrastructure, securing the cloud infrastructure, systems integration, cybersecurity, anomaly identification, and pilot validations.

Smart Fish Farm

Contributing to European Union's research and innovation program Horizon 2020, through its IoT applications in the IMPAQT project, Netaş introduced a remotely-monitorable, eco-conscious and sustainable model by the integration of smart management systems. The project aims to increase the survival rate of the fish and other aquatic creatures to 90 percent while reducing the feed waste rate to 10 percent.

Within the IMPAQT project, there are six fish and aquaculture facilities, including one in Turkey. The departure point of the project was to automatize these farms using IoT applications. In the project, where the Turkish company Çamlı Yem Besicilik of Yaşar Holding is also involved, the farm can manage itself using the data coming from the cameras and sensors, and the ecosystem can continuously renewing itself. So that the goals of the project include tracking the environmental impact through sensors, interpretation of the farm data as they are transferred to the cloud-based management system, and increasing the effectiveness of the farm management through the guiding information provided to the users.

Smart-PDM

The Industry 4.0 project of Netaş within the ITEA3 framework, namely Smart-PDM, aims the handling the data coming from critical modules of wind turbines and metal rolling facilities with AI-supported Big Data analysis techniques. The processed data is used to predict possible breakdowns of the critical parts and to offer solutions to the technical teams regarding the maintenance of these modules.

Smart-WIND

Netaş aims to increase the efficiency of wind turbines with the use of information and communication technologies in the Smart-Wind project carried out within the scope of EUROGIA. Within the scope of the project, carried out by seven institutions from Spain, Germany, and Turkey, Netaş processes data collected by IoT solutions from wind turbines operated by Zorlu Enerji, using advanced artificial intelligence and machine learning techniques. Thus, the efficiency of critical components in the turbines is increased.

With the Smart-Wind project, which started in January 2020 and will last for three years, advanced information technologies in the field of smart energy are developed domestically. Advanced cooperation and mutual know-how transfer are realized with the work done with partner organizations in Germany and Spain.

HEALTH5G

In 2020, Netaş continued to work on the Health5G project, initiated within the scope of CELTIC-NEXT, which is the communication technologies cluster under EUREKA in Europe. Health5G is a project carried out by 26 organizations from six countries with the aim of developing advanced solutions by using 5G in health technologies.

Netaş conducts advanced R&D studies in the fields of cloud computing and IoT technologies in the Health5G project. In this context, within the scope of inter-machine communication (M2M) technologies, which is one of the three pillars on which 5G will sit, Netaş ION Platform, which can process data from many sensors in the cloud, is tried to be tested on 5G networks and to work with software-based networks. In addition, Netaş continues to work on the development of high value-added e-health solutions by processing the data received from the health sensors of providers such as Vestel, Inosens, and Semper, which it has partnered with within the project, in ION – the IoT platform of Netaş.

INTERNATIONAL R&D

Solution and technology transfer to more than 80 countries with NetRD

The international R&D company Netaş, NETRD, continues to establish long-term partnerships with its customers in international markets, thanks to its skillful engineers and strategic location of Turkey.

NetRD's main customer is Ribbon Communications, the global leader in VoIP solutions, and its products are used by more than 800 service providers and institutions in more than 80 countries. Developing new generation products and providing customer support services, NetRD continues to work as Ribbon Communications' largest R&D and innovation laboratory. Continuing its successful cooperation with Ribbon Communications for 40 years, NetRD is one of the important hubs of a very important global technology transfer network.

NetRD focuses on three issues on a product basis: Cloud communication, unified communication, and modernization and update of telecommunication systems.

More cloud communication solutions with new capabilities

Netaş R&D teams worked on 41 major versions and many intermediate versions in 2020 in the cloud communication solution Kandy, with regards to the platform, messaging, and end-user applications, and they have updated them on the cloud. With these versions, the user portfolio was increased by 30 percent. The company is running the operations of Kandy on five continents around the world.

With the improvements made during the year, Microsoft Azure integration was added to the solution family, enabling Teams users to access PSTN / PBX networks. Designing one of the first WebRTC Gateway solutions in the world, the Netaş team continued to develop security, quality, virtualization, and multimedia on this platform and further strengthened its cooperation with a global company in the finance sector. With the newly added features to the cloud management and application platform, the reliability of the system was increased to 99.999 percent. The

enhancements needed for new customers and compliance needs (eg HIPAA) have been added to the solution.

The needs of important operators and companies in both North America and the Gulf Region were met by adding new features to the solutions in the client family that will increase the user experience and strengthen the infrastructure.

Unified communication: A2 R&D

- In April, coding and testing of version 14.0 of the AS product were completed. The load was made available to customers.
- An intermediate version called 14.0 MR was prepared and sent to the field in October so that some features developed at the request of some European and North American customers can be sent to customers.
- AS version 14.1 was made ready for a company in Europe with two new features.

Modernization of systems: C20 R&D

- Eight urgently requested projects arising from the critical needs of large operators in the USA, Canada, and the UK were developed with rapid release processes and delivered to customers.

Customer support

- More than 10 thousand customer problems were addressed. More than 720 software solutions were developed to solve these and 480 customer service interruptions problems were solved instantly.

NETAS

MANAGED SERVICES

Managed services ensure 24/7 business continuity

Netaş, with its team of expert engineers in every vertical that can manage the systems regardless of the platform, provides end-to-end NOC and SCOC services. Thus, it offers effective cost-benefit management through optimization and consolidation of living systems.

Providing consultancy on integration and use in line with current global processes, Netaş also provides support to companies according to the necessity of digital speed with its ability to use advanced technologies such as artificial intelligence and machine learning. Through its coverage in Turkey's 81 provinces as well as offices abroad, Netaş in the position of companies' managed services business partner abroad.

The field experience of Netaş, which has undertaken many projects of energy and contracting companies, extends to Africa. Netaş, which has implemented the project that will enable a cloud-based digital transformation for Sonatrach, one of the world's leading oil companies and the largest oil company on the continent, including the establishment and delivery of six data centers. The data centers in question were built with a project team of more than 20 people in four cities in the desert.

Competencies

- Detailed knowledge of customer systems with all their components
- Human resources with high end-to-end business and management capabilities
- Platform independent management with the experienced and certified team for each vertical
- 24/7 cybersecurity operations and network operations management center
- Proactive management and control

24/7 Monitoring

All layers of IT systems, which are the basis of the business processes of companies, are monitored 24/7. Potential problems in these layers are identified in advance and any problem is intervened proactively.

Network management

Network infrastructure components are monitored and managed remotely 24/7 by the Network Operations Center and the healthy operation of the system is ensured. Accordingly, in related devices; possible performance losses are identified and intervened, necessary changes are made with the configuration, and devices are updated.

System management

Configuration, monitoring, critical patch management, minor updates, system repair, system-based log tracking, user management and authorization, performance for server components such as operating system management, antivirus management, e-mail services, database management, middleware management, virtualization management. follow-up and improvement processes are carried out.

Application management

Special solutions are offered based on customer requirements such as mailing systems, ERP, CRM, BPM systems, and ISS services management. In addition, end-to-end solutions can be developed according to the needs of customers. Thanks to the Help Desk, customer problems are recorded and solutions are developed for recurring errors.

Datacenter design, installation, and migration

Solutions and consultancy are provided on data centers that are on the basis of business processes and operations. Regarding data centers, management and consultancy of turnkey processes are carried out, including the analysis of the company's IT infrastructure, optimization of resources, design of necessary data center infrastructures to accommodate the relevant systems, and migration of the data to these designed structures.

CYBERSECURITY OPERATIONS CENTER (CSOC)

Providing end-to-end cybersecurity structure

As the digitalization accelerates, cybersecurity needs increase accordingly. Providing an integrated service under a single roof with its cybersecurity expertise on 55 topicsand 360-degree perspective, Netaş is the cybersecurity business partner of dozens of leading brands from critical industries such as finance, aviation, energy, and retail.

Netaş supports enterprises to overcome the challenges including the employment of competent personnel and making required technology investment in face of cyber threats becoming more complicated day by day.

Netaş structured its services so that the corporations can fill their security gap far more efficiently than they could by themselves and with a sustainable model. Its cybersecurity service customer portfolio includes many companies from a wide array of industries, including insurance, retail, manufacturing, and e-commerce.

Netaş Cyber Security Services begin with the security analysis of the companies against a cyber attack and the identification of their risk status. Following necessary measures are taken and suggestions are made for an action plan, a penetration test is performed to measure the efficiency of the actions, to see the real status of the enterprise after a cyber-attack, and to ensure the continuity of the measures. In addition to these, Red Team activities, brand-specific cyber intelligence services, social engineering attack tests for the employees, security hardening in the systems, and 24/7 security incidents monitoring and response, all provide the elements of a holistic cybersecurity service.

Netaş cybersecurity solutions

Cyber Security Operations Centre: SIEM & SOC Management, Blue Team, Red Team, Forensic, Vulnerability Management, Cyber Threat Intelligence, EPP, EDR, UBA, Phishing Awareness, Incident Response.

Managed Security Services (Technology Consultancy and Test Services): IT GAP Analysis and Security Hardening Program, GDPR Consultancy, Risk and Compliance Management, Advanced Test Services.

SIEM & SOC Management: Today, organizations are facing new cyber threats and increased regulatory pressure. As a result, SIEM and SOC stand out as analytical skills to improve security controls of an organization and reduce risks at the same time. Netaş provides SIEM & SOC consultancy, 24/7 cyber incident management, SIEM installation, management, health-check and training, correlation consultancy.

Cyber Threat Intelligence: Netaş monitors intelligence platforms and databases on the surface web, as well as deep and dark web and tracks down potential threats, before these evolve into actual attacks; and takes necessary actions in order to eliminate the threat; drafts action plans for protection and impact controls.

Penetration Tests & App Scans: Netaş ensures holistic application security through analysis, design, implementation, verification, testing, correction, and development. According to detailed pen tests and app scans, services provided are Threat Modelling Services, Static Code Security Testing, Dynamic & Interactive Application Security Tests, Safe Coding Trainings.

Managed UBA: Netaş teams perform user behavior analytics (UBA) in order to support cyberattack prevention, by detecting anomalies, using machine-learning-based techniques. Services include attack, identity, cloud, and fraud analytics.

Managed DLP: In addition to the conventional data loss prevention (DLP) approach, Netaş provides discovery, classification, labeling, monitoring, and leak prevention for both structural and non-structural data.

Innovative services in cybersecurity

- Fraud monitoring and intervention, that monitors and responds to fraud risks in banks' payment channels
- Cybersecurity risk monitoring and scoring that supports the holistic risk management and control of organizations
- Cybersecurity insurance against possible loss and damage of cybersecurity risks
- Swift CSP consultancy services targeting infrastructure and communication security in money transfer channels
- Collecting and analyzing data from a wide range of sources, providing effective and proactive protection thanks to the cyber threat intelligence program.

NETAŞ NETWORK OPERATION CENTER (NOC)

A proactive approach in network and system infrastructure management

The Netaş Network Operation Center (NOC) monitors the system and network infrastructures that provide all business data of customers constantly and centrally, and on a 24/7 basis.

Taking the necessary actions as soon as possible, Netas Network Operations Center (NOC), which takes a proactive approach in network and system infrastructure management in terms of business continuity, provides services in order to provide the highest quality service by keeping the infrastructure required for central management and the employment costs of the relevant personnel at the most economical level.

NOC services

- Information collected simultaneously from the devices that form the company network, is reported within specific time intervals.
- The problems on the network are determined in advance and are fixed on short notice, and the workflow is maintained without interruption.
- Network performance measurements are made and evaluated to ensure that the required optimization and systems work at the ideal performance.
- Software and application management and its updates are performed from a single-center on time.

Elements of network operations management

Configuration management

It enables the configuration of all assets (hardware, software, network products, documentation, connected systems), keeping detailed information, monitoring, and reporting its history.

Change management

It provides the use of standard processes and procedures determined by the company. The impact of the change-related incidents on the quality of service is minimized and, as a result, the company's daily operations are accelerated.

Version management

It enables the control and distribution of newer versions of hardware or software that will be created by Netaş or outsourced from the company.

Event management

According to the IT incident management process that will be created by Netaş or outsourced from the company, it makes the right decisions for identification, analysis, and elimination of incidents occurring during the service.

Problem management

According to the purpose of problem management, it provides studies to find root problems within the IT infrastructure being serviced and ensures that the problems are solved without being occurred again.

DIGITAL TRANSFORMATION PROJECTS

Technology at the service of smart life

Offering its technology to service for a smarter life, Netaş continues to successfully implement large-scale digital transformation projects in all sectors from telecommunications to the public, from finance to energy.

SMART TRANSPORTATION

Netaş signature at the world's smartest airport

Netaş established the communication infrastructure and data center cloud automation system of the Istanbul Airport (IGA), arguably the world's smartest airport. The company played an active role in every stage of the project's electronic and IT infrastructure.

With its 1.3 million square meter terminal building, 42 km long belt conveyors, 6 runways with 500 aircraft capacity, and an annual passenger capacity of 200 million, İGA is one of the largest projects in the world, and an equally colossal technological infrastructure has been built for it.

Having deployed the wired and wireless telecommunication network infrastructure of Istanbul Airport, Netaş has broken a new network coverage record in Turkey with almost 5 thousand access points on this network. Thanks to this extensive access network, passengers are provided with seamless, fast, and secure internet service from the moment they park their cars to the moment their plane takes off. All businesses inside Istanbul Airport, including the security, the customs checkpoints, and the duty-free shops, are being run using the said communication infrastructure.

Europe's Best Airport In Terms Of Digital Transformation

Netaş has also built the data center cloud automation system of Istanbul Airport. Systems such as area management system that sets the gate number, changes, arrival gate; exchange system; passenger management system that will allow passengers to receive efficient service; car park management and loyalty system that will provide special campaigns and privileges will all run on this infrastructure. The airport management will be able to offer sources to the enterprises within the airport with automatic server provisioning through cloud automation integration. The system includes two active-active data centers. Besides the above, Netaş has also built the information infrastructure for the biggest airport hotel in the world constructed in İstanbul Airport premises.

Istanbul Airport has been awarded the "Digital Transformation Award" by Airports Council International (ACI) as a part of the 16th ACI Europe Awards. The accolade comes in recognition

of the airport's digital transformation and introducing technology where possible, making it one of the world's smartest airports.

- Infrastructure ready for innovative and smart technologies
- Almost 5,000 access points on wired and wireless networks
- Simultaneous, uninterrupted, fast, and secure internet access for 55,000 people
- Free internet for over 200 thousand passenger
- Data space of 20 million GB
- 99.4% coverage including the terminal, surrounding buildings, baggage operation, and remote aircraft parking areas with 4,750 wireless access points
- 24/7 monitoring
- 12,000 CCTV
- The reduced waiting time in passport and customs checkpoints and check-in counters
- Maximum operational efficiency

Safety on railroad transport

With its vast experience in railway communication networks, Netaş provides high-performance connectivity and operational efficiency with its GSM-R solutions, a wireless and secure broadband communication standard optimized for railroads.

In addition to four completed GSM-R projects and two transmission projects, here are some of the ongoing GSM-R projects:

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- Sivas-Yerköy High-Speed Train Project (GSM-R Exchange, GSM-R Radio Communication Network and Wired Network Communication infrastructure, construction infrastructure for facilities like Tower)
- Yerköy-Kayaş High-Speed Train Project (GSM-R Radio Communication Network and Wired Network Communication infrastructure, construction infrastructure for facilities like Tower)
- Bandırma-Menemen Project (GSM-R Radio Communication Network and construction infrastructure for facilities like Tower)
- 9 railroad communication projects
- High-performance connectivity and efficiency

SMART ENTERTAINMENT

Moving Turkish football to the digital future

Within the Smart Stadium Project for the Turkish Football Federation (TFF) since 2014, Netaş has deployed the electronic ticketing infrastructure of over 50 stadiums and laid the IT infrastructure

of these stadiums by installing the entire network and systems of the facilities including CCTV Surveillance Systems, Access Control Systems, Match Operation Centers, Stadium Data Centers.

The company has also established a Data Center in İstanbul Gayrettepe, a Data Recovery Center in Ankara Ümitköy, and the Main Match Operation Center of the Turkish Football Federation in Riva. Thanks to the systems it has built, Netaş ensured integrated and single-center management for the entire structure, including central ticketing, network, system, CCTV, GKS, and IT infrastructure.

- More than 50 smart stadiums
- Secure network
- Surveillance systems
- Beacons
- High capacity Wi-Fi
- Match network and operation center
- Digital wall and video streaming
- E-ticketing
- Access control systems
- Datacenter
- New payment methods
- Smart money

SMART PUBLIC SOLUTIONS

A globally pioneering disaster management system

Playing an active role in projects contributing to our country’s emergency management, Netaş initiated the Disaster Management and Decision Support System (AYDES), an AFAD project that in 2013, developed for the digital management of all phases of a disaster and the efficient use of resources.

The new version of AYDES, which started to be developed in 2019 in accordance with the developing new technologies, was launched in 2020 and started to be used in the field.

Thanks to AYDES, one of the few digital disaster management systems in the world, the resources in disasters and emergencies are managed efficiently and a smooth operation of the commanding process is provided. AYDES is being used by about 7 thousand active users in 81 cities, among which are institutions/organizations, NGO's and field services that also include eight ministries and the Red Crescent and which play a role in national disaster management.

Working integrally with more than 50 internal and external systems, AYDES also serves, for instance, information on "Meeting Points in cases of Disasters and Emergencies" which is put to public use over the e-Government portal.

Features of AYDES

- Creating risk maps according to the disaster type
- Predicting the impact of a possible disaster according to previous disaster and emergency drills
- Management of actions after a disaster on the decision support system
- Management of the recovery processes after a disaster
- Data collecting through mobile apps and its transfer into a database
- Dynamic and instant reporting on the dashboard with a decision support system

- 7 thousand active users in 81 provinces
- Unified disaster management
- Geographical information-based decision support system
- Integrated with more than 50 internal and external systems

Safer cities

As part of the City Safety Management System Contract negotiated with Aselsan; Netaş has been carrying out the deployment of the infrastructure, construction, installation and repair and maintenance work for the City Safety Management System and Vehicle Identification System to be implemented in 80 provinces so that security forces can more effectively ensure order and safety and perform inspections.

Safer schools

Netaş has completed the Safe School Project conducted by the Ministry of National Education for the safety of the children in schools.

Accordingly, Netaş has completed the installation and integration of all networks, systems, cameras, and infrastructure of a total of 762 schools in 71 cities across Turkey. Netaş started to provide guarantee and maintenance service after the school systems have been commissioned. As a result of the project, schools can be monitored live by security forces and the CSMS (City Security Management System) Centers.

- 762 safer schools across 71 cities
- Network, system, CCTV, and relative infrastructure deployment
- Live surveillance

e-Government transformation in Cyprus

Netaş has been conducting three major projects under the TRNC (Turkish Republic of Northern Cyprus) e-Government Program undertaken by Türksat on behalf of T.R.N.C. Ministry of

Transportation and Infrastructure to transform public institutions and organizations into e-Institution.

e-Census system project in TRNC

This project of the first phase of the TRNC e-Government Program is at the core of e-Government. During the project, it was Netaş providing detailed analysis, software design, and development, integration of the system with other institutions and systems, testing, installation, commissioning, training, data digitalization, and counseling. Now the company provides guarantee, maintenance and support services.

TRNC e-Corporate (Central Registration System for E-Companies) Project

The scope of the project includes a detailed analysis for the implementation of TRNC e-Corporate System, software design and development, integration with the other institutions and systems, testing, data digitization, data transfer, hardware supply, installation, configuration, commissioning, training/technical support, three years of guarantee, maintenance, support, and integration.

TRNC e-Customs / CIS (Customs Information System) Project

The project includes a detailed analysis for the Customs Information System, software design and development, integration with the other institutions and systems, testing, counseling, hardware supply, installation, configuration, commissioning, training/technical support, three years of guarantee, maintenance, support, and integration.

- e-Census System
- e-ID System
- Securing data privacy
- Access to information from a single point
- Compliance with global trade norms
- Compliance with European Union Customs legislation

SMART ENERGY

Digital transformation in the energy industry with NEOS

Netaş makes a difference in the energy industry with its locally developed technologies. Netaş Energy Automation Systems (NEOS) provide digital infrastructure for the energy and resource management of the cities.

NEOS OSOS

NEOS OSOS (Automatic Meter Reading System), a cloud-based automatic remote meter

reading and management system, not only allows significant savings of time and workforce through easy electricity consumption monitoring, but also enables real-time budgeting of demand, facilitated billing, identification of energy losses, and making consumption estimations.

NEOS Hydro

The benefit of NEOS in resource management is also similarly applicable to water distribution where NEOS Hydro remotely reads water meters and prevents any fraud and leakage. NEOS Hydro devices are compatible with both the application-specific to the lighting vertical and the ION horizontal platform.

NEOS Photon

NEOS Photon, developed for increased efficiency and savings in city street lighting, was delivered to be used in a local municipality in Istanbul. This platform, which allows for remote and real-time tracking of all devices in the field can automatically identify the failures and steers the field operation teams to repair the breakdown as soon as possible. NEOS Photon devices are compatible with both the application-specific to the lighting vertical and the ION horizontal platform.

SMART CITY

Smart cities for a sustainable future

As Turkey's leader systems integrator with its 120 business partners and R&D skills, Netaş equips Turkish cities with its smart technology solutions ranging from energy to sports, and from transportation to entertainment. With this goal, the company is also leading the Smart City Consortium, which is formed to enhance Turkey's smart city ecosystem.

Bringing together 24 institutions and organizations in order to make cities smarter in Turkey and abroad, the Smart City Consortium focuses on integrated smart solutions in the fields of energy, building management systems, emergency management, healthcare, environment and waste management, parking, and transportation systems.

In the first phase, the data to be produced by the devices to be used in the solutions to be produced in six verticals determined as energy, building emergency, health, environment and waste management, parking lot and transportation systems will be collected in a central management unit. The data to be processed with big data analytics and artificial intelligence applications will enable a structure that produces real-time actions.

In terms of providing complete cybersecurity protection, it is advantageous to collect data in a single center. Thanks to this architecture, the solutions to be produced in these six areas will work in full integration with each other, although they are provided by different manufacturers. This combination of forces will form the basis for new applications and research, with public access to real-time data streams open to any kind of analysis.

The smart city project presented by the Consortium became one of three projects qualified for the second phase of TÜBİTAK's Industrial Innovation Network Mechanism (SAYEM) applications. The outputs of the Consortium's project will contribute to increasing Turkey's high technology exports.

World Cities will get smarter with an investment of $158 billion

It is expected that with 5G, the development of internet of things technology will accelerate and this will serve as the basis of smart city applications. According to estimates, smart city spending, which was around $81 billion in 2018, will reach $158 billion in 2022. The importance of the Smart City Consortium led by Netaş steps in at this point. In the first plan, the data to be created by the devices to be used in the solutions to be manufactured in six verticals determined as energy, building emergency, health, environment and waste management, parking lot and transportation systems will be collected and evaluated in a central management unit. The data to be processed with big data analytics and artificial intelligence applications will enable a structure that produces real-time actions.

Why smart city?

- Current smart city applications increase the quality of life up to 30%.
- Smart city actions are included in public action plans all over the world.
- The population density of cities in the world and Turkey is growing and needs technological help for increased livability.
- Integrated solutions instead of vertical city solutions gain importance.
- Smart city spending will exceed $158 billion in 2022 according to IDC and $2 trillion in 2025 according to Frost & Sullivan.

SAYEM - Smart Cities Architecture

- Vertical applications
  - Smart energy
  - House-Building
  - Emergency management
  - Smart health
  - Environment and waste management
  - Parking and transportation systems

The cornerstone of the Smart City: IoN-Internet of Things Platform

ION, the IoT (internet of things) platform developed by Netaş, provides a robust and secure infrastructure for brand new solutions for increased savings and efficiency in smart city applications deployed by local governments. The platform is designed to ensure the end-to-end data security of IoT applications and is automatically scalable depending on the changes in data traffic. ION is designed with a horizontal infrastructure to encourage fast growth and innovation in the industry by enabling different IoT device and application providers to work under a common roof. It isolates various device and connection types from the application layer to enable innovative applications across various verticals with the central data management it offers.

The ION application enablement platform continues to evolve and grow every year. With the recently added features, it is now possible to publish new cloud services that third-party software developers will develop using their own expertise, by adding a user guide on the market on ION. Users in the delegate role on the same ION installation can use the services in the market in their applications they manage by starting a subscription. In addition, ION setup allows owners to make the data of their IoT applications available to third-party companies if and to the extent they want, and to initiate new commercial opportunities.

It aims to bring a solution from the very beginning to the continuous increase in application diversity, technological heterogeneity, and usage density experienced by companies with active use in the field of IoT. The outstanding features in this regard:

- Increased savings and productivity
- Encourages rapid growth and innovation.
- Enables innovative applications between different verticals.
- Paves the way for the contribution of third-party partners and developers.

SMART EDUCATION

Next-generation smart classrooms

As part of the Movement of Enhancing Opportunities and Improving Technology (FATİH) initiated by the Ministry of National Education, Netaş established the ICT infrastructure of almost 7,700 schools. The schools were equipped with high-speed broadband internet infrastructure within the scope of the technological infrastructure for next-generation smart classrooms. The project that enables teachers and students to have access to educational documents and social information in the electronic environment is among the largest projects that have been implemented in Turkey concerning the digitalization of education.

- ICT infrastructure for about 7,700 schools

- Schools with high-speed broadband internet infrastructure
- One of Turkey’s largest projects concerning the digitalization of education

Bilfen Shools use Netaş infrastructure

Bilfen Schools are using Netaş infrastructure, as they provide education to their 16 thousand students, with 1,000 teachers and staff on its 88 campuses. In Bilfen Schools, education continued uninterruptedly with Microsoft's digital work platform in the second period of 2019-2020, when education was carried out remotely. As a result of the smooth implementation of all necessary PoCs by the Netaş Microsoft Solution team in a very short time, and all the necessary installations by BDH teams, Bilfen students can easily meet all their digital needs with solutions such as Teams, OneNote, Minecraft for Education.

SMART HEALTHCARE

Emergency hospitals’ infrastructure successfully completed

The infrastructure works of two field hospitals, namely Sancaktepe Prof. Dr. Feriha Öz Emergency Hospital and Yeşilköy Prof. Dr. Murat Dilmener Emergency Hospital, which were commissioned officially in May 2020, were successfully carried out by Netaş. The integration of all the components was completed only in 50 days. The overall work included the data center design of both hospitals, the supply and integration of the data center cabinet system in the data center, the cooling system, structural cabling, and building patch cords, as well as license supply of DELL PC Client, Palo Alto FW, and Microsoft, together with the related peripheral equipment.

Turkey's pre-hospital healthcare system digitalized with ASOS

Keeping on making Turkey ready for the ICT and digital transformation world of the future with its engineering competency, Netaş implemented the Emergency Healthcare Automation Systems Project (ASOS) of Turkey’s Ministry of Health, opening a new digital era in the Turkish healthcare system.

It is the first and only project that provides data integrity, coordination and communication among the Ministry of Health central organization, Provincial Health Directorates, 112 Command Control Centers, 112 Stations and healthcare facilities. ASOS enables immediate access to information such as reporting/call and case information, patient information, supply and medication status, personnel actions, hospital bed occupancy rates, transport processes, 112 training information, ambulance and inventory maintenance & repair, insurance/traffic insurance processes, shift lists and scoring information.

Aiming to increase the efficiency, activity and accessibility of emergency healthcare services on a national scale, ASOS project enables the servicing of 5 thousand ambulances and 15 thousand

users in 81 provinces across Turkey. The goal of the system is to direct the ambulances owned by the Ministry of Health, transfer the patient as soon as possible to the nearest and most suitable hospital and service with available beds based on initial findings and the location. With ASOS, patients can be monitored to see whether the first intervention was sufficient even after the ambulance transfers the patient to the hospital. The personnel is trained in case any shortfalls are detected.

OYS (Incident Management System) Module developed in ASOS can monitor patients affected by mass incidents that reach SAKOM (Health and Disaster Coordination Center) and require Crisis Coordination Intervention live from the time they are affected until they arrive at the hospital and clinic treating them, and even through discharge processes.

- 81provinces, 5 thousand ambulances & 15 thousand users

Digital transformation in city hospitals

Netaş completed the installation of data centers and network infrastructures of four city hospitals so far, in Yozgat, Adana, Elazığ, and Bursa, Turkey. Thanks to the infrastructure built by Netaş, the information systems of hospitals are unified, and all types of medical equipment can exchange information over the network using the installed system. Hospital management reaches a seamless operation through systems that have been integrated with smart building technology as well, and the diagnosis procedure is shortened since documents such as x-rays, reports, and blood tests are electronically received directly by the physicians. In addition, polyclinic processes have been facilitated thanks to the desktop computers installed in the hospital and the tablets that enable data entry. Netaş is providing 24/7 network monitoring and maintenance for systems components and peripheral equipment.

- End-to-end system back-up
- Seamless operation warranty
- Integrated with smart building technologies
- Reduced diagnosis process
- 24/7 network monitoring and system maintenance

DATA & BUSINESS ANALYTICS

End-to-end solutions in big data and business analytics

As a provider of end-to-end solutions in the field of big data and business analytics starting by process analysis stage, Netaş shares its international market experiences with its customers. Optimal solutions are produced for customer needs in the field of big data using open source services and micro-services developed by Netaş R&D engineers within the framework of industrial standards and installations are being made for big data infrastructures.

Netaş offers end-to-end solutions that increase the usability of corporate data and enable new applications:

- Data Warehouse solutions
- Business Intelligence solutions
- Business Analytics, Artificial Intelligence, and Machine Learning solutions

All solutions are applied by considering full compliance with business processes.

With close monitoring of developments and innovations on the subject, solutions can be offered with diverse technologies, including open-source services, big data technologies, and cloud computing services.

In the Big Data Platform and Test Laboratory established within Netaş, big data solutions are developed simultaneously for all sectors. In the Netaş Big Data Platform, with log measurement studies collected instantly and periodically from server data, all kinds of requests from mobile and web platforms can be processed and evaluated instantly, and the data in the structured databases can be transferred to the big data platform, as well as the data coming through IoT applications.

The Cloud-based Business Intelligence application, which was started to be developed in early 2020, is being tested on Netaş products and customer solutions as of 2021. Being developed by Netaş engineers, the business intelligence product continues to evolve to be used in many projects based on Business Intelligence and Artificial Intelligence thanks to the many new technologies it contains.

TELECOMMUNICATION

Integrated and unified communication solutions

Offering dozens of technologies as integrated real-time solutions to corporate markets within the scope of unified communication solutions, Netaş has been implementing major infrastructure projects, focusing on telecom systems modernization, unified communication/multimedia communication, telecom transfer to the cloud.

Fixed Voice Network modernization

Having successfully implemented the ZTE NFV Based IMS system in Türk Telekom Fixed Voice Network, Netaş has undertaken the capacity increase twice for the project and completed the installation of these.

As the second step of Türk Telekom Fixed Voice Network modernization, Netaş won the tender to transform the interconnection (I-SBC) network into an NFV-based system, transforming its after-sales support team into a pool of experts that can support different projects with this new project using the same infrastructure. An international quality after-sales team has been formed that can carry out both installation and maintenance activities.

Transforming the Fixed Voice Network of Northern Cyprus Telecom Administration into an NFV-based IMS network that can support fixed and mobile access, Netaş has created fast and effective solutions at low cost with the integration software it has developed in its R&D.

Türk Telekom Istanbul Metro DWDM Project

Istanbul is the city with the most intense traffic demand in Turkey. In order to meet infrastructure needs coming from companies, end-users and other operators for Türk Telekom's future wired optical transmission systems, Netaş will replace the existing systems in the current area gradually with ZTE systems. This infrastructure to be installed in Istanbul, will carry more capacity than the total capacity carried by the wired optical transmission networks in the country combined.

Telecommunication project for SMEs in Australia

With the communication project it developed for one of Australia's major telecom service providers, Netaş designed a brand-new communication system for SMEs which are considered to be of key importance for the Australian economy. With the solution in which 12 different web/mobile applications and cloud infrastructure have been developed, SMEs can purchase a company phone line in 15 minutes online using a credit card, install a virtual reception service to this phone line and program such functions as meeting and directing the calling customers and make use of mobile applications among themselves for communication and conference services with rich content.

Communication solutions for Switzerland

With a project it realized for one of the major service providers in Switzerland, Netaş offers a set of new communication solutions needed by companies at any scale. The project involves the management of SipPBX servers included in the operator's communication network by the application server developed by Netaş. Thus, the operator has the chance of enhancing the contents of the SipPBX services provided to its corporate customers and Netaş has performed the software development needed for increasing subscriber and call capacities and managing the traffic of SipPBX servers. Thousands of corporate customers at varying scales in the country now receive secure services over Netaş systems.

FINANCE

Special solutions for the finance industry

Netaş continues to provide highly specialized services for the finance and insurance industry, such as software and application testing services, data center installation, migration and maintenance, network installation, cybersecurity services.

TEST SERVICES

Banking applications testing service

Netaş has undertaken the "Banking Applications Testing Service" project for Ziraat Technology, which has been providing technology services to Ziraat Bank, Turkey's oldest and largest public bank with a history of 157 years, and its subsidiaries. Within the scope of the project, Netaş is responsible for managing the end-to-end test processes of Ziraat Technology, defining test automation strategies, managing the projects and resources, developing and training the testing team, monitoring the business outcomes and quality, reporting, and identifying and using the required automation tools.

CYBERSECURITY SERVICES

24/7 security service for all banking transactions with Fraud Monitoring

Netaş launched the Fraud Monitoring Service, which enables banks to provide the safest service by monitoring the risks and fraud attempts that occur within the scope of all payment channel operations.

With the service launched under the roof of FOC (Fraud Operations Center), banks are supported in fraud and security units, governance, analytics, and process improvement activities, enabling them to be more effective in monitoring and intervention processes performed 24/7.

Financial institutions that currently use Netaş SOC (Security Operations Center) service have also started using the new fraud monitoring and response service for banking operations. In this way, banks have opened the way to reduce the burden and banking risks on existing fraud teams, while having a value-added service for possible future fraud security and cybersecurity incidents that require joint action and coordination.

INTERNATIONAL MARKETS

An international producer and systems integrator

Netaş has been supplying telecommunication networks, cloud computing infrastructures, data centers, as well as cybersecurity and software solutions in many countries. While it’s one of its main goals to procure its local ve domestic products it develops in its ArGe to international markets, the company also aims to contribute to the technological and digital transformation of countries, which it has operations.

As a business partner in digital transformation projects of a vast zone extending from Asia-Pacific to the Turkic Republics, and from North Africa to the Middle East, Netaş offers technological solutions and services in many fields spanning from telecom to finance, and from energy to the public sector.

Netaş has its fully staffed offices in Algeria and Kazakhstan, has a representative office in Azerbaijan, and a representative in Georgia. The company continues to structure and grow in the international markets.

As an international manufacturer with the support of its main partner ZTE and its own R&D, Netaş is also a systems integrator that can create and implement turn-key projects with complementary products from other vendors. The company manages large projects on a global scale with its vast technical team having both carrier network and information technology expertise. This provides Netaş a competitive upper hand.

Providing more contribution to the digital transformation of Kazakhstan, Netaş, together with its main shareholder, technology giant ZTE, is working to increase broadband internet usage within the scope of the Digital Kazakhstan Program. Accordingly, the company has been supporting the mobile and fixed internet access infrastructure of Kar-Tel, Amsterdam-based global telecom company VEON's subsidiary in Kazakhstan, with ZTE's MiFi Router and 4G USB modems. It also supplies the IPTV infrastructure offered by Kar-Tel during the pandemic period with ZTE's Set-Top Box (STB) product.

In the meantime, Netaş makes a great contribution to the digitalization of Qatar, as the country is preparing to host the 2022 World Cup. Netaş undertook the digital sports and customer experience platform project in the country.

Netaş aims to supply all products and services of its main partner, ZTE, to the countries it is responsible for, and to carry out information and communication technologies integration projects with ZTE and complementary products.

NETAS

TECHNOLOGY TRAINING CENTER

High Technology Training Center: n-telligent institute

Netaş is offering 20 different courses under 6 main topics, designed in order to help all the constituents of its ecosystem, from its own employees to companies from every sector, and from start-ups to university students, keep their skills updated in its n-telligent institute. The topics also include the content from ZTE, its main shareholder.

Known as “Turkey’s engineering school”, Netaş made all its knowledge base available to the use of its ecosystem, including all organizations and institutions, at n-telligent institute. By incorporating the n-telligent institute, Netaş aims to be a “business partner” in human resources training for companies from different verticals, reinforcing their human resources. As a next step, Netaş seeks to export its training on a global scale, with ZTE.

Built on lifelong training

The training programs of n-telligent institute are designed to address the rapid changes in technology, and they offer a lifetime training opportunity for companies to integrate their workforce to the latest technological developments. Focusing on raising engineer leaders, n-telligent institute is designed in order to sharpen the social skills of engineers, to support their leadership skills development in technical roles.

The training of the global technology giant ZTE also integrated

With its in-depth knowledge from digital transformation projects and 47 years of R&D expertise, Netaş offers 20 different courses under 6 main topics, ranging from cybersecurity to agile management, and from test services software to Big Data sciences and technologies of its global business partners, under the roof of n-telligent institute.

The n-telligent institute includes 5G network technologies, Radio Access Technologies, IP Networking, Wireless Communication Technologies, Switching Infrastructure, and RAN product training of ZTE, one of the largest companies in the world in terms of communication technology patent number, which is the main shareholder of Netaş.

Offers internationally accredited certificates in DevOps expertise

The n-telligent institute collaborated with the DevOps Institute, a global organization of DevOps experts. Within the framework of the partnership, n-telligent institute is now DevOps Institute’s authorized training and competency testing center in Turkey and the region. Thus, Netaş trainers will also have the competence to provide training with accredited DevOps and DevSecOps instructor certificates.

The n-telligent institute also collaborates with Dale Carnegie, who has contributed to the organizational development of companies with over 100 years of experience. Dale Carnegie supports Netaş experts in having an instructor vision, preparing their training programs, and developing their skills for effective training with the “Training of the Trainer” certification program.

Digital skills also determine the market value

The golden rule for companies to achieve success and stand out in the increasingly competitive environment is to keep digital competencies constantly updated. Studies reveal a direct proportion between market value and skill resources. So the key to economic progress and growth of companies is to develop skills resources.

Coursera's Global Skills Index 2020 report underlines that economic progress depends on high skills and competence. Countries with higher skills qualifications see higher GDP returns over the long term, according to the report. As an example based on the report data, there is a 40 percent correlation between technology, business, and data science skills qualifications and US stock return. The data show that each skill qualification percentage of a country is associated with an increase in GDP per capita of $600. So countries and companies can withstand this decline and make their economies more resilient by investing in skills development and keeping them updated. At this point, n-telligent institute plays an important role in Turkey and the region.

NETAS

HUMAN RESOURCES

Being a Netaş employee means adding value to the society

The ICT industry has gained numerous leaders raised in Netaş, Turkey's engineer school. Today, Netaş continues to perform digital transformation with its innovative and competent talent pool and is taking strong steps towards the future.

The Human Resources Department of Netaş believes in the power of talent management, and it keeps its focus on the happiness, productivity, education, and personal development of its employees. The team carries out exemplary human resources practices by preserving the values, culture, and way of doing business of the company, coming from its more than 50-year heritage.

Netaş COOP Program

Netaş Coop Program which started in 2014 is a long-term internship program, and it is creating opportunities for university students to have a career at Netaş. Every year, in three semesters named fall, spring, and summer, within the scope of the program that takes place in three months, 200 students on average are offered a full-time internship opportunity in Netaş R&D Headquarters.

During the internship, students have an active role in projects such as VoIP switchboard design, VoIP and web security projects, IPv6, JITC, Log Wizard, Smart Office, and Application Server Replacement. While the training of students who successfully completed their internship carries on, they are offered a part-time job, ensuring that they get professional R&D experience, and their training and development processes in the company continue.

With this program, full-time jobs are offered to the candidates that are experienced for 8 to 18 months in Netaş technologies, suitable for Netaş organizational culture, who meet the evaluation criteria, and who proved themselves with their success, and who want to shape their career at Netaş. Up until today, out of 1,032 students that joined the Netaş COOP Program, 250 of them managed to join the Netaş family, whether with a part-time or full-time scheme.

In 2020, when 101 students from contracted universities participated in the long-term internship program, 10 students found the opportunity to work in full-time engineering positions with R&D teams.

Life at Netaş

Benefit&Banafit Flexible Side Benefit Program

Netaş has flexible side benefit practice as a part of the Benefit&Banafit Program. Netaş allows its employees to choose their own side benefit packages, according to their own preferences and needs, within the determined criteria, limits and conditions.

RecogNetaş Reward Portal

Everyone who works at Netaş can reward each other. Netaş employees can reward each other or be rewarded on any day of the year for different reasons, in different categories, without having to wait for the end of the year.

JobShop

Netaş employees are given the opportunity of lateral and vertical transfers to vacant positions in the company.

Netaş Theatre Company

Netaş Theatre Company, since 2005, has been staging a play in every season. During the pandemic, the Theatre Company moved their performances to the online platform.

Lunchtime Conversations

Netaş has been organizing Lunchtime Conversations in collaboration with different organizations and institutions, with speakers presenting on different topics. So far, many topics have been discussed, including economy, health, psychology, and art among others, and a new conversation is being held each month. In 2020, Netaş employees had the opportunity to listen to healthcare, parenting, business, and personal development experts in 13 sessions.

NetaşTalks

During NetaşTalks, the employees share their inspiring stories with their colleagues.

Planetaş

The quarterly internal magazine Planetaş publishes success stories, articles on innovative products and technology, as well as rich content including art, sports, and traveling, all written by Netaş employees.

E-Olympics

The traditional Netaş Olympics, where employees compete with each other every year in different sports branches, were held online this year. During two months, 300 applications were made, and 224 individual contesters joined e-sports events in 268 matches with a total time of 6,150 minutes.

Future with Netaş

BAU Netaş Techno Academy

Netaş employees can get post-graduate education with a 75 percent discount. Hereby, Netaş offices turn into a campus for its employees.

n-telligent institute

The reputation of Netaş being an engineer school turned into an actual school. The n-telligent institute, which already made Netaş knowledge open to its ecosystem, is also investing in its own employees. The institute focuses on improving both the social and technical skills of Netaş employees, in order to raise future leaders.

Art of Engineering Certification Program

The Art of Engineering Certification Program, created in collaboration with Istanbul Technical University, supports its participants to adopt an inter-disciplinary approach and productivity so that they can make a difference with what they do and innovate. In 2020, the program had its first graduates.

NEXTCODERS

The NextCoders program, created to provide coding and math training to the children of Netaş employees, now includes artificial intelligence training and lasts for 40 weeks. The second term graduates received their certificates in December. The training was held online.

Umutluyuz (We have hope)

Thanks to the Netaş spirit, the Netaş employees are part of the social transformation as much as they are of the digital transformation. Within the scope of the Umutluyuz [We have hope] Voluntary Platform of Netaş, employees participate in voluntary reading projects for visually impaired people, cooperate with NGOs and make donations, organize blood donation campaigns with Red Crescent, and supports schools.

Netaş Orphans Foundation

The Netaş Orphans Foundation, which was established 30 years ago within Netaş, supports the education of the children of their deceased colleagues.

Innovation at Netaş

ideaLab - New Idea Platform

IdeaLab, the new idea platform, was launched in 2020. The platform receives suggestions on the processes and operations of the company departments, as well as ideas on new products, services, and markets. For every idea listed in ideaLab, a journey of four steps begin. At each step, the idea owner receives feedback, and the idea matures receiving evaluations from the right experts.

Netaş employees in figures

The average age of Netaş employees is 33 and 29 percent of the employees are women. The total number of employees reached 2,521 by the end of 2020.

SUSTAINABILITY

A better life and a better future with Netaş

Netaş is contributing to the sustainable development of Turkey for more than half a century, with the successes it achieved for the first time in the history of the country, the employment it provided, its contributions to the economy through exports and investments, as well as social investments.

In line with 17 Sustainable Development Goals specified in the United Nations Development Program, Netaş focuses on the areas where technology can use its healing and transformative power in the most effective way. In this way, it offers its strongest muscle, technology, at the service of economic, social and environmental development.

Sustainable Development Goals we support with our projects

GOAL 3: Good Health and Well-being
GOAL 4: Quality Education
GOAL 5: Gender Equality
GOAL 8: Decent Work and Economic Growth
GOAL 9: Industry, Innovation, and Infrastructure
GOAL 10: Reduced Inequality
GOAL 11: Sustainable Cities and Communities
GOAL 12: Responsible Consumption and Production
GOAL 13: Climate Action
GOAL 14: Life Below Water
GOAL 17: Partnerships to Achieve the Goal

Netaş carries out its sustainability activities under four main titles

The company prioritize social and environmental benefit and continues to carry out its sustainability activities under four main titles:

1. Focuses on developing new generation smart technologies and digital transformation projects that will support the efficient use of energy resources and reduction of carbon footprint.
2. Puts equal opportunity and rural development as a priority with projects that provide social benefits.
3. It supports start-ups for the sustainable growth of its ecosystem and works to increase the rate of women in the sector.
4. With its Environment, Health, and Safety Policy, it fulfills its responsibilities and commitments towards the environment.

Supporting sustainable development by moving Turkey to the digital age

Netaş, with its leadership in domestic R&D and systems integration, makes an important contribution to the development of our country on an end-to-end sustainable life with reference digital transformation projects it implements for various industries spanning from public sector to transportation, energy to entertainment, retail to education, telecom technologies, and defense. Developing high technologies building smart cities, that serve to protect natural resources and the environment, Netaş takes our country to the digital age.

In this context, Netaş established the Smart City Consortium, bringing together 24 institutions and organizations consisting of universities, start-ups, and technology companies in order to focus on developing integrated smart solutions regarding energy efficiency, building management, emergency management, healthcare, environment and waste management, parking and transportation systems. Continuing its work with 360 international organizations in the EU Horizon, Netaş also develops sustainable projects such as smart fish farms and smart agriculture under this roof.

On the other hand, thanks to the effective cloud computing solutions it offers, many organizations no longer have to use their own data and server hardware. By procuring only the services they need, they do not have to invest in hardware, which is often idle and can save on the energy costs of this equipment.

Netaş Platform for a Better Life

The technical expertise and passion of Netaş steer not only its commercial activities but also its social benefit efforts. In this direction, Netaş, through its understanding of "Our future is our values and technology at our core", gathers all the sustainability and social benefit efforts it has materialized for a better life and a better future under the roof of "Netaş Platform for a Better Life".

With this platform where the company realizes exemplary projects in a wide range of fields from the environment to education and diversity, Netaş aims to enhance and expand the scope of its projects that support all its stakeholders, which it believes will contribute to a sustainable life with technology, especially the digital architects of the future, that means our children and start-ups.

Turns technology into equal opportunity in education

Netaş is using the power of technology to support the social equality of opportunity. Accordingly, within the scope of Fatih Project, it installed the internet infrastructure of thousands of schools in Turkey. In addition, it built technology classes that set an example in its region. The Robotics and Innovation classes that Netaş built in a primary school in İzmir, where it established its ICT infrastructure, have today become the technology education base for primary schools in İzmir and its surrounding region. With the same understanding, the company established the ICT infrastructure of a school in Istanbul and built technology classes in it.

Netaş supported the Haypader Special Education Application School, which was built in Istanbul for children with disabilities. The company is also one of the supporters of the Gören Göz Project, which aims to enable visually impaired people to act more independently and to facilitate their living conditions.

Strengthening its ecosystem

Netaş aims to contribute to building a sustainable world on technology with new generations to which it provides digital capabilities. With this understanding, the company focuses on the development of children and young people with technology, and on the creation of suitable environments for future entrepreneurs to grow healthy. So it supports the ecosystem in two dimensions.

Netaş launched the "NextCoders Program" in order to raise generations that question the needs of the digital age, can look analytically, and have high problem-solving skills. With this program, the company provides training both to the children of its employees and to students in demanding schools with its volunteer engineers. The scope of the program is updated every year with developing technologies. The program, which started as robotic coding, now includes mathematics, which is the foundation of all basic sciences, and finally artificial intelligence.

Entrepreneurs, who are important players in the ecosystem, are supported by both mentoring activities and seven companies under the Netaş Wesley Clover fund, established by Netaş in 2015. With the 'Netaş as a Platform' structure, R&D and sales channel support are provided to technology SMEs.

Within TÜSİAD's (Turkish Industry & Business Association) "Bu Gençlikte İş Var!" [There Is Something About the Youth!] program, Netaş supported e-playout, an e-sports initiative within the scope of its program. The e-playout team, guided by Netaş on the way they set out to realize their dreams, completed the program in the first place.

Netaş launched a mentor and mentee program with the Turkish Education Foundation (TEV) in order to support women's employment, especially in technology. With this program, the company supports female university students to empower them in their future business life. The company also continues to work with the Wtech Women's Association in Technology, with this understanding.

Supporting young people in international platforms

Netaş shares the enthusiasm of young people with STEM Team Sponsorships on national and international platforms. In this context, it supports middle school and high school students to participate in national and international competitions with their own ideas and projects.

Golden Horn Robotics, teamed up by high school students supported by Netaş, competed with 44 teams from all over the world and received a grant award in Los Angeles. Robert College

Robotics Team received the most prestigious award of FIRST® Robotics Competition in the "Bosphorus Regional" and was entitled to participate in the FIRST Championship held in Houston under the sponsorship of NASA.

Believing in the importance of peer education, Netaş adopts the understanding of "Only children understand and inspire children best". Accordingly, the company brings together the members of the team that it supports in robotics and coding competition platforms at home and abroad, and children under the umbrella of NextCoders together, so they share their experiences. Thus, effective role modeling is provided to children.

Companion of the country's largest entrepreneurship network

Netaş is the biggest supporter of University4Society, Turkey's most comprehensive entrepreneurship program. University4Society, which started to be organized in METU for the first time in 2016, is today organized in 80 universities and 40 provinces. Nearly a thousand volunteers work in the program, which provided entrepreneurship training to more than 10 thousand students as of 2020. The purpose of the program, the largest entrepreneurial network in Turkey in terms of the ecosystem it created, is to explore students, who are working in the field of entrepreneurship in universities, at the very early stages of their careers. It also aims to bring these ideas from the university to the economy through applied entrepreneurship activities and an online acceleration program. University4Society is also active abroad as of 2020 and held meetings with unicorn-producing universities in start-up capitals of the world.

Diversity in the foundation of 54 years of the corporate culture

The success of women engineers in Netaş inspires women who want to pursue a career in technology. Netaş Diversity Principles were created to define diversity, which is the basis of 54 years of Netaş culture, within a certain framework. All Netaş employees are committed to these principles.

Netaş, one of the supporters of WEPs (Women Empowerment Principles), Global Compact, and HeforShe, supports university students to make a strong start in business life within the scope of the mentoring program it has implemented with TEV.

Biodiversity for sustainability: Netaş Healing Forest

Within the “Netaş Healing Forest” project in Gaziköy, a village in Tekirdağ, Netaş aims the protection of the healing plants in an environmental plan, and to provide an alternative source of income from the forest other than wood for Gaziköy villagers, in rural development. In the project, 23 kinds of medicinal plants with an economical value are grown. In 2020, Netaş collaborated with e-cording, one of the brightest initiatives of the start-up ecosystem, as both companies believe that the power of technology serves the best for sustainability in both rural development and nature. Within the scope of the cooperation, 40 thousand sage seed capsules were thrown to the soil in Netaş Healing Forest with the help of drones. The project became a source of income for the women of Gaziköy, which prepared 40 thousand seed balls. With this

project, where women's labor meets smart technology, Netaş aims to support biodiversity while contributing to the transformation of forest villagers into exporters.

Volunteer for social development

Netaş Volunteers working to be a pioneer not only in digital transformation but also in social transformation, take part in projects aiming to increase social awareness on education, environment, health, and many other issues.

Netaş Orphans' Education Foundation

The foundation provides scholarship support to children, who lost their parents while working at Netaş, throughout their education life. The source of the foundation, which is active for 30 years, is entirely Netaş employees.

ÖSGD Vocational Guidance Project

Netaş has been involved in the "Vocational Guidance Project" which aims to explain the details of a profession to students, from primary school to university, directly by professionals of that profession. On the other hand, Netaş volunteers participate in the projects of the Private Sector Volunteers Association (ÖSGD), of which the company is a member.

An environmentally friendly company

Within the framework of the Environment, Health, and Safety Policy, which entered into force in 1997, Netaş constantly observes the use of raw materials and energy more efficiently, taking necessary measures to protect the ecological balance, acting with environmental awareness in order to protect human health and the environment. Environmental Board consisting of environmental experts, assumes control, consultancy, and implementation roles, and is responsible for the review of the environmental management system, monitoring the current approvals/licenses and permits for processes and making annual declarations on legal legislation. In addition, Netaş carries out activities for controlling greenhouse gas emissions resulting from its activities, determining risks/opportunities, participating voluntarily in the protection of the ecological environment, and preparing a CDP (Carbon Disclosure Project) Report. External audit regarding the environment is carried out by TÜV NORD firm.

Sustainability in the supply chain

Netaş applies a detailed sustainability policy in its supply chain for social and economic sustainability. There are audit and blacklist systems to ensure that all suppliers comply with the Supply Chain Management Ethical Principles and Rules. In this context, it strongly expresses its opposition to discrimination, unequal wage policies, child labor, precarious work, corruption, and environmentally harmful activities.

Netaş listed in Sustainability Index

Netaş considers its sustainability strategy as an inseparable, complementary, and mutually enhancing part of its business strategy. Thanks to this responsibility, Netaş is listed in the

Sustainability Index, which includes companies that are traded on Borsa Istanbul and have high corporate sustainability performances.

Good Ideas will come to life in ideaLab

The ideaLab Platform is launched, to materialize the ideas of Netaş employees, who very much like to pursue the "new" and the "more". Each employee who says "I've an idea!" can log in to the platform enter their idea into the system. Then the journey of the idea begins.

There are two main topics for ideas on the platform. The first one is business ideas, regarding a new product, service, or market, or ideas to enhance existing practices regarding these. The other is ideas on business processes. These are ideas regarding improvements on the workflow or operation of departments and project suggestions.

The ideaLab has a very important role in supporting innovation, creative thinking, and activating productive minds. In addition, it will be of great benefit in terms of identifying the sectoral needs and opportunities by directly using the observations of the employees who do the job/work. Employees will not only have the opportunity to present their ideas to decision-makers but will also play an active role in bringing the idea to life.

INVESTOR RELATIONS and SHARE STOCK PERFORMANCE

INVESTOR RELATIONS DEPARTMENT

Netaş Telekomünikasyon A.Ş. has an Investor Relations Department reporting to the Deputy Chairman of the Executive Committee and the Chief Financial Officer (CFO).

In addition to meeting the information requests of existing shareholders, the Investor Relations department focuses on expanding the domestic and foreign investor portfolio of Netaş. Throughout 2020, various meetings were hold with domestic and foreign corporate investors and individual investors, mostly fund managers of asset management firms, and they were informed about the operational and financial performance of Netaş. As 2020 was a special year due to the pandemic, meetings between investor relations and stakeholders were conducted electronically as an alternative to one-on-one meetings.

Netaş Investor Relations has adopted the understanding of conducting its activities in a transparent and effective manner, remaining equidistant to all investors. Within this scope, shareholders can reach the relevant department via the e-mail address of yatirimci@netas.com.tr and through +902165222804 by phone. All requests for information are met in accordance with the principle of equality, except those requiring confidential information or trade secrets.

The Investor Relations Department ensures that records of correspondence between investors and the shareholding as well as the records pertaining to other data and documents are kept correctly, safely and up to date at the same time.

The Investor Relations Department plays an active role in overseeing and monitoring the fulfilment of obligations arising from capital market legislation, including all aspects of corporate governance and public disclosure, and informs the relevant managers in line with the regulations.

GENERAL ASSEMBLY MEETINGS

Investor Relations Department has responsibilities regarding the organization General Assembly Meeting; such as preparing the documents to be submitted to the perusal of the shareholders and taking necessary measures as to ensure that general meetings are held in compliance with the relevant legislation, articles of association and other internal regulations. The department carries out these duties in coordination with the Department of Law and Regulations.

In 2020, the General Assembly meeting for 2019 was held in accordance with the current legislation, articles of association and other in-house regulations, and the general meeting agenda and information document were prepared for the shareholders prior to the General Assembly.

The obligations regarding public disclosure were fulfilled in accordance with the legislation, and necessary disclosures were provided in the Public Disclosure Platform (KAP – kap.gov.tr) to be complete, direct, easily understandable, containing sufficient information and far from misleading statements.

STOCK PERFORMANCE OF NETAŞ TELEKOMÜNİKASYON

COMPARATIVE PERFORMANCE OF NETAŞ STOCK AND BORSA ISTANBUL TECHNOLOGY INDEX (2017 YE- 2020 YE)

*Stock and Index performance are taken account for 4 years between 02.01.2017- 31.12.2020.

Based on the performance of the last four years, Netaş stock performance was well above the BIST100 benchmark index.

Netaş aims to achieve sustainable success in its operational results with successful projects and solutions it has developed in corporate companies, public and international markets for years, and to continue increasing company value and stock performance.

INVESTOR RELATIONS – STUDIES FOR SUSTAINABILITY INDEX OF ISTANBUL STOCK EXCHANGE

The trend and necessity of investing in environmentally friendly, sustainable companies (responsible investing), which have become increasingly prominent recently, brings new responsibilities to investor relations. According to 2020 data, almost all institutional investors state that they consider “climate change” when making their investment decisions; the 17 “Sustainable Development Goals” are observed to have been playing a key role ensuring the global economic growth as revealed in the United Nations Development Program (UNDP). In the long run, sustainable economic growth triggers a turnover and profit growth for companies, which provide gains in stocks and other assets. Therefore, aligning investors and companies in line with the goals of the society is gaining importance day by day.

As a result of the studies carried out by the Investor Relations Department, Netaş shares were included in the "Sustainability Index" by Borsa Istanbul as of November 2019 and traded under the Sustainability Index in the period of November 2019 - October 2020.

Continuing its gains in this field in 2020 and participating in the valuation studies of Borsa Istanbul for the new period, Netaş has been entitled to be one of the 58 companies determined by Borsa Istanbul and will be included in the BIST Sustainability Index in December 2020 - October 2021.

The purpose of the BIST Sustainability Index is to create an index for companies traded with a high sustainability performance in Borsa Istanbul and improve the understanding, knowledge and practices regarding the sustainability among companies in Turkey, and more particularly among companies listed in Borsa Istanbul. While this study, which was carried out for these purposes and to be included in the index, provided a basis for the sustainability journey of Netaş, it also provided useful feedback for the development of existing policies.

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FINANCIAL PERFORMANCE

FINANCIAL PERFORMANCE

2020 Year Summary;

- Consolidated orders booked was 1,970 million TL in 2020 with a 43% growth.
- Sales Revenue increased by 31% and reached to 1,733 million TL.
- Order on Hand was 1,276 million TL in 2020 with a 58% increase.

Financial Highlights

TL Million	2020 YE	2019 YE	y/y %
Revenue	**1.733**	**1.328**	**31%**
Cost of Sales	(1.556)	(1.168)	**33%**
Gross Profit	**177**	**160**	**11%**
Gross margin %	*10%*	*12%*	*(184)*
Operating Expenses	**(178)**	**(192)**	**(8%)**
General Administrative Expenses	(71)	(88)	(19%)
Sales, Marketing & Distribution Expenses	(101)	(97)	4%
Research & Development Expenses	(6)	(7)	(24%)
Incentives	5	4	14%
EBIT	**4**	**(28)**	**n.m.**
EBIT margin %	*0%*	*-2%*	*235*
Depreciation	77	61	**26%**
EBITDA	**81**	**33**	145%
EBITDA margin %	*4,7%*	*2,5%*	*219*

EBIT = Gross Profit – Sales, Marketing and Distribution Expenses - General Administrative Expenses – Research and Development Expenses + R&D Incentives

R&D Incentives: Disclosed under Other Income from Operating Activities in the financial statements prepared in accordance with the Capital Markets Board requirements.

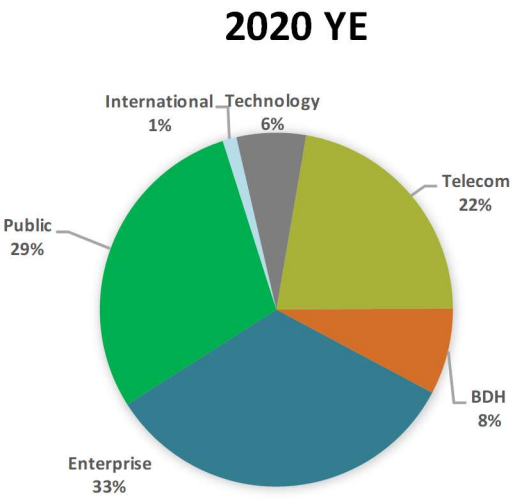
EBITDA= EBIT + Depreciation and Amortization

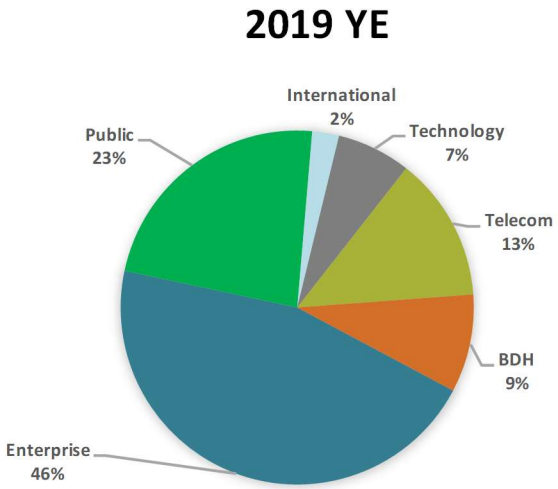
Orders & Sales Revenue

Orders: Orders booked in 2020 increased 43% year over year and recorded at 1,970 million TL (281 million USD). Orders on hand were 1,276 million TL (182 million USD) with a 58% increase.

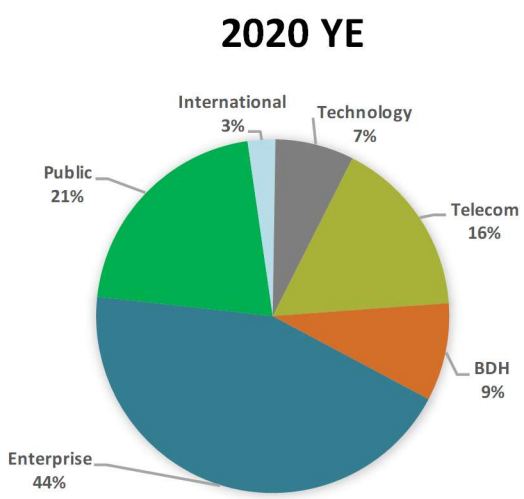
Sales Revenue: 2020 year-end consolidated group revenues was recorded at 1,733million TL with a sharp 31% increase year over year.

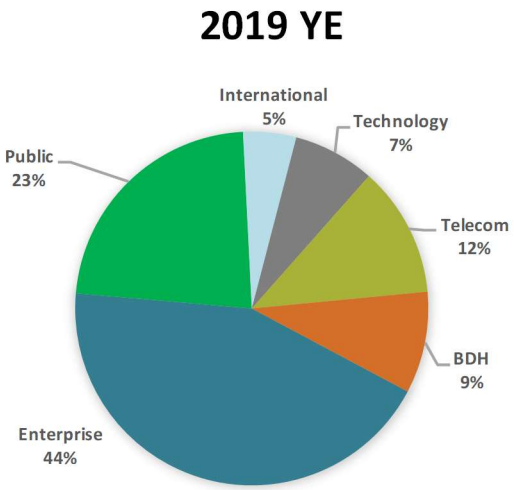
Breakdown of Orders Booked





Sales Breakdown



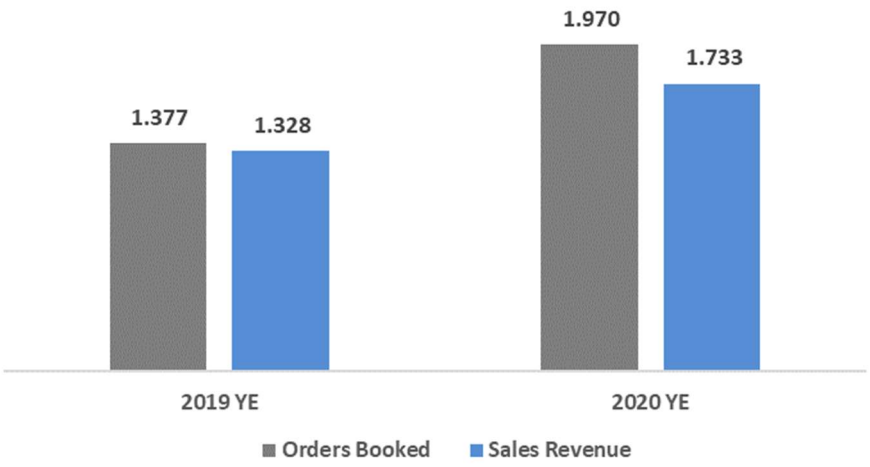


CONSOLIDATED FINANCIAL PERFORMANCE

The consolidated order amount of the Group increased by 43% in 2020 compared to the previous year and reached 1.970 million TL. In 2020, 46% and 94% dollar based respective increases in public and telecoms segments contributed to the increase in the amounts of orders received. On the orher hand, the corporate segment still has the largest share with 33%, followed by the public and telecom segments with 29% and 22%.

The consolidated sales revenues of the Group increased by 31% on an annual basis in 2020 and amounted to 1,733 million TL. The breakdown of sales revenues among segments was realized in parallel with the order breakdown meaning corporate, public and telecom segments constituted 44%, 21% and 16% of sales revenues, respectively.

In 2020, the highest increase on sales revenues was realized in the telecom segment with 79%, and the turnover of the telecom segment reached 284 million TL from 159 million TL.



In 2020, the Group’s gross line reflected an increase of 11% and gross profits realized at the level of 177 million TL.

Thanks to the 8% savings in total operating expenses due to the 19% and 24% decrease in general administrative expenses and research and development expenses, EBIT (Earnings Before Interest, Taxes), which was negative last year, was realized at the level of 4 million TL in year-end 2020. In the said period, the Group's EBITDA (Earnings Before Interest, Taxes and Depreciation) increased from 33 million TL in 2019 to 81 million TL by the end of 2020, and the EBITDA margin reached 4.7% from 2.5%.

FINANCIAL PERFORMANCE BASED ON SEGMENTS

2020 YE (Million TL)	Enterprise	Public	International	Technology	Telecom	BDH	Unallocated	Total
Orders Booked	**654,4**	**573,0**	**25,1**	**125,0**	**437,2**	**155,1**	**-**	**1.969,7**
Sales Revenue	**762,1**	**363,4**	**44,0**	**125,0**	**283,7**	**155,1**	**-**	**1.733,2**
Cost of Sales	(713,1)	(313,7)	(43,9)	(98,0)	(262,0)	(125,4)	-	(1.556,1)
Gross Profit	**49,0**	**49,6**	**0,1**	**27,0**	**21,7**	**29,7**	**-**	**177,0**
Sales, marketing and distribution expenses	(29,0)	(14,0)	(16,8)	-	(19,4)	(21,4)	-	(100,7)
General administrative expenses	-	-	-	-	-	-	(71,3)	(71,3)
Research and development expenses	-	-	-	(5,7)	-	-	-	(5,7)
Operating profit/ (loss) of segment	**20,0**	**35,6**	**(16,7)**	**21,3**	**2,26**	**8,2**	**(71,3)**	**(0,6)**
Operating profit margin	**3%**	**10%**	**-38%**	**17%**	**1%**	**5%**		**0%**

2019 YE (Million TL)	Enterprise	Public	International	Technology	Telecom	BDH	Unallocated	Total
Orders Booked	**627,6**	**317,1**	**33,9**	**93,3**	**182,3**	**123,4**	**-**	**1.377,5**
Sales Revenue	**578,7**	**303,2**	**64,5**	**99,3**	**158,5**	**123,4**	**-**	**1.327,6**
Cost of Sales	(539,8)	(246,9)	(54,1)	(77,8)	(147,8)	(101,2)	-	(1.167,6)
Gross Profit	**38,9**	**56,4**	**10,4**	**21,5**	**10,8**	**22,2**	**-**	**160,0**
Sales, marketing and distribution expenses	(36,9)	(11,1)	(13,8)	-	(13,1)	(22,5)	-	(97,2)
General administrative expenses	-	-	-	-	-	-	(87,6)	(87,6)
Research and development expenses	-	-	-	(7,4)	-	-	-	(7,4)
Operating profit/ (loss) of segment	**1,99**	**45,3**	**(3,4)**	**14,1**	**(2,3)**	**(0,2)**	**(87,6)**	**(32,2)**
Operating profit margin	**0%**	**15%**	**-5%**	**14%**	**-1%**	**0%**		**-2%**

Enterprise Segment

In 2020, the Group's orders booked from the corporate segment increased by 4% compared to the previous year, while the sales revenues of this segment increased by 32% to 762.1 million TL.

In 2020, the corporate segment accounted for 44% of total revenues, accounting for the largest portion of sales as in the previous year. The corporate segment is also the largest in picking orders by segments, with a share of 33%.

On the other hand, operating profit of the corporate segment increased from 2 million TL to 20 million TL as of year-end 2020, with an operating margin of 3%.

Public Segment

In 2020, orders received in public segment increased significantly by 81% and reached 573 million TL. In parallel with this increase, the share of public segment in the Group's total orders received has increased from 23% in 2019 to 29% by 2020.

The sales revenues of public segment increased by 20% compared to the previous year and reached 363.4 million TL.

In addition, the public segment emerged as the segment with the highest operating profit, with an operating profit of 35.6 million TL generated in 2020.

International Segment

In 2020, international segment reflected declines both on the amount of orders received and on the basis of sales revenues. Orders and sales revenues of the relevant segment in 2020 decreased by 26% and 32%, respectively, compared to the previous year.

The international segment has the smallest share in total in terms of order and sales revenues, with a share of 1% in orders received and 3% in sales revenues as of 2020. The international segment recorded an operating loss of 16.7 million TL as of the end of 2020.

Technology Segment

In the technology segment, the amount of orders received in 2020 increased by 34%, and sales revenues grew by 26%, reaching 125 million TL. In addition, technology segment stood out as the second segment that constitutes the highest operating profit after the public segment with an operating profit margin of 17%, and the contribution of the segment to the Group's operating profitability was realized as 21.3 million TL.

Telecom Segment

New projects purchased with ZTE products led to an increase in the volume of the segment. The amount of orders received in 2020 increased by 140% and reached 437.2 million TL. The increase in the sales revenues of the segment was realized at the level of 79%, enabling sales revenues to reach 283.7 million TL. As a result, the share of the telecom segment in total orders and sales revenues increased, reaching 22% and 16%. However, the operating profit margin of the segment remained limited at 1% in 2020.

BDH

Compared to the same period of the previous year, the amount of orders received and sales revenues of BDH increased by 26% in 2020 and reached 155.1 million TL. The operating profitability of BDH was realized at the level of 8.2 million TL.

DEBT STRUCTURE & NET WORKING CAPITAL

As of the end of 2020, the Group's cash and cash equivalents are 307.2 million TL and net debt is 219.3 million TL. The Group's net debt position improved significantly in 2020, and its net debt position, which was 408 million TL at the end of 2019, contracted by 46% to 219.3 million TL.

As of the end of 2020, the Group's total financial debt is 526.5 million TL. As of year-end 2020, 96% of the Group's financial debt consist of short-term financial borrowings.

(million TL)	Consolidated Total Financial Debt	Cash and Cash Equivalents	Net Debt
2020	526,5	307,2	219,3
2019	603,3	195,3	408,0

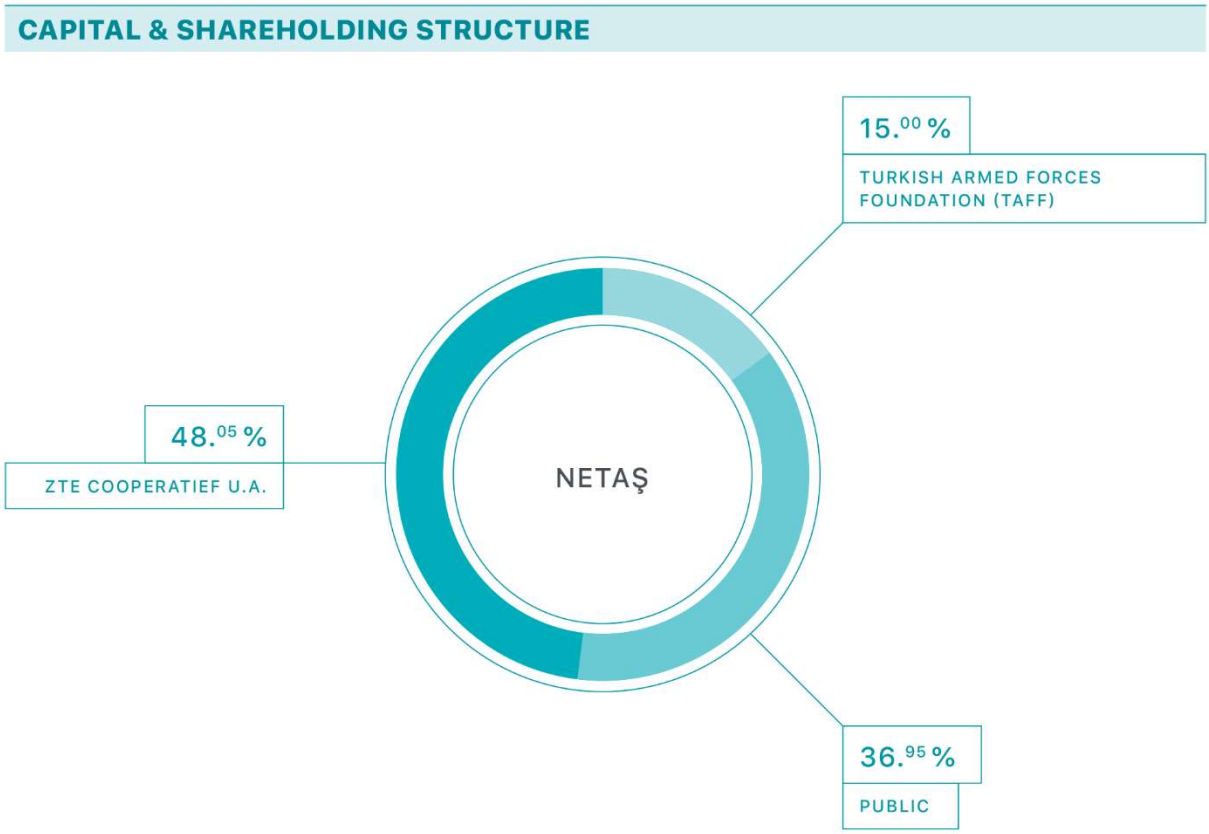
2020	TL	USD
Short Term Financial Debt (Bank Loans)	505,1	68,8
Long Term Financial Debt (Bank Loans)	21,4	2,9
Total Debt	**526,5**	**71,7**

The Group's net working capital * (including long-term trade receivables and payables) decreased from 578 million TL at the end of 2019 to 342 million TL at the end of 2020.

*Net Working Capital = (Total Current Assets - Cash & Cash Eq. + Non-current Trade Receivables)- (Total Short Term Liabilities – Financial Liabilities + Long Term Trade Payables)

CORPORATE GOVERNANCE

NETAŞ'S SHAREHOLDING STRUCTURE



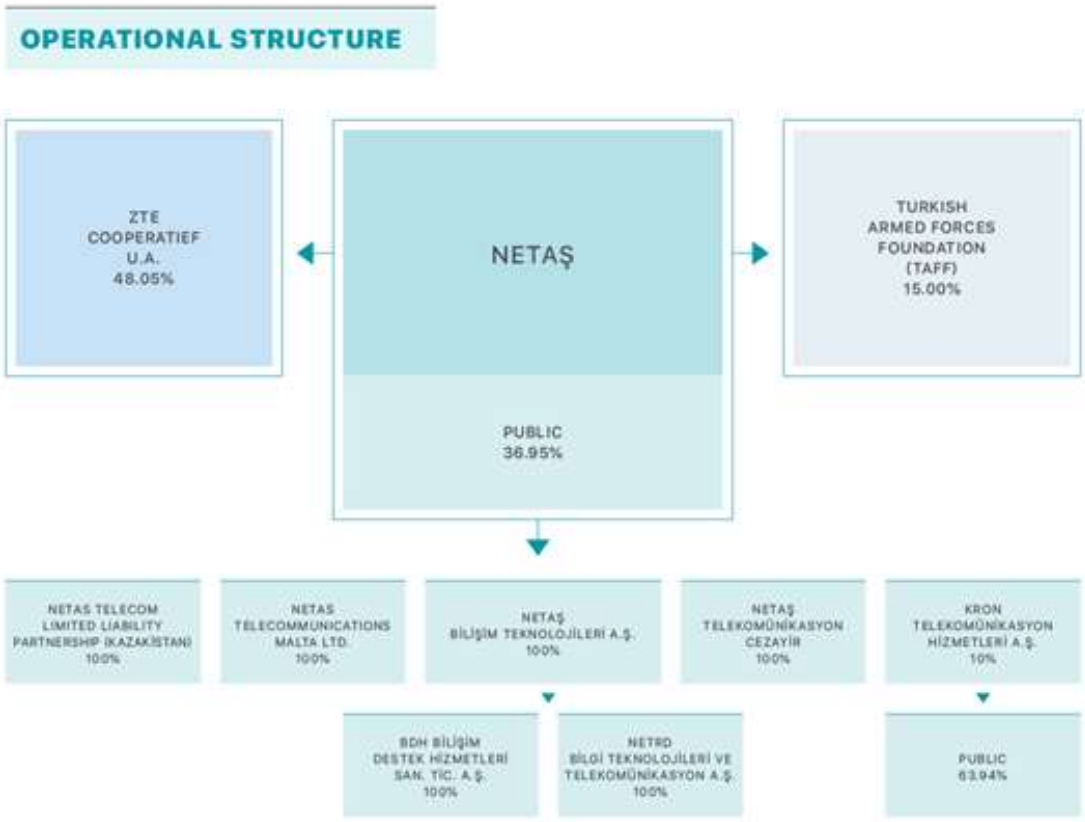
As of 31 December 2020, main shareholder of Netaş Telekomünikasyon A.Ş is ZTE Cooperatief U.A with 48.05%. 15% of the company's shares are owned by Turkish Armed Forces Foundation. Netaş stock is listed in Turkey and the company's free float is 36.95% as of 31 December 2020.

The company shares are divided into two groups and all are registered shares. Separation of the shares into two groups grants no privileges to the mentioned (A) and (B) group shares other than as specified in article 9 and 15 of the Articles of Association.

As of 31 December 2020, capital structure of the company as in the following:

31 December 2020	Nominal Value (TL)	Share (%)
ZTE Cooperatief U.A. (*)	31,168,351.34	48.05%
Turkish Armed Forces Foundation (TSKGV)	9,729,720.00	15.00%
Public	23,966,728.66	36.95%
Total Paid in Capital	64,864,800.00	
Istanbul Stock Exchange Code	NETAS	

* As of July 28, 2017, the conditions precedent to completion of the Transaction stipulated under the Share Purchase Agreement have been satisfied in full and the shares of OEP were transferred to ZTE Cooperatief. Following the transaction, a Mandatory Takeover Bid Obligation has arisen for the shares owned by ZTE Cooperatief. Takeover bid has been completed on October 17, 2017. As of October 17, 2017, ZTE Cooperatief holds 48.05% of Netaş.



RELATED TO JOINT VENTURES AND ASSOCIATION OF THE COMPANY

NETAŞ BILIŞIM TEKNOLOJILERI A.Ş.

Global competition is constantly increasing and companies now begin to operate on a service- and customer oriented basis rather than simply focusing on the products. This mandates companies including Netaş Bilişim to closely follow and use IT technologies more effectively. From industrial solutions to business solutions and from systems integration and outsourcing to care and maintenance services, network solutions and consultancy, “Netaş Bilişim” has been providing a wide range of services in international markets since 1989. The Company has 100% shares of Netaş Bilişim Teknolojileri A.Ş.

NETRD Bilgi Teknolojileri ve Telekomünikasyon A.Ş.

The business area of NETRD, includes all kinds of information and telecommunication systems, hardware and software design and coding, research and development activities, product development, consultancy, including all kinds of information activities and services, technical

support, technological solution, integration, VOIP to develop, install, service, operate and operate advanced communication technologies in Turkey or abroad, to provide business services and to carry out all these activities on behalf of its own customers or to the customers it serves. The company indirectly owns 100% of NETRD.

BDH Bilişim Destek Hizmetleri San. ve Tic. A.Ş.

BDH offers brand-independent consultancy, strategic outsourcing, hardware and support services in the IT sector to a wide range of customers from small-medium sized enterprises to large ones and public institutions. With a service team of experienced and certified professionals specializing in different areas of IT, BDH provides with 18 branches and 45 partners to its customers throughout Turkey.

Centers located in Istanbul, Ankara, Izmir, Bursa and Samsun offer hardware support for all kinds of IT products including servers, storage units, handheld devices, printers and more. The Company indirectly has 100% shares of BDH.

NETAŞ TELECOM LLP (KAZAKHSTAN)

Founded in Almaty, Kazakhstan, in 2012, Netaş Telecom LLP operates in line with Netaş's vision of becoming "Regional System Integrator". Netaş Telecom LLP is fully owned (100%) by the Company.

NETAŞ TELEKOMÜNIKASYON MALTA Ltd.

"Netaş Telecommunications Malta Ltd" was established with an initial capital of 1.200 Euros on 4 November 2014 for the purpose of improving operational efficiency. Netaş Telecommunication Malta is fully owned by the Company.

NETAŞ TELEKOMÜNIKASYON ALGERIA

"Netaş Telecommunications Algerie Sarl LLC" was established in Algeria, field of activity of the company is manufacturing of small installation and electric lighting equipments; registration of the company completed on 31 March 2019. In accordance with the agreement, Netaş Telecommunication A.S owns 49% of "Netaş Telecommunication Algeria" and has the management control.

Kron Telekomünikasyon Hizmetleri A.Ş.

Kron Telekomünikasyon Hizmetleri A.Ş. produces software solutions for national and regional telecoms operators and service providers. The Company acquired the company's Group A shares in 2013 in line with its strategic growth goal and for the purpose of offering innovative solutions to its customers. Having strengthened its systems integration capabilities by acquiring Kron, the Company now provides a wider range of end to-end solutions to its customers in Turkey and the region. The Company has 10% shares of Kron.

BOARD OF DIRECTORS AND EXECUTIVE COMMITTEE

BOARD OF DIRECTORS*

Name Surname	Title
Aiguang Peng	Chairman
Şuay Alpay	Vice Chairman
Ding Minzhongxia	Board Member
Ming Li	Board Member
Ali Zülfü Tigrel	Independent Board Member
Özer Karabulut	Independent Board Member

*Netaş Board of Directors consists of seven members as per the articles of association. As of December 14, 2020, a new member has not yet been appointed to replace Jiang Xiangyang, a member of the Board of Directors.

Members of the Board of Directors were elected to serve for 3 years at the General Assembly held on 29 May 2019. Upon the resignation of Ming Xiao in 2020, Aiguang Peng was appointed as the chairman of the Board of Directors, and the relevant appointment was approved and accepted at the General Assembly held on October 22, 2020.

BOARD COMMITTEES

Three committees were formed by the Board of Directors as he Audit Committee, the Committee for Early Detection of Risk, and the Corporate Governance Committee.

AUDIT COMMITTEE

Chairman: Ali Zülfü Tigrel (Independent Board Member)
Member: Özer Karabulut (Independent Board Member)

COMMITTEE FOR EARLY DETECTION OF RISKS

Chairman: Ali Zülfü Tigrel (Independent Board Member)
Member: Özer Karabulut (Independent Board Member)
Member: Şuay Alpay
Member: Ding Minzhongxia

CORPORATE GOVERNANCE COMMITTEE

Chairman: Ali Zülfü Tigrel (Independent Board Member)
Member: Aiguang Peng
Member: Şuay Alpay
Member: Ding Minzhongxia
Member: Yeşim Bilginturan

The Audit Committee and the Early Detection of Risk Committee usually meet one day before the Board of Directors meetings. The Audit Committee convenes at least four times a year, the Early Detection of Risk Committee six times a year, and the Corporate Governance Committee at least four times a year. Since the Nomination Committee and Remuneration Committee foreseen in the Corporate Governance Principles could not be established due to the structure

of the Board of Directors, these duties were undertaken by the Corporate Governance Committee. The resumes of the board members are available on the corporate website.

REMUNERATION PROVIDED FOR BOARD OF DIRECTORS AND TOP MANAGEMENT

Total remuneration provided for the board of directors for the period ended 31 December 2020 is 0.6 million TL. It was 0.5 million TL for the period ended 31 December 2019.

As of 31 December 2020 and 31 December 2019 there is no credit granted to the Group's board of directors.

For the period ended 31 December 2020, total remuneration provided to the upper management of the Group is 21.8 million TL. For the period ended 31 December 2019, it was 19.4 million TL.

As of 31 December 2020 and 31 December 2019 there is no credit granted to the Group's management.

Total donations for the year 2020 were realized as 88.772 TL.

RISK MANAGEMENT AND INTERNAL CONTROL MECHANISMS

CREDIT RISK

The Group Management covers credit risks by limiting the average risk for the counterparty in each agreement and by taking guarantees if necessary. The collection risk of the Group mainly arises from its trade receivables. The Group manages this risk that may arise from trade receivables by limiting the credit limits set for customers with the guarantees received.

The Group has applied the simplified approach stated in IFRS 9 to calculate the expected credit loss provision for trade receivables. This approach allows for a lifetime expected loan loss provision for all commercial receivables. In order to measure the expected credit loss, the Group first classifies its trade receivables by taking into account the characteristics of credit risk and credit risk. Expected credit loss ratios for each class of commercial receivables grouped using past credit loss experience, forward macroeconomic indicators were calculated, and the expected credit loss provision was calculated by multiplying the determined ratio by the trade receivable totals.

LIQUIDITY RISK

Adaption of a management policy to ensure that the collection due dates for receivables comply with debt due dates protects the Group against liquidity risk. The Group holds adequate sources to be able to fulfill its current and future liabilities.

CURRENCY RISK

Functional currency of the Group is USD and therefore, currency risk is associated for the most part with the shifts of USD value against TL and other currencies. With the purpose of limiting the effects of appreciation or depreciation of USD against other currencies, the Group makes use of its assets in compliance with its liabilities to the extent possible and undertakes contracted expenditures in the contract currency. Further Information concerning currency risk is provided in the Financial statements footnote 29.

INTEREST RATE RISK

Interest rate-sensitive financial assets are placed in short term instruments in order to avoid any possible interest rate fluctuations. Interest rate-sensitive liabilities constitute 29% of the total liabilities. The rate in question was 41% the previous year.

INFORMATION CONCERNING INTERNAL CONTROL AND INTERNAL AUDIT ACTIVITIES

As specified on CMB Corporate Governance Principles, an Audit Committee with independent Board Members is established within the Group to ensure that the Board accurately performs its tasks and liabilities. There is also a Committee for Early Detection of Risk, formed of Board Members.

The Company maintains its internal control activities in order to determine operational, financial and adaptation related risks originating from market conditions and business processes. Necessary measures to mitigate and avoid risks are taken accordingly. Activities relating to internal control include; increasing efficiency of processes, implementing same or similar procedures for all work conducted within the workflow, contributing to the conduct of roles and responsibilities, promoting coordination between teams, ensuring and controlling full compliance with provisions of rules, regulations and laws.

CORPORATE GOVERNANCE REPORTING

SHAREHOLDERS

EXERCISE OF THE INFORMATION RIGHTS BY SHAREHOLDERS

The majority of the requests and questions from shareholders were concerning the operational and financial performance of the company, developments of the projects and fluctuations in the stock price.

The requests from local individual investors were mostly received through telephone and replied based on available information, to the extent permitted by legislation and confidentiality rules relating to business secrets. Requests received through electronic mail were responded through electronic mail.

Announcements related to the Company's activities and developments, which could be of interest to the shareholders, were disclosed to the public through Public Disclosure Platform in accordance with Communiqué of the CMB Material Events Disclosure. The media was also informed through press releases. These released and announcements were also placed on the website of the Company at www.netas.com.tr/en

The Articles of Association of the Company does not have a provision for the appointment of a special auditor; however, the shareholders have a right to request the appointment of a special auditor in accordance with Article 438 of Turkish Commercial Code.

GENERAL ASSEMBLY MEETINGS

During the year, one ordinary general meeting were held. Netaş Telekomünikasyon A.Ş held its Ordinary General Shareholders' Meeting for the period 01 January 2019-31 December 2019 on 22 October 2020 and meeting quorum realized at 63.58%. Media representatives did not attend the General Shareholders' Meeting, while shareholders' representatives were present at the meeting. The invitation to the meeting was made in conformity with Article 14 of the Articles of Association of the Company and Article 414 of the Turkish Commercial Code and the provisions of the Capital Markets Law. Additionally, invitations were published in Turkish Commercial Registry Gazette, holders of registered shares were invited by registered mail and the Meeting was announced at the Public Disclosure Platform (PDP).

The General Assembly meeting for 2019 was held in physical environment by taking special precautions due to pandemic conditions, and electronically through the Electronic General Assembly System (EGKS) of Central Registry Agency. In the notice of invitation, shareholders intending to participate through the Electronic General Assembly System were reminded of their obligations. The Financial Statements, Annual Report and The Dividend Distribution Proposal were made available for the review of the shareholders in the company headquarters and its website three weeks prior to the Ordinary General Assembly. Shareholders were allowed to comment and raise questions at the meeting. Proposals made by shareholders were put to vote

at the General Assembly by the Chairman. No proposals were made for addition of items in the agenda of meeting. At the Ordinary General Assembly, shareholders were informed of donations made under a separate agenda item. There are no donations or charities for the aforementioned period.

The minutes of the Shareholders Meetings were announced to the public through Public Disclosure Platform (PDP), registered with the Commercial Registry and published in the Commercial Registry Gazette. Additional copies are made available to the shareholders at the head office and the web site of the Company for review.

VOTING RIGHTS AND MINORITY RIGHTS

According to the Articles of Association of the Company, every share has a right to one vote at meetings of shareholders. The ordinary and extraordinary meetings of shareholders are held in accordance with the Turkish Commercial Code. Minority rights are subject to the provisions of the Turkish Commercial Code and Capital Markets Law.
The shares of the Company are divided into two groups, where both (A) group shares are and (B) group shares are registered shares. The differentiation of the shares between (A) and (B) groups, does not give the owners any rights nor privileges, except as provided in Articles 9, 15, of the Articles of Association.

According to Article 9 of the Articles of Association; the required quorum for meetings and the required majority for resolutions of the shareholders shall be subject to the provisions of the Turkish Commercial Code (T.C.C.) and Capital Markets legislation. However, resolution of the shareholders concerning amendments to the Articles of Association shall require the affirmative votes of the shareholders representing at least one half of the total number of shares within Group A.

There is no cross shareholding relationship between the Company and its shareholders. Cumulative voting procedure is not stated in the Articles of Association and thus not implemented.

DIVIDEND RIGHTS

There is no privilege granted to shareholders regarding participation to the company profit; and the profit distribution procedure has been described in article 22 of the Articles of Association. The Dividend Policy of the company has been announced to shareholders on Public Disclosure Platform and the corporate website of the company.

At the general assembly meeting of the company held on October 22, 2020, the Proposal to Not Distribute Profit for the period (01.01.2019 – 31.12.2019) due to due to the fact that the company did not generate profit in the period and the economic uncertainties, presented by the Board of Directors, was submitted for the shareholders' information and approval and was accepted majority vote.

TRANSFER OF SHARES

The transfer of shares is stipulated in Article 6 subparagraph (c) of the Articles of Association of the Company.

Accordingly, (B) group registered shares can be freely transferred without being subject to any limitation or condition within the framework of Turkish Commercial Code and Capital Markets Legislation. However, concerning the transfer of (A) group registered shares the existing shareholders in Group (A) are entitled to pre-emptive rights which are required to be exercised within 30 days from the date of the offer for sale. Therefore a shareholder wishing to transfer its shares, in full or in part, must first offer, in writing, to transfer its shares to the other shareholders in Group A in proportion to their respective shares, stating the price and other conditions for sale. If any shareholder, to whom the offer was made, declines to purchase the offered shares, such shares shall be offered to the other shareholders in proportion to their share ownership and this method will be pursued in the same manner until all shares are sold or rejected. Following the application of the above procedures, the transferor will be free to offer any rejected shares to third parties without restrictions provided that the price and other conditions of sale are no more favourable to the third party than the price and other conditions contained in the initial offer.

PUBLIC DISCLOSURE AND TRANSPARENCY

CORPORATE WEBSITE AND CONTENT

The corporate website www.netas.com.tr/en of the Company is actively used both in Turkish and in English for implementation of the disclosure policy within the framework of the Corporate Governance Principles of the Capital Market Board. Majority of information takes place on the website also is presented in English.

ANNUAL REPORT

The annual report presents information within the scope of Corporate Governance Principles of the Capital Markets Board.

STAKEHOLDERS

INFORMING STAKEHOLDERS

Stakeholders are persons, corporations or interest groups such as employees, creditors, customers and suppliers, in direct relation with the company and having interest in the achievement of the Company objectives or in its activities. Stakeholders are invited to the meetings regarding any matters concerning them. informative meetings are held for suppliers

and distributors. Public announcements are made through press releases, press bulletins and interviews; published press releases are simultaneously announced on corporate web sites and corporate social media accounts. Employees are regularly informed via announcements and various events organized by Company.

With the general assembly meetings, open to all stakeholders, the company's website, annual and interim reports, press releases and Public Disclosure Policy based on transparency aim to inform not only the shareholders but also all stakeholders.

Stakeholders may share information through the investor relations department e-mail and phone, to communicate any practices that they consider to be breaching the legislation or to be ethically inappropriate to the Audit Committee.

PARTICIPATION OF STAKEHOLDERS IN MANAGEMENT

Models are being developed to support participation of stakeholders, especially company employees, in the company management, without disrupting company operations. The relevant groups, primarily the company employees, can meet with company executives at any time. The opinions of relevant groups are received through employee and customer satisfaction surveys that are periodically conducted by independent organizations and the company, and strategies are developed accordingly.

HUMAN RESOURCES POLICY

The success of Netaş in a dynamic and rapidly changing information and Communication Technologies sector is dependent upon the contributions and development of its employees. The Company aims to maximize the potential, motivation and innovation of its employees in order to achieve corporate objectives. To this end, the Company provides equal opportunities for employment, rewards performance, promotes the development of individuals and teams, fosters environmental protection, and meets the requirements of health and safety regulations. Competitive compensation and social benefit programs are prepared, the knowledge and the competencies of the employees are assessed through the attributes defined in Core Competencies. Within the performance management process and throughout the career development process, employees are given opportunities to assess and develop their skills.

The human resources policy is available at the website of the Company under the title of "Human Resources". Related policies and procedures are accessible by all employees. Managers and Human Resources department are responsible to maintain relations with employees in line with the human resources policy.

All employees are informed in detail and transparently about all human resources processes including their employment contracts, mutual responsibilities of the company and its employees and working standards defined in the Personnel Regulations since their recruitment. Employee rights are governed by human rights principles, current legislation, labor contracts, personnel regulations and ethical rules.

ETHICAL RULES AND SOCIAL RESPONSIBILITY

The Board of Directors has established a Code of Conduct for the Company and its affiliates and communicated it to employees.

Netaş has been implementing Environment, Health and Safety Program since 1997. Within the scope of this program ISO14001 Environmental Management System and ISO45001 Employee Health and Safety Management System are implemented. No claims were raised against the Company for environmental pollution. In addition, our company has ISO9001 Quality Management System, ISO10002 Customer Satisfaction Management System, ISO27001 Information Security Management System, ISO22301 Business Continuity Management Systems, contributing to our social stakeholders.

Activities related to social responsibility of the Company include maintenance of relations with universities and the provision of scholarship to successful students in need. Furthermore, through memberships in foundations and associations, contributions are made to the society, and to scientific and technological development. Voluntary initiatives of employees for public aid and environmental activities are encouraged and supported.

STRUCTURE OF THE BOARD AND PRINCIPLES OF ACTIVITY

THE STRUCTURE AND COMPOSITION OF THE BOARD OF DIRECTORS

The Board of Directors of the Company is composed of 7 (seven) members elected for three years by the general assembly of shareholders, from among the shareholders or their nominees. Four of the seven members are elected at the meeting of the Shareholders from among the candidates nominated by Group A and three members are elected from among the nominees of the Group B shareholders. There are two Independent Board Members among the Board of Directors.

Name of the Board Members, starting date of employments and duty terms take place in the section of “Corporate Governance Information Form” at the end of this report. Background (CVs) of Board of Directors are presented on the corporate website of the company, www.netas.com.tr

There are no restrictions imposed on the Board of Directors concerning other duties and occupations they can assume other than the restrictions concerning conflict of interest (as stated in Turkish Commercial Code) and competition with the Company. Such restrictions are submitted to the approval of the shareholders each year at the General Meeting.

The written statements of all independent members, regarding their independence in line with the criteria specified in the legislation, the articles of association and the communiqué are presented at the end of this annual report.

There have been no events compromising the independence of the independent members serving as members of the board of directors in 2020.

WORKING PRINCIPLES OF THE BOARD OF DIRECTORS

The agenda for the meeting of the Board of Directors is determined by consultation between the Chairman, the members of the Board and the General Manager. Invitations to meetings were made at least seven days in advance of the meeting together with the notification of the agenda. The 2020 Board of Directors meetings were held electronically, due to the current pandemic conditions, and were signed by hand in accordance with the Articles of Association. 100% participation was achieved in all Board meetings held in 2020. In order to facilitate communication with the Board Members and to provide related services a Corporate Secretarial Services function exists within the Company. In case of a different opinion expressed in the Board Meetings, these are reflected in the minutes of the meeting. Questions raised and comments made at the meetings of the Board and related responses are recorded in the minutes of the meeting. Members of the Board of Directors are not granted weighted voting rights or veto rights under the Articles of Association.

According to the Articles of Association, the required quorum for Board meetings is the presence of five members of the Board. The majority vote of those present is required for the approval of any subject.

An amount of USD 20 million has been insured against possible losses to be incurred by the Company arising from faults of Members of the Board of Directors during service, and the insurance exceeds 25% of our capital.

NUMBER, STRUCTURE AND INDEPENDENCE OF THE BOARD COMMITTEES

Three committees have been established by the Board of Directors as the Corporate Governance Committee, the Audit Committee and Early Detection of Risks Committee. Details concerning Committees, Committee members, frequency of committee meetings are presented in the “Corporate Governance Information Form”. One Independent Board member takes role more than one committee.

Withing the calander year, the Audit Committee has communicated to the board of directors all its proposals regarding issues under its responsibility. The Corporate Governance Committee has offered recommendations to the board of directors on improvement of corporate governance applications and has supervised the duties of the Investor Relations Department. The Early Detection of Risks Committee which works for early detection of risks jeopardizing the existence, development and sustainment of the company, responsible for taking measures, for detected risks and for risk management; has reviewed the risk management systems of the Company in accordance with the Corporate Governance Principles and the Early Detection of Risks Committee Regulations.

STRATEGIC OBJECTIVES OF THE COMPANY

The strategic objectives of the Company are reviewed and determined by the Board of Directors during budget review discussions within the scope of three year plans prepared by the management and submitted to the Board. The activities of the Company, the level of achievement of objectives and past performance are reviewed by the Board each quarter and at the end of the budget period.

FINANCIAL BENEFITS

Board Members receive a monthly fee payable at the end of each month. Compensation for the Members of the Board of Directors is determined by the General Assembly of the Shareholders each year, in accordance with Article 15 of the Articles of Association. There are no incentives available to Board Members based on performance in connection with the performance of the Company.

Financial benefits provided to members of the Board of Directors and senior management team are explained in the annual report. The Company did not lend any money, extend any credit, extend a personal credit through a third party, nor provided any guarantees to or in favor of any Member of the Board of Directors or any Manager of the Company.

Compensation policy is available at the company website.

OTHER ISSUES CONCERNING THE OPERATIONS OF THE COMPANY

- The company acquired none of its own shares during the reporting period.
- In the year of 2020, there is no administrative and judicial sanction applied to the company or the company's management due to practices contrary to the provisions of the legislation.
- The company compared its 2020 targets with its budget, upper management examined the deviations and determined the neccessary strategic actions to be taken.
- There is no taken or avoided to taken measures which may cause a loss for the company in the year of 2020.
- In the year of 2020, the company was not a respondent in any suit whose outcome would be capable of significantly affecting either the company's financial position or the conduct of its business.

CORPORATE GOVERNANCE COMPLIANCE REPORT

Compliance Status

	Yes	Partially	No	Exempted	N/A	Remarks
1.1. FACILITATING THE EXERCISE OF SHAREHOLDERS RIGHTS						
1.1.2 - Up-to-date information and disclosures which may affect the exercise of shareholder rights are available to investors on 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					

HİZMETE ÖZEL - INTERNAL

1.3.11 - The General Shareholders' Meeting was held open to the public, including the stakeholders, without having the right to speak.			X			Stakeholders without having the right to speak did not specifically request to attend the Meeting. General Assembly Meeting is not open to media due to security and time manegment concerns.

Compliance Status						
	Yes	Partially	No	Exempted	N/A	Remarks
1.4. VOTING RIGHTS						
1.4.1- There is no restriction preventing shareholders from exercising their shareholder rights.	X					
1.4.2- The company does not have shares that carry privileged voting rights.			X			The shares of the Company are divided into two groups, where both (A) group shares are and (B) group shares are registered shares. The differentiation of the shares between (A) and (B) groups, does not give the owners any rights nor privileges, except as provided in Articles 9, 15, of the 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					

HİZMETE ÖZEL - INTERNAL

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 minority rights.			X			For Considerations did not take place in the Articles of Association, verdicts of Capital Markets Board of Turkey and Turkish Commercial Code is applicable.
Compliance Status						
	Yes	Partially	No	Exempted	N/A	Remarks
1.6. DIVIDEND RIGHT						
1.6.1 - The dividend policy approved by the General Assembly is posted on the company website.	X					
1.6.2- The dividend 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					
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						
1.7.1- There are no restrictions preventing shares from being transferred.		X				The transfer of shares is stipulated in Article 6 subparagraph (c) of the Articles of Association. (B) group registered shares can be freely transferred without being subject to any limitation. Article 6 subparagraph (c) of the Articles of Association is applicable for theTransfer of (A) shares.
2.1. CORPORATE WEBSITE						

HİZMETE ÖZEL - INTERNAL

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				Most of the content taking place on the corporate website also presented in English.
	Compliance Status					
	Yes	Partially	No	Exempted	N/A	Remarks
2.2. ANNUAL REPORT						
2.2.1- Board Members ensure that annual report of the company reflects the operations of the company as whole and complete.	X					
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 program is in place for reporting legal and ethical issues.	X					

HİZMETE ÖZEL - INTERNAL

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				The participation of employees to the management are promoted with periodic meetings within the company in particular goal setting and performance evaluation meetings. The results out of these meetings are used for necessary changes to be made by the management.
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				If the decisions have specific consequences for the relevant stakeholders; the opinions of relevant groups are received through talks, surveys and their suggestions are received. For other stakeholders (suppliers, business partners) communication channels are always open.

	Compliance Status					
	Yes	Partially	No	Exempted	N/A	Remarks
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					

HİZMETE ÖZEL - INTERNAL

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					
3.3.5 - Employees, or their representatives, were notified of decisions impacting them. The opinion of the related trade unions was also taken.	X					Desicions which may affect employees are reported to them. Our employees are non unionised.
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					
	Compliance Status					
	Yes	Partially	No	Exempted	N/A	Remarks
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					

HİZMETE ÖZEL - INTERNAL

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				Ethic Rules take place on the corporate website under the topic of Sustainability.
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 company and management performance.	X					

Compliance Status						
	Yes	Partially	No	Exempted	N/A	Remarks
4.2. ACTIVITY 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					

HİZMETE ÖZEL - INTERNAL

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					
Compliance Status						
	Yes	Partially	No	Exempted	N/A	Remarks
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			There is no policy concerning a target to have women board members at a minimum of 25%
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						

HİZMETE ÖZEL - INTERNAL

4.4.1-Each board member attended the majority of the board meetings in person.		X				Some of the Board Members attended to the board meetings with teleconference time to time.
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 internal regulation specifying any limitations in this respect due to the contribution of different experiences of Board Members to the Board. CVs of Board members can be found on the corporate website of the company.
Compliance Status						
	Yes	Partially	No	Exempted	N/A	Remarks
4.5. BOARD COMMITTEES						
4.5.5 - Board members serve in only one of the Board's committees.			X			Some Board Members have duties in more than one committee.

HİZMETE ÖZEL - INTERNAL

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	There is no consultancy services used in this manner.
4.5.8 - Minutes of all committee meetings are kept and reported to board members.	X					
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			There was no performance evaluation at the Board of Directors level.
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			Remuneration of board members and executive management is disclosed in the annual report; however it is not in the individual basis.

HİZMETE ÖZEL - INTERNAL

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	None
1.2. Right to Obtain and Review Information	
The number of special audit request(s)	None
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 (ad)	https://www.kap.org.tr/tr/Bildirim/876801
Whether the company provides materials for the General Shareholders' Meeting in English and Turkish at the same time	Documents presented only in Turkish.
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	None
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)	None
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)	None
The name of the section on the corporate website that demonstrates the donation policy of the company	Investor Relations – Corporate Information-Articles of Association
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/883045
The number of the provision(s) of the articles of association that discuss the participation of stakeholders to the General Shareholders' Meeting	Clause 8
Identified stakeholder groups that participated in the General Meeting of Shareholders, if any	Some of the shareholders and their representatives, Board Members, Auditor of the company, some members of the executive committee and the employees responsible for the general assembly attended to the General Assembly Meeting.
1.4. Voting Rights	
Whether the shares of the company have differential voting rights	No

HİZMETE ÖZEL - INTERNAL

In case that there are voting privileges, indicate the owner and percentage of the voting majority of shares	-
The percentage of ownership of the largest shareholder	48.05%

1.5. Minority Rights

Whether the scope of minority rights enlarged (in terms of content or the ratio) in the articles of association	No
If yes, specify the relevant provision of the articles of association	-

1.6. Dividend Right

The name of the section on the corporate website that describes the dividend distribution policy	Investor Relations / Corporate Governance /Policies / Dividend Distribution Policy
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	At the general assembly meeting of the company held on October 22, 2020, the Proposal to Not Distribute Profit for the period due to the economic conditions and recognition of net loss, presented by the Board of Directors, was submitted for the shareholders' information and approval.
PDP link to the related general meeting minutes in case the board of directors proposed to the General Assembly not to distribute dividends	https://www.kap.org.tr/tr/Bildirim/883045

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General Assembly Meetings

General Meeting Date	22.10.2020
The number of information requests received by the company regarding the clarification of the agenda of the General Shareholders' Meeting	0
Shareholder participation rate in the General Shareholders' Meeting	63.58%
Percentage of shares directly present at the GSM	0.13%
Percentage of shares represented by proxy	63.45%
Specify the name of the page of the corporate website that contains the General Shareholders' Meeting minutes, and also indicates for each resolution the number of votes for or against	Investors Relations / General Assembly Info (in Turkish)
Specifiy the name of the page of the corporate website that contains all questions asked in the general assembly Meeting and all responses to them	Investors Relations / General Assembly Info (in Turkish)
The number of the relevant item or paragraph of the General Shareholders' Meeting minutes in relation to related party transactions	Item 9
The number of declarations by insiders received by the board of directors	85
The link to the related PDP general shareholder Meeting notification	https://www.kap.org.tr/tr/Bildirim/883045

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2. DISCLOSURE AND TRANSPARENCY

2.1. Corporate Website

Specify the names of the sections of the website providing the information requested by the Principle 2.1.1.	Investor Relations
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	Investor Relations – Shareholder Structure
List of languages for which the website is available	Turkish, English

2.2. Annual Report

The page numbers and/or names 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 external of the members of the board of directors and executives conducted out of the company and declarations on independence of board members	Annual Report – Corporate Governance – Structure of Board and Principles of Activity
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	Annual Report - Corporate Governance Information Form – Board Committees
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	Annual Report - Corporate Governance Information Form – Board of Directors – Principles of Activity
ç) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on amendments in legislation which may significantly affect the activities of the Corporation	Annual Report - Corporate Governance Compliance Report - Other Issues Concerning the Operations of the Company
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	Annual Report - Corporate Governance Compliance Report - Other Issues Concerning the Operations of the Company
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	None

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consulting and rating and the measures taken by the corporation in order to avoid from these conflicts of interest	
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%	There is no cross-ownership relationship in the company's capital
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	Annual Report – Sustainability

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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	-
The number of definitive convictions the company was subject to in relation to breach of employee rights	14
The position of the person responsible for the alert mechanism (i.e. whistleblowing mechanism)	Human Resources
The contact detail of the company alert mechanism	insan_kaynaklari@netas.com.tr

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 bodies where employees are actually represented	Executive Committee

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	The Board Supports the Human Resources Department
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	Netaş-Human Resources
Whether the company provides an employee stock ownership program	There isn't an employee stock ownership programme
The name of the section on the corporate website that demonstrates the human resources policy covering discrimination and mistreatments and the measures to prevent them. Also provide a summary of relevant parts of the human resource policy	Investor Relations – Sustainability Section
The number of definitive convictions the company is subject to in relation to health and safety measures	0

3.5. Ethical Rules and Social Responsibility

The name of the section on the corporate website that demonstrates the code of ethics	Investor Relations – Sustainability Section
The name of the section on the company website that demonstrates the corporate social responsibility report. If such a report does not exist, provide information about any measures taken on environmental, social and corporate governance issues.	Investor Relations – Sustainability Section
Any measures combating any kind of corruption including embezzlement and bribery	Investor Relations – Sustainability Section

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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	None
Number of reports presented by internal auditors to the audit committee or any other relevant committee of the board	-
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	Annual Report – Risk Management and Internal Control Systems
Name of the Chairman	AIGUANG PENG
Name of the CEO	ALİ EMİR EREN
If the CEO and Chair functions are combined, provide the link to the relevant PDP announcement providing the rationale for such combined roles	The roles of the Chairman and CEO are undertaken by different individuals.
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	Year End Annual Report https://www.kap.org.tr/tr/Bildirim/908656
The name of the section on the corporate website that demonstrates current diversity policy targeting women directors	There is no such policy.
The number and ratio of female directors within the Board of Directors	0

HİZMETE ÖZEL - INTERNAL

STRUCTURE OF THE BOARD

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 Independency 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
AIGUANG PENG	No	No	07.08.2020	-	No	No	Yes
ŞUAY ALPAY	No	No	29.05.2019	-	No	No	Yes
MINZHONGXIA DING	No	No	28.07.2017	-	No	No	Yes
MING LI	No	No	03.04.2019	-	No	No	Yes
ALİ ZÜLFÜ TİGREL	No	Yes	07.06.2018	https://www.kap.org.tr/tr/Bildirim/824792	Yes	No	Yes
ÖZER KARABULUT	No	Yes	29.05.2019	https://www.kap.org.tr/tr/Bildirim/824792	Yes	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)	5 out of total 6 meetings were realized as electronic meeting.
Director average attendance rate at board meetings	100 %
Whether the board uses an electronic portal to support its work or not	No
Number of minimum days ahead of the board meeting to provide information to directors, as per the board charter	3
The name of the section on the corporate website that provides information about the board charter	Investor Relations – Corporate Governance – Articles of Association
Number of maximum external commitments for board members as per the policy covering the number of external duties held by directors	Turkish Commercial Code is applicable in this manner, it is submitted to the approval of General Assembly every year.

4.5. Board Committees

Page numbers or section names of the annual report where information about the board committees are presented	Annual Report – Corporate Governance Compliance Report – Number, Structure and Independence of the Board Committees
Link(s) to the PDP announcement(s) with the board committee charters	https://www.kap.org.tr/tr/Bildirim/824792

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	-	ALİ ZÜLFÜ TİGREL	Yes	Board Member
Corporate Governance Committee	-	AIGUANG PENG	No	Board Member
Corporate Governance Committee	-	ŞUAY ALPAY	No	Board Member
Corporate Governance Committee	-	DING MINZHONGXIA	No	Board Member
Corporate Governance Committee	-	YEŞİM BİLGİNTURAN	No	Not a Board Member
Audit Committee	-	ALİ ZÜLFÜ TİGREL	Yes	Board Member
Audit Committee	-	ÖZER KARABULUT	No	Board Member
Early Detection of Risk Committee	-	ALİ ZÜLFÜ TİGREL	Yes	Board Member
Early Detection of Risk Committee	-	ÖZER KARABULUT	No	Board Member
Early Detection of Risk Committee	-	ŞUAY ALPAY	No	Board Member
Early Detection of Risk Committee	-	DING MINZHONGXIA	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 Compliance Report – Number, Structure and Independence of the Board Committees
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 Compliance Report – Number, Structure and Independence of the Board Committees
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 Compliance Report – Number, Structure and Independence of the Board Committees
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 Compliance Report – Number, Structure and Independence of the Board Committees
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 Compliance Report – Number, Structure and Independence of the Board Committees

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 – CMB Report
Specify the section of the website where remuneration policy for executive and non-executive directors are presented	Investor Relations - Corporate Governance - Policies- Remuneration Policy
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 - Remuneration Provided for Board of Directors and Top Management

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 Committee Meetings Held in Person	The Number of Reports on its Activities Submitted to the Board
Corporate Governance Committee	-	100%	20%	1	1
Audit Committee	-	100%	100%	4	4
Early Detection of Risk Committee	-	100%	50%	6	6

Decleration of Independence

To the Board of Directors of Netaş Telekomünikasyon A.Ş.;
I hereby declare that;

There have been no employment relations in management positions undertaking important duties and responsibilities; I do not jointly or individually own more than 5% share in capital, voting rights or privileged shares or no significant commercial relation has been established, during the last five years; between the Company or partnerships where the Company controls the management or has significant influence, partnerships controlling the management of or having significant influence in the Company or legal entities controlling the management of such partnerships; and me, my spouse and my blood relatives or my relatives by marriage,

I have not been partner of (5% and higher), have not been employed in management positions undertaking important duties and responsibilities or have not been a member of the board of directors, in companies to/from which the Company sold/purchased significant services or products in the framework of agreements, especially regarding audit (including tax audit, legal audit, internal audit), rating and consultancy of the Company, during periods when the services or products were purchased or sold, during the last five years,

I have the required professional training, knowledge and experience to duly perform the duties I shall assume as an independent member of the board of directors,

I do not have a full-time job in public institutions and organizations and if elected, I shall maintain this status throughout my term in office (except for university faculty membership),

I comply with the criteria for residence in Turkey according to the Income Tax Law No. 193 dated 31/12/1960,

I have strong ethical standards, professional reputation and experience to positively contribute in Company activities, to maintain neutrality in conflicts of interest between the Company and shareholders, and to freely make decisions by taking into consideration the rights of stakeholders,

I shall allocate time to Company affairs to follow the operation of Company activities and to fully fulfill the requirements of the duties I shall undertake,

I have not been a member of the Company board of directors for more than six years during the last ten years,

I do not serve as independent member of board of directors in more than three Companies management of which are controlled by the Company or by partners controlling the management of the Company; and in more than a total of five Companies traded in the stock exchange.

I have not been registered and announced on behalf of the legal entity elected as member of the board of directors.

Decleration of Independence

To the Board of Directors of Netaş Telekomünikasyon A.Ş.;
I hereby declare that;

There have been no employment relations in management positions undertaking important duties and responsibilities; I do not jointly or individually own more than 5% share in capital, voting rights or privileged shares or no significant commercial relation has been established, during the last five years; between the Company or partnerships where the Company controls the management or has significant influence, partnerships controlling the management of or having significant influence in the Company or legal entities controlling the management of such partnerships; and me, my spouse and my blood relatives or my relatives by marriage,

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I have not been registered and announced on behalf of the legal entity elected as member of the board of directors.

Özer KARABULUT

29.05.2019

Netaş Telekomünikasyon A.Ş.

Şirketin Unvanı: Netaş Telekomünikasyon A.Ş.
Ticaret Sicil Numarası: 94955/40304
Mersis No: 0632000106100010

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