

# NETAS

2018  
ANNUAL  
REPORT

A smarter  
life  
a better  
future



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**We are in the verge of a new era.**

**We are trailing on a wave of change  
that affects everything.**



Everything changes;  
how we communicate,  
how we share the culture,  
how we improve ourselves and  
how we spend our money.

And this change is  
happening really fast.



**We need more than  
new hardware and software  
to adapt this change;  
we need people.**

**We need experts and cooperation...**



The power which will move us forward

resides in working together

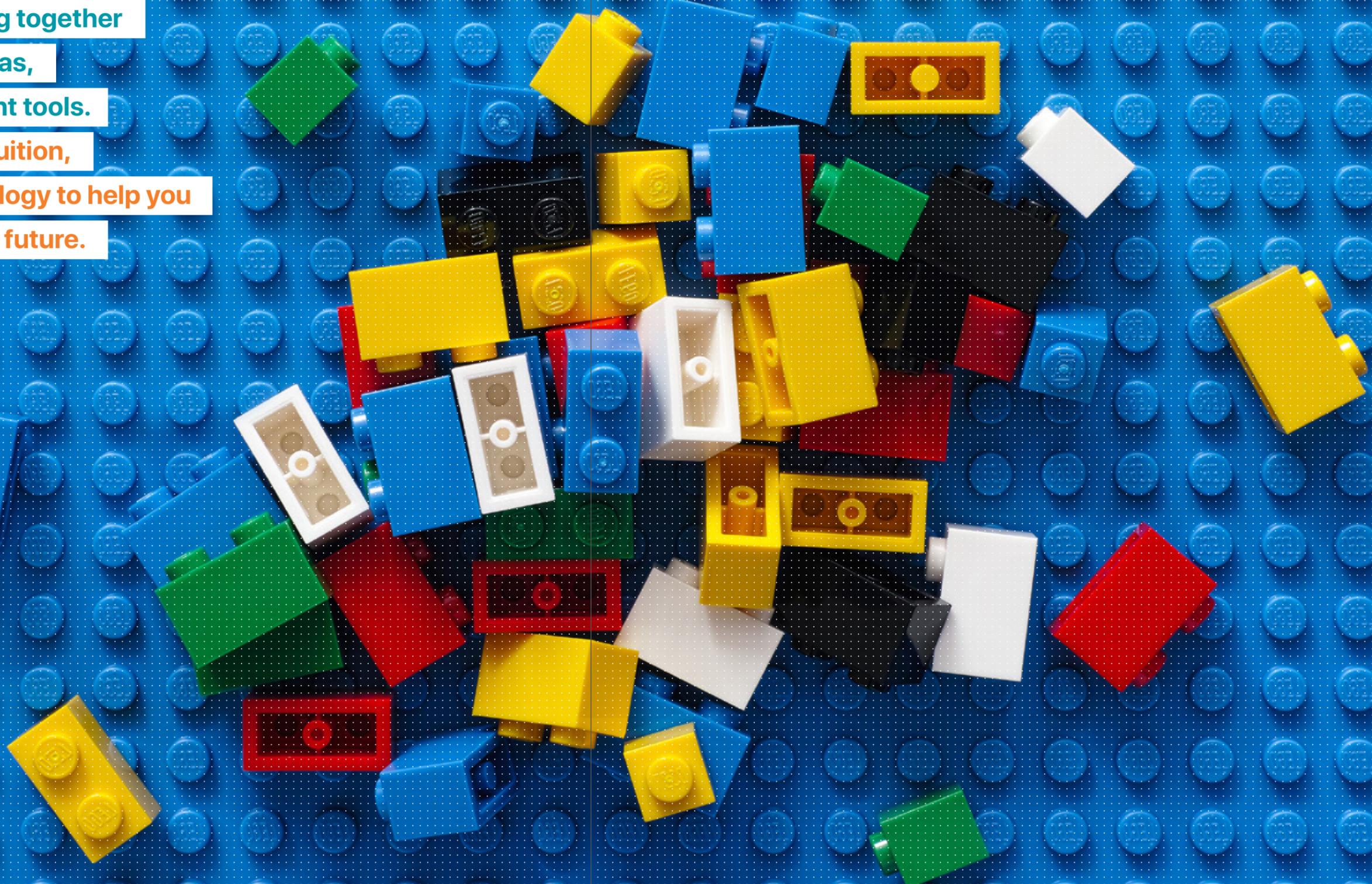
to create new ideas,

and using the right tools.

Netaş has the intuition,

ideas and technology to help you

integrate into the future.



To help you

catch opportunities and

make the world a better place,



**for a better future**

**where the society, the economy and**

**the environment are all in harmony;**

**where the opportunities for changing**

**work, private and social lifestyles**

**increase and inspire others,**





to help the world work  
more efficiently and productively  
and to improve people's lives.

**For people.**

## MESSAGE FROM BOARD OF DIRECTORS

## XIAO MING

**During its more than 50-year history, Netaş has successfully conducted its relationships with its every stakeholder on the base of trust, thanks to its established corporate culture and commitment to excellence in offering products and services, as well as its belief in prospering the ICT ecosystem. This invaluable asset will continue to support our company's accomplishments in 2019 and beyond.**

**Dear Shareholders,**

The latest developments in the information and communication technologies continue to change the landscape of every industry. As we are approaching the commercial deployment of 5G in different markets around the globe, a new set of revolutionary transformations will alter not only the business world, but our very lives as well. As we pioneer the development of 5G and beyond technologies in ZTE, and offer invaluable contribution in this field in Netaş, we will not only witness this unique milestone in the world history, but we have the privilege to be the actors of it.

Our investments of today are defining the added value that we will be offering in the years to come. From this perspective, ZTE's acquisition of Netaş shares was a right decision within the scope of Netaş vision to become Turkey's global technology brand and ZTE's plans to gear up its operations in Europe, the Middle East, North Africa and the CIS. In 2018, we certainly made a good start in paving the way for further collaboration between ZTE and Netaş teams, and we are assured that our solution portfolio, including products and services, as well as the customer support we provide will improve substantially in the coming period.

In 2018, Netaş redirected its resources to certain markets to take advantages of ZTE's past operations. We are looking forward to seeing Netaş, with its more than 50 years of experience in the ICT industry, its substantial R&D power and excellence in customer support and services, to increase its footprint in international markets, its revenues and its brand awareness, while expanding the reach of ZTE solutions, and improving the customer satisfaction. As Turkey is one of the stronghold within the scope of this strategy, Netaş has regained a solid ground to deepen its business with telecommunication operators in its domestic market. This decision is also a step forward for Netaş to leverage its localization capabilities with the support of ZTE, and to offer new domestically developed and manufactured solutions to its home market. As our aim is to provide sustainable contribution to the economies in which we operate, the localization of ZTE solutions by the Netaş R&D is one of our priorities.

Once our strategy is put as such, we are now focusing on improving the sustainability of our business, for an uninterrupted leap forward. In 2018, we experienced a severe temporal disruption in our business, among other challenges. As we are now enhancing our export compliance process in ZTE, with all its subsidiaries including Netaş, we are committed to becoming an example in the industry in terms of export compliance. Netaş has already proved its commitment and I believe the company overall will very quickly adapt new procedures, as its agility is evident by the rigorous and tenacious diligence of the Netaş management team in the past year. On behalf of the Board of Directors, I congratulate the executive team for their professionalism in observing the obligations towards every shareholder. Improved export compliance program, which is going underway in Netaş, will also strengthen our company's position as a trusted ICT solutions supplier to all the clients it serves.

After the completion of ZTE's acquisition of Netaş shares, last year, ZTE and Netaş had agreed to establish an educational institution, a repair and return center for the EMEA region, and a GSM-R center of excellence. Leaving the year 2018 behind, we have successfully laid the infrastructure of a new technology learning and skills sharpening center in Netaş, not only for ZTE product trainings, as initially planned, but also as an institution open to all ICT professionals in Turkey and elsewhere. In addition, with the transfer of the management of ZTE's certain markets to Netaş, we are getting ready to offer extensive service capabilities of Netaş to our customer base in the EMEA region.

During its more than 50-year history, Netaş has successfully conducted its relationships with its every stakeholder on the base of trust, thanks to its established corporate culture and commitment to excellence in offering products and services, as well as its belief in prospering the ICT ecosystem. This invaluable asset will continue to support our company's accomplishments in 2019 and beyond.

**Best regards,**

**XIAO MING  
CHAIRMAN OF THE  
BOARD OF DIRECTORS**



## MESSAGE FROM CEO

## C. MÜJDAT ALTAY

**Until today, in every investment we made, in every step we took, our motivation has been our passion to live in a more connected, a better and a smarter future. We believed that the technology is the best medium on this path and we came together to develop the best technology solutions. Our goal is not only to move our company forward in 2019, but also to leave a company for next generations of a digital age, which always maintains its innovative spirit.**

**Dear Shareholders,**

As our country's leader systems integrator, we left behind a year, commissioning projects that will integrate Turkey into the future and transforming our R&D power in telecommunication technologies into gains for our country through new products and services. We have taken exciting steps in order to extend our operations in the international markets. We have completed our preparations, with our main shareholder ZTE, to conduct new projects with operators.

We have started executing sustainability projects, both in corporate scale and also in order to support the development of our society. To ensure our company's sustainable success, we have designed new export control compliance processes, which we believe will be exemplary in the industry. We continue to work on this program.

With our achievements in 2018, we aim to improve our company's competency in developing local technology solutions and provide support to Turkey to increase its competitiveness in international markets in line with the strategic priorities of both Netaş and Turkey. As we are aware that we can only achieve this goal with all the stakeholders involved, we are now building new structures to share our knowledge to the Turkish ICT ecosystem.

**INNOVATIVE ICT INFRASTRUCTURE FOR TURKEY'S NEXT-GENERATION AIRPORT**

Our country has completed the first phase of Istanbul Airport, one of the world's largest airports. In addition to our multi-tech R&D power, our strategic business partnership with the world's leading technology suppliers and our competency in offering services in an international scale, thanks to our teams' dedication, we successfully delivered the next-generation technology infrastructure of Istanbul Airport within a very tight schedule.

This colossal project, for which we will continue to provide management and maintenance of the systems we procured, will serve as a unique and important reference in the coming period for us to take part in upcoming projects in both national and international scale and also in new projects with IGA.

**WE INCREASE THE VALUE WE GENERATE THROUGH LOCALIZATION**

Since its foundation, our company locally developed the state-of-the-art telecommunication technologies, first to lay our country's telecommunication infrastructure and then to transfer them into foreign markets. Today, we are offering software solutions to world's leading operators through international R&D cooperation programs.

In addition, we are offering digital tools, improving efficiency in all verticals of the industry, through authentic solutions we develop in our R&D. In 2018, we have received the certification for our VoIP security firewall, NOVA V-Gate, and for our field service management platform Mobi-fi, acknowledging that these products are developed locally in Turkey. We are in the process of receiving such a certification for other products we developed and we hope these successful digitalization tools designed by Turkish engineers would set an example in our industry.

The most exciting development, on the other hand, is that our main shareholder ZTE prioritized localisation in its strategic plans concerning Netaş. We continue our extensive efforts on this issue. We will localize ZTE's globally competitive technology solutions.

**WE ARE READY FOR A LEAP FORWARD IN INTERNATIONAL MARKETS**

In 2018, we have taken important steps to reinforce our position and extension in the international markets.

We are deepening our relationships in markets nearby, including Azerbaijan, Kazakhstan, Georgia and Qatar. We continue implementing large-scale public and private industry projects in Algeria and we aim to increase our business volume in this country through a subsidiary, which we are planning to

incorporate in 2019. We are conducting important e-government projects in Cyprus.

I am very glad to announce our decision to increase Netaş operations in some of ZTE's country markets. Therefore, we are now stronger, as we get closer to become Turkey's global technology brand by the republic's 100<sup>th</sup> anniversary in 2023.

We are getting ready for a leap forward in order to increase our business volume and brand awareness in international markets by next year.

**FOCUSING ON ADDED-VALUE SERVICES**

Today, facing the acceleration in the technological development, businesses are increasingly leaning towards outsourcing the procurement of their ICT needs and focus on their core business instead. Back in 2017, we invested to expand our managed-services portfolio in line with this trend, and in 2018, we have started to see positive results.

With the holistic approach we adopted, our cyber security services are already standing out in the Turkish ICT industry and in 2018, we have started to work with Turkey's leading companies in this field. We have expanded our test services portfolio, and commissioned

a device farm. We are now providing test services to leading finance and telecommunication companies. We have shifted up our studies to increase business efficiency through Big Data analytics and expanded our team to expand our activities.

**NEWS STEPS FOR A SUSTAINABLE COMPANY, SOCIETY AND ECONOMY**

Our company, operating in a global scale with its wide business partner network, has started to conduct a meticulous export control compliance program, with the leadership of our main shareholder ZTE, in order to ensure an uninterrupted operation. We are committed to materialize exemplary export control compliance processes, together with the constituents of our supply chain.

On the other hand, we are realizing projects to support social and economic development, which we see as our duty. We have provided good examples in line with the new education model of the digital age, focusing on triggering creativity of new generations in their approach to the technology. In addition, we are increasingly underlining the importance of increasing the women employment in technology, and we are supporting movements, advocating that it is no longer a choice, but a requisition of the economic development.

**A NEW STRUCTURE TO ACQUIRE TALENTS INTO ICT INDUSTRY**

Since the foundation of Netaş, one of Turkey's prominent technology centres, we served as a school with our more than 50-year corporate culture and our R&D knowledge base, as we believed that our most important investment is to train people. In 2018, we formulated the model of education of this school, we identified our competencies with a meticulous study and consulted the experts of technology education. As a result of these challenging efforts, we have structured a new institution to provide Netaş employees and other ICT professionals with technical and soft skills: n-telligent Institute. We believe that the Turkish ICT world will acquire new talents thanks to our Institute.

Until today, in every investment we made, in every step we took, our motivation has been our passion to live in a more connected, a better and a smarter future. We believed that the technology is the best medium on this path and we came together to develop the best technology solutions. Our goal is not only to move our company forward in 2019, but also to leave a company for next generations of a digital age, which always maintains its innovative spirit.

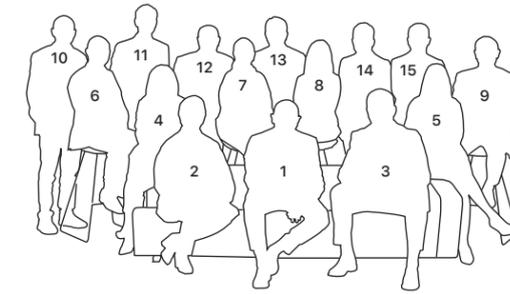
**Best regards,**

**C. MÜJDAT ALTAY  
CEO**



## EXECUTIVE COMMITTEE

- 1 **C. MÜJDAT ALTAY**  
CEO
- 2 **YASEMİN AKAD**  
CPO
- 3 **İLKER ÇALIŞKAN**  
CFO
- 4 **SELDA PARIN**  
ENTERPRISE BUSINESS UNIT GM
- 5 **BUKET OKUMUŞ**  
BRAND AND CORPORATE COMMUNICATIONS DIRECTOR
- 6 **SERDAR URÇAR**  
INTERNATIONAL MARKETS BUSINESS UNIT GM
- 7 **BANU TESAL**  
CEO ADVISOR
- 8 **NESLİHAN BEYHAN**  
STRATEGIC PLANNING DIRECTOR
- 9 **KAMİL ORMAN**  
PUBLIC & DEFENSE AND TELECOM SECTOR BUSINESS UNIT GM
- 10 **EMRE ŞEHSUVAROĞLU**  
CCO
- 11 **BÜLENT ŞEREF ŞENYÜREK**  
SPC P&D SOLUTIONS SENIOR DIRECTOR
- 12 **ÖMER AYDIN**  
DEFENSE PRODUCT SOLUTIONS SENIOR DIRECTOR
- 13 **BÜLENT KEMAL MUTLU**  
NETAŞ R&D ACT. GENERAL MANAGER
- 14 **BURAK ŞALK**  
NETRD GENERAL MANAGER
- 15 **ALTAY DOĞU**  
CARRIER TELCO BUSINESS UNIT ACT. GM



**NETAŞ**  
**AT A GLANCE**

# TURKEY'S NUMBER ONE SYSTEMS INTEGRATOR

**With a deep-rooted history, Netaş continues to deliver end-to-end value-added solutions, systems integration, and technology services to service providers and corporations in its domestic market, as well as in international markets with an innovative approach.**

Founded in 1967 with a partnership agreement signed between PTT and Northern Electric, Netaş has been an industry leading company for 51 years providing solutions and services in the information and communication technologies field. Listed on Istanbul Stock Exchange (BIST) in 1993 and is a ZTE Cooperatief U.A. (ZTE) subsidiary since July 2017, today Netaş keeps accomplishing important achievements as Turkey's number one systems integrator\* and software exporter.

**NEXT-GENERATION COMMUNICATION SOLUTIONS**

Making a difference with its technological competency, vast know-how, and experience, Netaş steps forward in the ICT industry with Turkey's largest R&D investment and employment\*\*. Employing more than 800 engineers in its R&D center, the company provides its customer base with solutions in different domains of next-generation communication technologies, including mobile broadband, cyber security, cloud computing, business applications, and Big Data analytics.

Providing leading public and private corporations in different verticals from telecommunication to finance, and general industry with a wide range of services, Netaş also plays an important role in procuring the needs of Turkish Armed Forces by the modernization of the country's defense communication network.

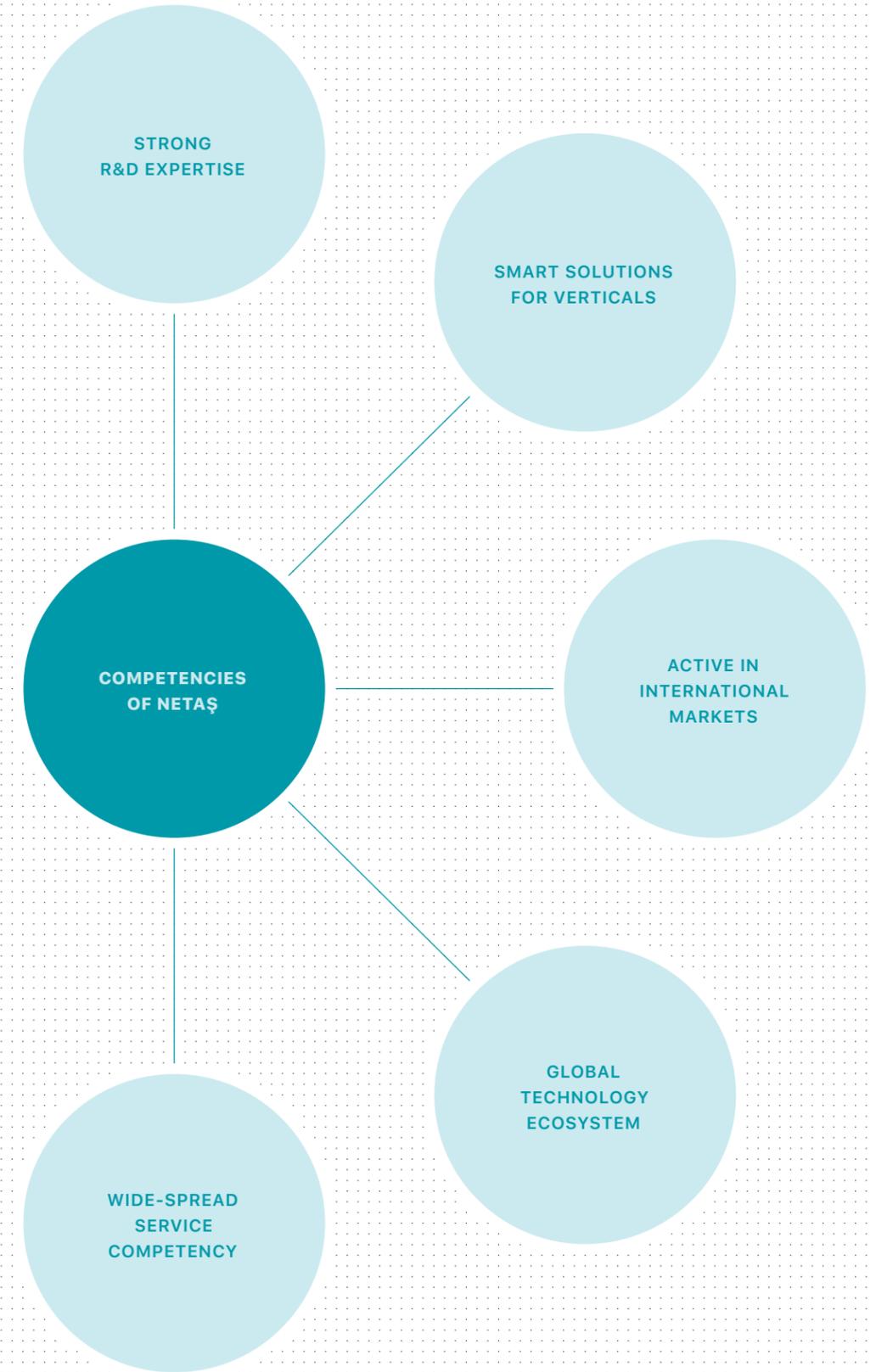
In addition, Netaş delivers consultancy, service management, hardware, and support services to public and private industry, with its experienced and certified IT Support Services (BDH) team, a 100% Netaş subsidiary, expertise on different IT segments.

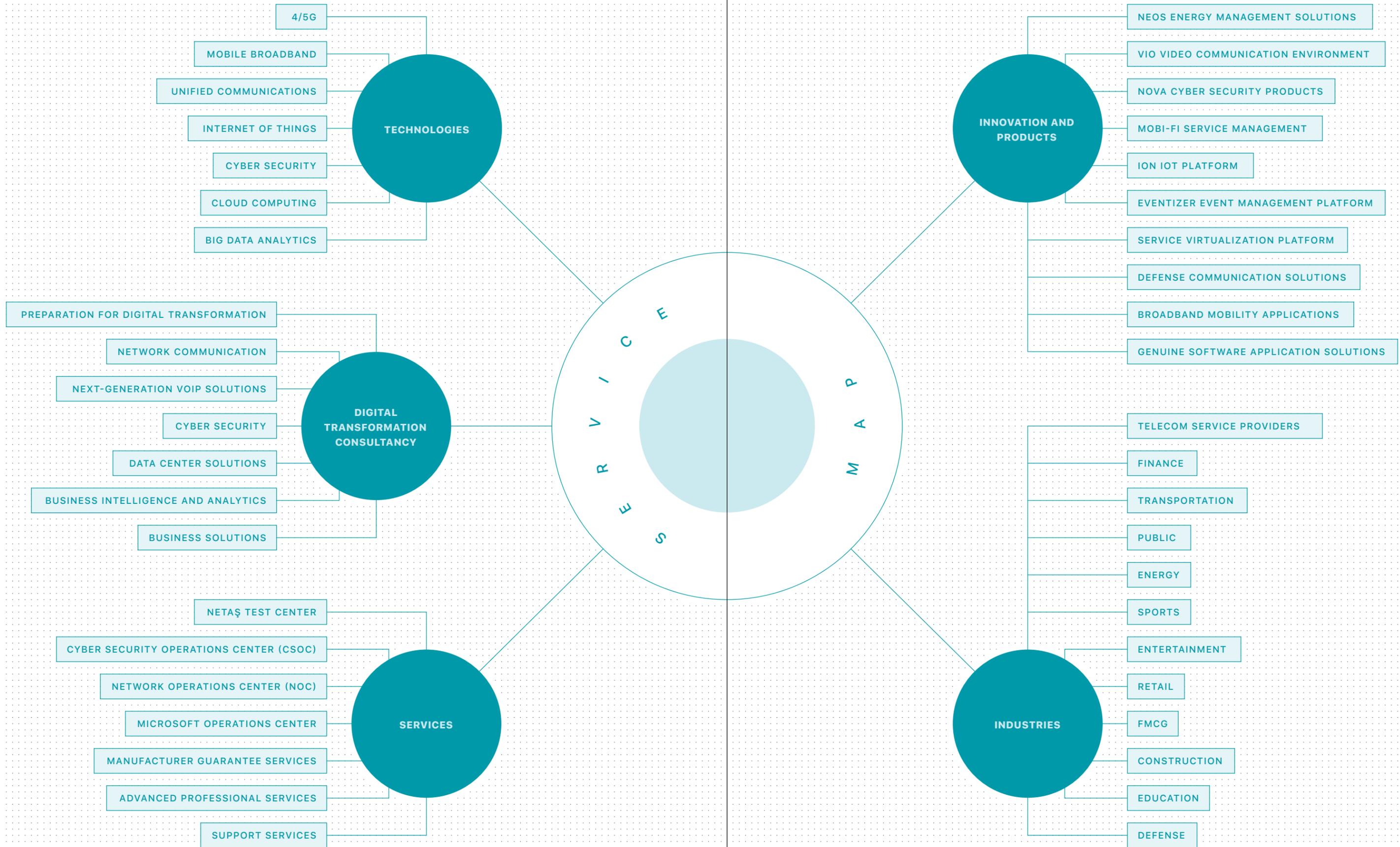
**DIGITAL TRANSFORMATION LEADER OF TURKEY AND THE REGION**

Achieving a faster growth compared to the industry average in the past decade, Netaş takes a significant role in the digital transformation of Turkey and the region. Having the mission and vision of carrying its achievements in Turkey to international markets, the company provides value-added end-to-end solutions such as technology consultancy and after-sales support to 30 countries from Asia-Pacific to Turkic Republics, and from North Africa to the Middle East.

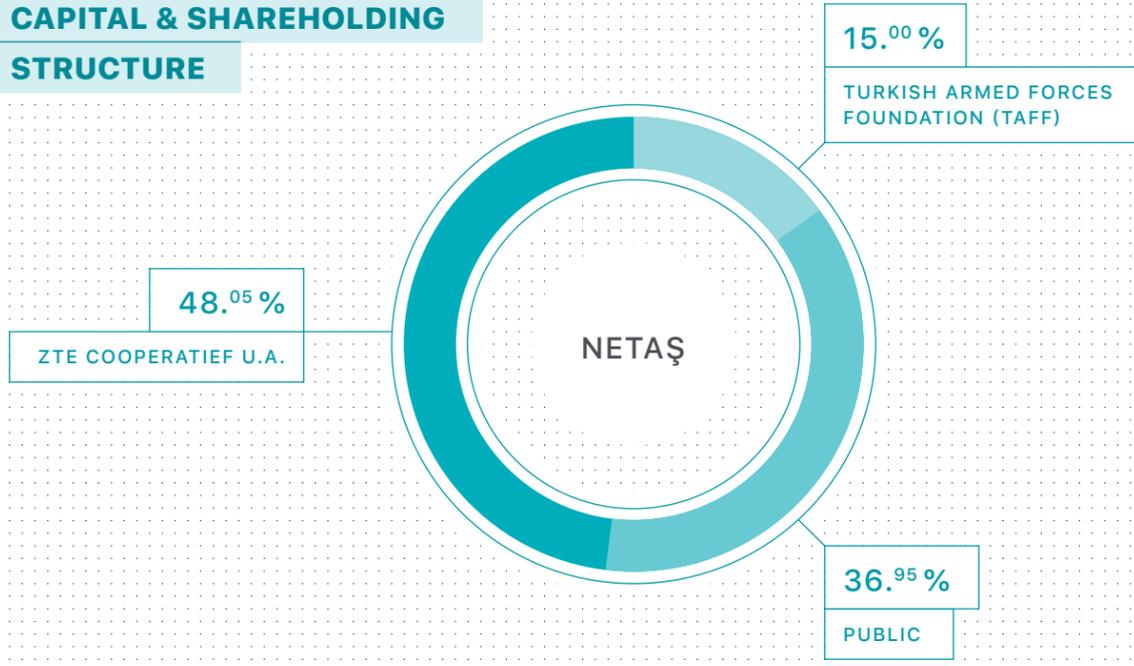
Increasing the number of countries it provides its services, the company makes strategic business partnerships with the leading global technology companies and develops software solutions for more than 200 global operators, to ensure its clients are following the latest developments in the IT industry and using technology more efficiently.

\* According to 2017 report of Bilişim500.  
\*\* According to the report of Turkishtime, "R&D 250, Companies of Turkey Making the Most R&D spending".

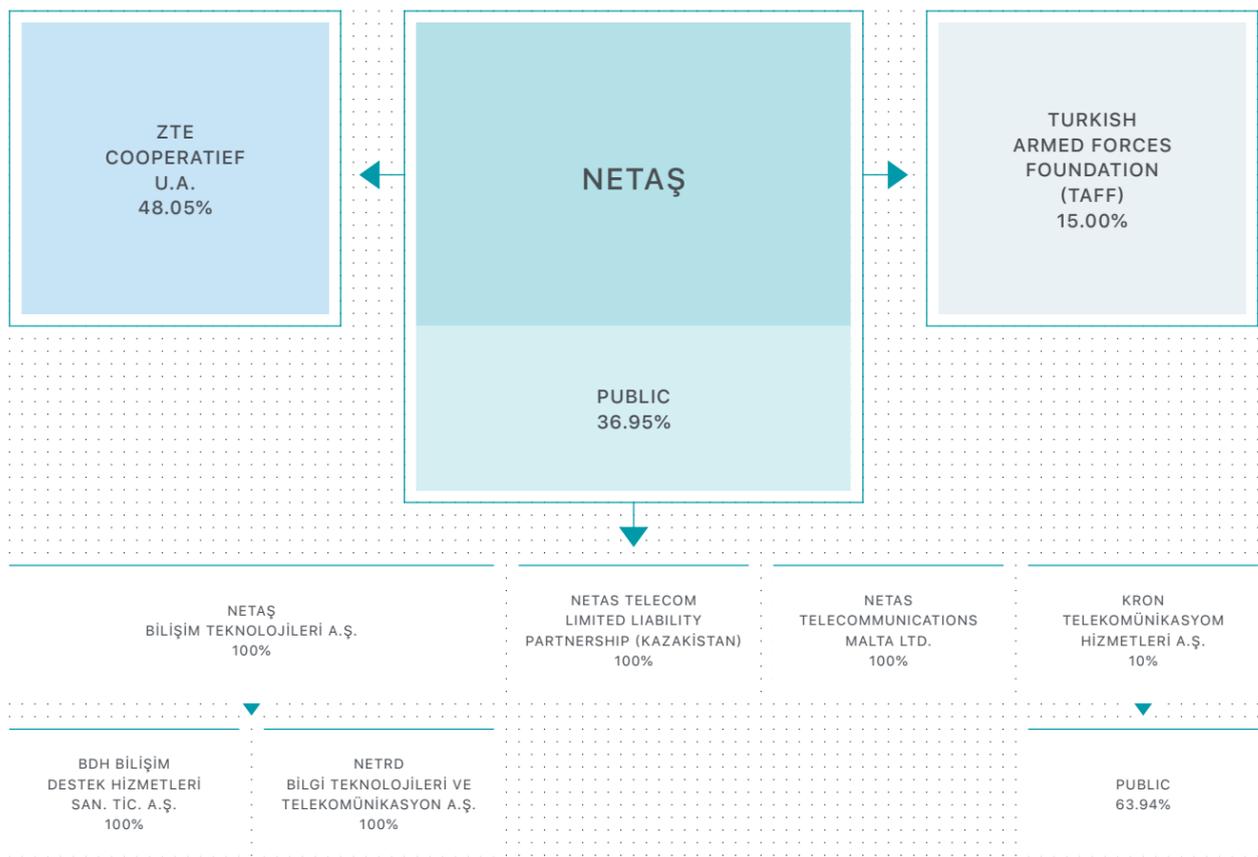




**CAPITAL & SHAREHOLDING STRUCTURE**



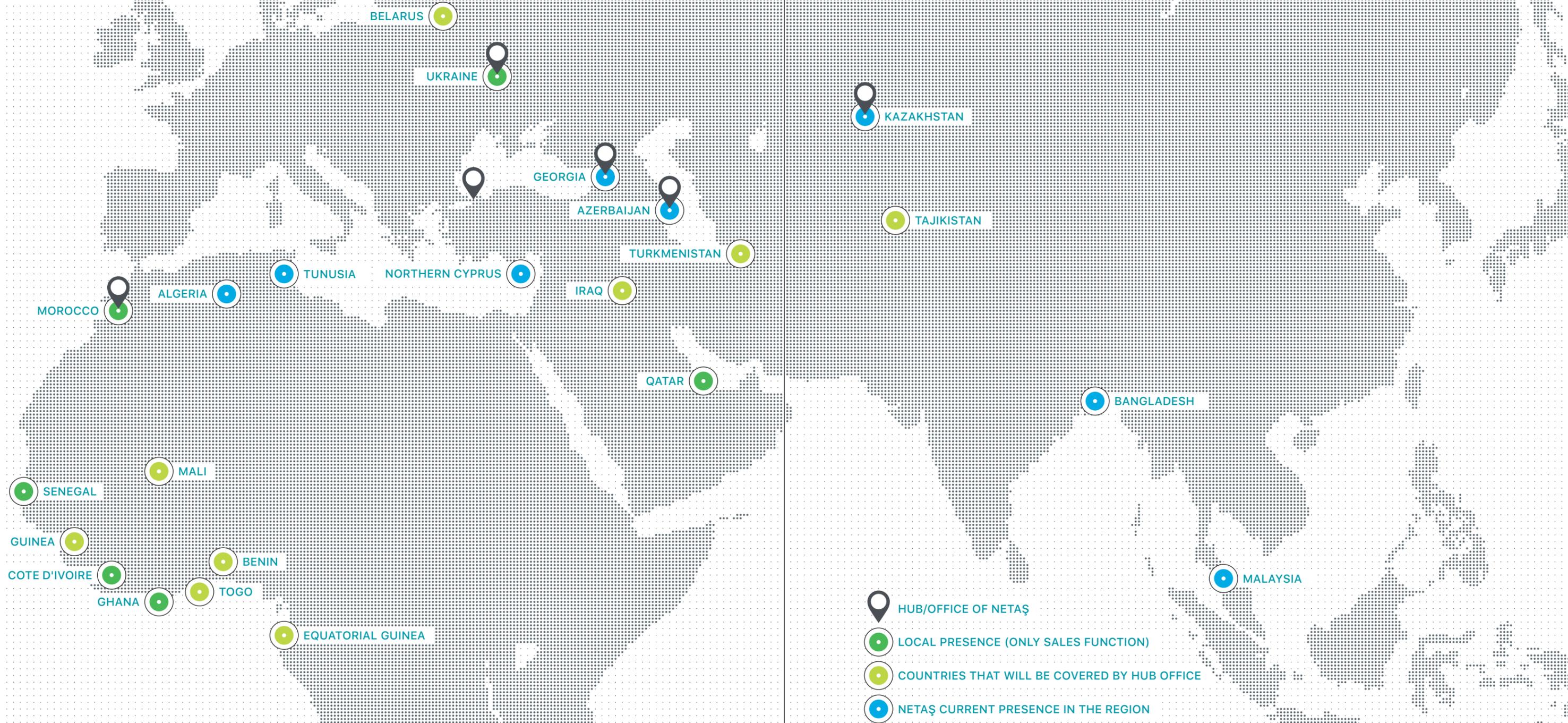
**OPERATIONAL STRUCTURE**



OPERATIONAL MAP

# GLOBAL SYSTEMS INTEGRATOR

Starting its activities in international markets in the 1990s, Netaş today is implementing many major digital transformation projects in 30+ countries. The company's objective is to spread the know-how of Turkish engineers and Netaş's technology and services on a global scale.



MILESTONES

# LONG-STANDING PAST, SUSTAINABLE SUCCESS

**Established under the partnership agreement between PTT and Northern Electric in 1967, Netaş has achieved many success stories through its history.**



**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**

⊙ First exports to Lebanon. 500 automatic telephone units are exported.



**1971**

⊙ Number of employees reaches 1,000.



**1973**

⊙ Establishment of Turkey's first private sector R&D in telecom business. 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 500,000<sup>th</sup> 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 1 millionth line. ⊙ Designed Turkey's first rural exchange.



**1984**

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



**1982**

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

**1985**

⊙ Number of active lines exceeds 2 million.



**1983**

⊙ Transition of Netaş to digital technologies. ⊙ Establishment of Printed Circuit Board plant.



**1986**

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

### 1987

- ◉ Turkey steps into a fully-digital communications era. ◉ Number of lines delivered to PTT exceeds 3.5 millions

### 1989

- ◉ Digital 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

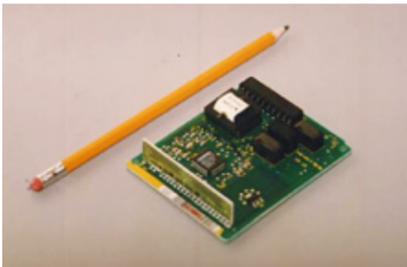
- ◉ Production of the 1.5 millionth DMS line. ◉ Expansion of exports territory: Soviet Union, Azerbaijan, Nigeria, Turkish Republic of Northern Cyprus and Canada.

### 1991

- ◉ Netaş establishes the data network to be used within the scope of 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 transmission network.



### 1994

- ◉ Design of the first ASIC.

### 1995

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

### 1996

- ◉ European Quality Achievement Award.
- ◉ Start of production of TASMUS (Tactical Area Communications System) for Turkish Land Forces.

### 1997

- ◉ Netaş becomes the first Turkish company to receive ISO 14001 environmental certificate in information technologies field.

### 1998

- ◉ European Quality Achievement Award
- ◉ Software exports total USD 10 million.

### 2000

- ◉ Netaş signs contract for the sale and delivery of SDH transmission products. ◉ Growth in Russia, Morocco, Bangladesh and Kazakhstan by 40 percent compared to the previous year.

### 2001

- ◉ Acting as the largest supplier of telecommunications equipment infrastructure in Turkey, Netaş manufactures carrier class optic and data network equipment worth USD 70 million.

### 2002

- ◉ Commissioning of the state-of-the-art optic system for Türk Telekom. The system's SDH optic network is capable of data transmission at 10GB/s.
- ◉ Signing of Aycell GSM 1800 mobile telecommunication network contract worth USD 145 million. 400 base stations installed in 35 cities.
- ◉ 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.

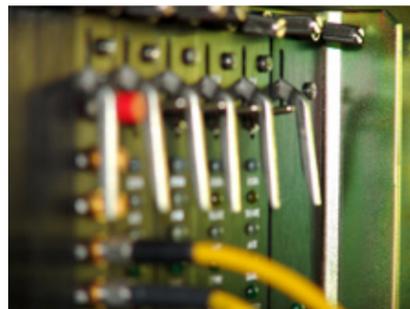
### 2003

- ◉ Signing of a USD 40 million contract for the modernization of Turk Telekom's fixed line network.



### 2004

- ◉ TN-1XE, a domestic product, introduced in transmission infrastructure of Türk Telekom.



### 2005

- ◉ New generation exchange-soft switch installed as an international exchange in Türk Telekom network.



### 2006

- ◉ New projects in defense communications: New patrol boat, MILGEM, search and rescue boat projects. ◉ Two separate transmission projects completed and commissioned in Bangladesh.



### 2007

- ◉ Nortel Global High Technology Development and Solution Center established: 800 R&D engineers working for the development of new generation communication networks.
- ◉ 'Software Export Champion' of Turkey.

### 2008

- ◉ 'R&D Center' status granted within the scope of the relevant law.
- ◉ 'Software Export Champion' of Turkey.

### 2009

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

### 2010

- ◉ 'Software Export Champion' of Turkey.
- ◉ OEP RHEA Türkiye Teknoloji BV acquires 53.13 percent of Nortel shares.
- ◉ Partnership and R&D cooperation contracts signed with global technology giants such as Genband, Avaya, Ciena, Kapsch and CarrierCom.

### 2011

- ◉ Acquisition of Probil. ◉ Named as the first Cisco Cloud Infrastructure Provider of Turkey. ◉ 'Microsoft - Enterprise Sales Partner of the Year' award. ◉ 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 Biggest Voice and Video Network Project of Turkey: Contract with the Ministry of Justice for Voice and Video IT System interconnecting courts and prisons.

- ◉ 110 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'. ◉ Named as the "Most successful R&D Center in telecommunications business" by the Ministry of Science, Industry and Technology. ◉ Netaş Kazakhstan office established.

### 2013

- ◉ Growing stronger with the acquisition of 10 percent Group A shares of Kron.
- ◉ Celebrating the 40<sup>th</sup> Anniversary in R&D, Netaş moves to its new technology base in Kurtköy. ◉ Awarded 'Best Global Partner in Enterprise Business' by Cisco. ◉ 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 Defense Industries. ◉ Netaş increases Aydem's productivity through the Automatic Meter Reading System Project. ◉ Deployment of technology infrastructure for Odeabank.
- ◉ Finance Sector's Biggest 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.
- ◉ Named as the 'Most successful R&D Center in the telecommunications business' in 2013 by the Ministry of Science, Industry and Technology.
- ◉ The Turkish Patent Institute published the list of "Companies with the Highest Number of National Patent Applications in 2013" and Netaş ranks 2<sup>nd</sup> in the telecommunications industry segment and 7<sup>th</sup> in the country overall list with 34 patent applications. ◉ Becomes the highest growing company in the Turkish information technologies industry.
- ◉ Crowned 'The Turkish Systems Integrator Partner of the Year' award by Microsoft.

## 2014

⊙ A first in the history of technology exports of Turkey: Digital Field 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 radio frequency (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 capacity upgrade of 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 (BVM) of the Istanbul Stock Exchange.



⊙ Signed a contract for the delivery of radio and wire communications in the Haydarpaşa-Gebze-Köseköy section of Marmaray and Ankara-Istanbul High-Speed Rail Line.

## 2015

⊙ With the assistance and guidance of the Undersecretariat for Defense Industries (SSM), the Fourth Generation (4G) Communications Technology Development Project's product (ULAK), locally developed by Turkish engineers.



⊙ Under the FATİH Project, '2nd Phase Local Area Network Installation Work' including infrastructure installation for schools awarded to Netaş by the Turkish Ministry of Education.

⊙ Ranked 1st at BT Haber Yayıncılık's 16th ICT 500-Top 500 ICT Company survey. Netaş ranks first in the following categories: 'Network Hardware of the Year', 'Software Export of the Year' and 'Systems Integrator and Hardware of the Year'. ⊙ In collaboration with Wesley Clover, owned by the Canadian investor Sir Terrence H. Matthews, there are now seven companies under the Netaş Wesley Clover Technology Fund (NWCTF), founded in order to invest in start-up companies and entrepreneurs, as well as to promote high value-added technology projects. ⊙ Ranks 1st 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'.



⊙ 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.

⊙ "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. ⊙ Launched Turkey's first locally developed cyber security 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 (TAFF). ⊙ 44.2 million-dollar digital transformation project agreement signed with Sonatrach, the largest oil company of Algeria and Africa, and the 11th largest oil company of 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 a series of events.

⊙ ZTE (0763.HK / 000063.SZ), a major international provider of telecommunications, enterprise and consumer technology solutions, through its subsidiary ZTE Cooperatief U.A., acquired 48.04 percent of Netaş shares, which were held by OEP Turkey Tech. B.V, an investment managed by One Equity Partners. ⊙ 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 an horizontal cloud-based IoT (Internet of Things) platform, ION by Netaş that provides the infrastructure for the IoT applications of objects. ⊙ Awarded the contract to deploy all wired and wireless communication networks of Istanbul New Airport and to manage its operation for five years. Software and mobile applications specific to the project to ensure a state-of-the-art, reliable and uninterrupted communications at Istanbul New Airport are being developed by Netaş as well. ⊙ Signed a set of business partnership protocols with TÜBİTAK BİLGEM for the development of new generation cyber security products and projects.

## 2018

⊙ Representative office in Azerbaijan is founded. ⊙ Approval received for the foundation of a local company in Algeria. The company will be founded in 2019. ⊙ 86 patent, 19 brand applications are made. ⊙ Local Product Certificate is obtained with 100% domestic participation rate for two software product/solutions: Nova V-Gate and Mobi-fi. ⊙ NEOS OSOS (Automatic Meter Reading and Energy Monitoring System), which is offered within the scope of Netaş's smart city solutions was awarded "Commercialization of Innovation" award in Turkish Electronics Industrialists Foundation (TESİD) 16th Innovation and Creativity Awards, in "Large-Scale Corporation" segment. ⊙ Netaş is chosen as the Systems Integrator of the Year within the research of Turkey's First 500 IT Companies (Bilişim 500), 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. ⊙ Netaş has received the "2018 - The Corporate Business Partner of the Year" and in the corporate segment "Architectural Excellence" awards from Cisco, the leading global company of network technologies. ⊙ Ranked among the top 10 companies of Turkey within the Turkishtime magazine annual research "R&D 250, Turkey's Top R&D Spending Companies", Netaş also was named as one of the top 10 companies with the most R&D staff employment. As for Information Technologies, the company has kept 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.

## 2018 AWARDS

# SUCCESS CROWNED WITH AWARDS



## COMMERCIALIZATION OF INNOVATION AWARD FOR NEOS

NEOS Automatic Meter Reading and Energy Monitoring System, under the NEOS Smart Energy Management System within the scope of Netaş's smart city solutions was awarded "Commercialization of Innovation" in the Large-Scale Corporation segment in 16<sup>th</sup> Innovation and Creativity Awards of Turkish Electronics Industrialists Foundation (TESİD). The award was granted on January 23, for the innovative solutions that NEOS Automatic Meter Reading and Energy Monitoring System provides. The cloud-based system allows remote reading and management of all kinds of meter data. Developed by Netaş R&D department, NEOS Smart Energy Solutions System is being used in five cities, increasing the efficiency of resource usage.



## FIVE MORE AWARDS FOR NETAŞ IN ICT 500

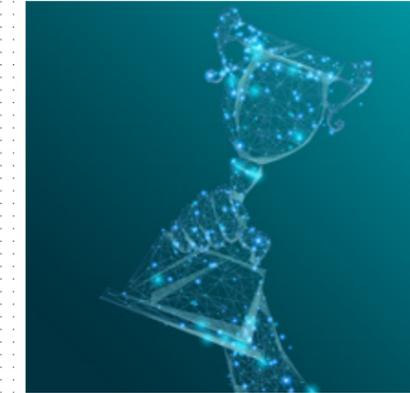
In the 19<sup>th</sup> Turkey's Top 500 ICT Companies (Bilişim 500) Survey, Netaş received five awards, proving its excellence in different segments of systems integration. In the survey, 500 largest players of the ICT industry were evaluated. Netaş was chosen as the Systems Integrator of the year in four categories, including "Hardware", "IoT and M2M", "Network Hardware", "Service Export" and "Data Backup & Storage Hardware". In addition, Contribution to Economy Special Award was also presented to Netaş on 5<sup>th</sup> of July in the "ICT Services Exports" category.



## TWO AWARDS FROM CISCO

Netaş has received the "2018 - The Corporate Business Partner of the Year" and in the corporate segment "Architectural Excellence" awards from Cisco, the leading global company of network technologies. Awards were presented to Netaş in the ceremony on September 26. Having a strategic partnership for more than 20 years, Netaş and Cisco realize digital transformation projects together both in Turkey and other international markets that Netaş operates, covering all verticals in industries such as finance, retail, production, service, energy, and the public. On the basis of the prizes that Netaş was awarded, lies the excellence of the network infrastructure of Istanbul Airport, one of the largest airports in the world. The wireless and wired communication infrastructure of the airport was built by the partnership of Netaş and Cisco, thanks to the strength of Netaş's deep-rooted R&D center. The coverage of the network infrastructure of Istanbul Airport is the largest of its kind in Turkey.

Continuing its journey full of success since 1967, Netaş again crowned its 2018 achievements with awards.



## NETAŞ IS ONE OF TURKEY'S TOP 10 COMPANIES WITH THE MOST R&D INVESTMENT

Being an ecocole of next-generation technologies in Turkey, Netaş ranked among top ten companies in two categories in the Turkishtime magazine's annual survey of "R&D 250, Turkey's Top R&D Spending Companies" in 2018. In Information Technologies category, Netaş has maintained its leadership. In terms of the share of the R&D spending to the total turnover, Netaş ranked among the top 10 companies with 13,6 percent. Meanwhile, Netaş subsidiary Kron, with 10 percent A class shares owned by the company, took place in the same list by spending one-fourth of its total turnover for R&D. Founded Turkey's first private telecommunications R&D center in 1973, Netaş took place in the list of "Turkey's top 10 companies with most R&D staff employment" in R&D 250 research. The company will celebrate its 45<sup>th</sup> anniversary of the foundation of its R&D center in 2019.



## ANOTHER AWARD FROM TİM FOR ICT SERVICES EXPORTS

In 2018, Netaş ranked in the "ICT Services" category within Turkey's 500 Largest Service Exporters annual survey conducted by Turkish Exporters Assembly (TİM). The President Recep Tayyip Erdogan presented the awards to the corporations which ranked in the "Turkey's 500 Large-Scale Service Exporters" survey. With its vision to become Turkey's global technology brand, Turkey's digital transformation architect Netaş was named as the second largest ICT services exporter of Turkey.

## NETAŞ IN 2018

# ANOTHER YEAR FULL OF ACHIEVEMENTS

Having a busy agenda in 2018 both in its domestic market and in international markets, Netaş has left behind another year full of achievements. From conferences to partnerships, trainings to social responsibility projects, here are some of prominent developments of Netaş in 2018...



## NETAŞ CEO C. MÜJDAT ALTAY ELECTED AS TESİD CHAIRMAN

In the 28<sup>th</sup> Regular General Assembly Meeting of Turkish Electronics Industrialists Foundation (TESİD), Netaş CEO C. Müjdat Altay was elected as the Chairman of Board for the 2018-2019 period. Being the chairman of the board for the foundation since 2010, Altay stated: "Electronics and ICT industry has a leading role among all the industries to bring Turkey to the future. Within the scope of the Republic of Turkey's 2023 targets, we would like to create technology brands with determinant roles in global markets and make electronics and ICT industries the driving force of the economy providing

high added value. A pillar of this is to support start-ups and strengthen the ICT ecosystem; while another pillar is to smooth the digital transformation journey for SMEs and provide an increased pace for their contribution to the economy. Our motto as the new board management is going to be 'Turkey's future is in youth's hands.' Individuals that think, investigate, question, take risks, and are open to innovation, will carry our country a step further in all fields. With this understanding, we will support the young entrepreneurs of our country, as well as the "Young TESİD" entity within our foundation much more.



## NETAŞ AND BOGAZICI UNIVERSITY COOPERATE TO DEVELOP GLOBALLY COMPETITIVE PRODUCTS

With the "R&D and Productization Frame Agreement" they have signed, Netaş and one of Turkey's best universities, Bogazici University will conduct collaborative R&D and position the developed products in global markets. Within the scope of the partnership, Netaş R&D experts and the academic staff of the university will work together and develop products with a global vision, focusing on 5G, cloud computing and Internet of Things (IoT). C. Müjdat Altay, Netaş CEO and Dr. Mehmed Özkan, Rector of Bogazici University attended the signing ceremony held on March 22. Speaking at the ceremony, Netaş CEO stated: "We made significant achievements until this day through university-industry partnerships and through developing innovative products and solutions. However, this partnership has a very special importance for us. With this partnership, we will not only conduct collaborative R&D activities, but we will also conduct the productization process of a project developed locally in Turkey for global markets. This step will provide significant contribution to our target of becoming the region's technology powerhouse."



## NETAŞ PRESENTS ITS LATEST NETWORK MANAGEMENT APPROACH FOR 5G IN MWC'18

During the world's biggest mobile technology gathering MWC, held between February 26 and March 1 in 2018, in Barcelona, Spain, Netaş' 5G Architect Dr. Yunus Donmez presented the latest management and automation approaches in 5G networks, with his speech titled "Network automation during the transition from 4G to 5G" in a panel during the congress. The audience of the panel included the representatives from leading global mobile operators, smart phone producers, application developers, infrastructure providers, and mobile technology developers. Kicked off its R&D studies on 4G back in 2008 when 3G licenses were being granted in Turkey and developed a prototype of a local base station until 2013, Netaş continues its R&D researches on 5G technology. Netaş's 5G R&D team develops new products and services in line with the latest innovations in 5G.



### NETAŞ R&D KEEPS MAKING A DIFFERENCE IN TELECOMMUNICATION

Making a difference in the industry with its R&D and innovation studies, Netaş has taken the third row among telecommunication companies with the most patent applications, according to the Turkish Patent and Trademark Office's 2017 report. The company is also ranked 3<sup>rd</sup> among telecommunication companies with most patent applications until this day. Stating that Netaş is the company making the largest R&D investment in the ICT industry, Netaş CEO C. Müjdat Altay said, "As a technology hub of Turkey, as well as its region, we increase the added value we provide

through our R&D and innovation activities. Thanks to these efforts, the savings we have provided to our country have exceeded \$3.5 billion. Education and R&D are of the critical importance for Turkey to produce its own technology with its own resources. As Netaş, we founded Turkey's first private telecommunication R&D in 1973. We provide contributions to the Turkish ICT ecosystem, not only with technological solutions we develop, but also through our role as an institution to train ICT professionals, as we see all the achievements in this field as 'national matter'".

### BINALI YILDIRIM VISITED THE ZTE R&D CENTER IN CHINA

President of Grand National Assembly of Turkey visited the ZTE R&D Center during his formal call to China. Briefed about ZTE's leading 5G and communication technologies, Yıldırım has also visited the company's R&D labs. Yıldırım was accompanied by Netaş Board Chairman Xiao Ming, Board Member Jiang Xiangyang, and CEO C. Müjdat Altay.



### BAU-NETAŞ TECHNO ACADEMY NOW OPENED FOR ALL IT INDUSTRIES



BAU-NETAŞ Techno Academy Master and Doctoral Program in Computer Engineering with Thesis has given its first graduates since its foundation in 2014. Setting a sustainable example to university-industry partnerships, the program is opened to all IT industries in 2018. In the BAU-NETAŞ Techno Academy Master and Doctoral Program in Computer Engineering with Thesis, a syllabus created by the collaboration of NETAŞ engineers and BAU academicians is being practiced. Kicked-off for engineers that aim to work in fields such as multimedia technologies and cybersecurity, the program differentiates from its counterparts by being practiced in NETAŞ'S R&D labs.



### CHINA'S CONSUL GENERAL IN ISTANBUL CUI WEI VISITS NETAŞ

Consul General of People's Republic of China in Istanbul Cui Wei paid a visit to Netaş on December 14, and was briefed about Netaş's R&D capabilities, its technology products and services, and the breakthrough planned in the upcoming days with the company's main shareholder ZTE.

### WOMEN-FRIENDLY COMPANY

Netaş has signed the Principles of Women's Empowerment constituted with the partnership of UN Global Compact and UN Women. Supporting this global initiative focusing on increasing the women participation in all aspects of the economic life and ensuring a gender equality, Netaş also endorses "HeforShe" initiated by UN Women.



### NETAŞ DELIVERS ROBOTICS AND INNOVATION CLASSROOMS IN İZMİR

After having deployed the technology infrastructure for more than 8 thousand schools in 46 cities for next-generation smart classes within the scope of the Ministry of National Education's FATİH project, Netaş provided two technology classrooms in İzmir. Technology classrooms provided to Havva Yıldırım Pre-school and Bahar Yıldırım Elementary School in Karabağlar district of İzmir were delivered on April 23, the National Sovereignty and Children's Day. With these technology classrooms, Netaş has aimed at setting an example of "Technology Class" concept to Turkey in primary education. Within the scope of the project, the approach was to focus on improving the level of analytical thinking and learning skills of primary school-age children.

## INDUSTRY DEVELOPMENTS

# GLOBAL ICT MARKET KEEPS UPTREND IN 2018

**The global economy made a good start to the year 2018, though closed the year with a rising risk outlook; while the global ICT market maintained the previous year's uptrend. The market is expected to record an overall year-on-year growth of 3.9 percent in 2018, on a nominal exchange rate basis.**

Despite making a good start to the year, the global economy has closed 2018 with a rising risk outlook, due to rising protectionism resulting in increased uncertainty. The World Bank revised down its global economic growth forecast by 0,1 percentage points compared to its mid-year forecast to 3,0 percent.

On the other hand, geopolitical tensions going on in Turkey, the currency rate shock of August and deterioration seen in macroeconomic figures have caused increased difficulty throughout the year. As a consequence, the overall growth of the Turkish economy remained at 3.6 percent in 2018.

The economic growth of the Middle East and North Africa, key markets of Netaş, accelerated to 1,7 percent, compared to the previous year, while the growth rate in Turkic Republics has shown some slowing down. (Resources: World Bank, TÜİK)

## DIFFERENT TRENDS IN GLOBAL AND TURKISH ICT MARKETS

In the global ICT market, the uptrend observed in 2017 continued in 2018, and the market is expected to record an overall year-on-year growth of 3.9 percent, on a nominal exchange rate basis.

The North African and Middle Eastern ICT market, where Netaş is an active player, is thought to have moved sideways.

The Turkish ICT market, on the other hand, has contracted by 25 percent year-on-year, on a nominal exchange rate basis. (Source: Gartner Market Databook, Q4 2018)

Examining sub-segments of the world ICT market on a nominal exchange rate, the server equipment category, was the fastest growing cluster with a year-on-year growth of 18 percent. It is considered that the investments done by large-scale data centers and the increase in memory prices contributed to the faster growth. On the contrary, the server equipment segment is the fastest contracting segment with 35.7 percent in the Turkish ICT market. On a fixed exchange rate basis, the Turkish software market has grown by 11.4 percent and the IT services market has grown by 9.9 percent. (Source: Gartner Market Databook, Q4 2018)

In the upcoming 4-year period, the rapid growth in the software and IT services segments is anticipated to be the main drive of the Turkish and global OCT market.

## AN ECONOMY BASED ON DATA

We live in an age that the digital takes a greater share both in our business and daily lives. More time is spent online, primarily due to online videos, social media, and games. Accordingly, broadband data usage per capita shows significant increases. The monthly mobile data usage per subscriber in Turkey has increased by 50% in the last three years, reaching 4.7 GB. As for the subscribers using a 4.5G-supporting SIM card, this figure stands at 7.6 GB. Meanwhile, in the abovementioned period, the fixed broadband usage has increased by 16 percent year-on-year, reaching 94 GB. (Source: BTK Market Data Report - 3<sup>rd</sup> Quarter 2018). Growth in this field will be driving force for the investment to be made in telecommunication infrastructure.

With its more than 50-year experience, strong technology talent pool and the globally proven product range of ZTE, its main shareholder, Netaş is an important supporter for telecom operators in this field.

The digital transformation of corporations takes place on the base of data. It is critical for corporations to collect large amounts of data, to remain competitive, by increasing the workflow efficiency, taking preventive measures in manufacturing processes and understanding the customer behavior. In a typical scenario, IoT platforms and Big Data systems are used to retrieve and analyze data from a wired or mobile network (e.g., LPWAN). Once data are interpreted with business analytics applications, then transformed into predictions, decisions, or workflows through artificial intelligence algorithms, and offer added value.

Throughout this journey of data, Netaş provides support to corporations with its end-to-end solutions and consultancy services. As for the protection of digitized data, Netaş provides corporations with extensive and quality cyber security services, thanks to its expert cyber security team and Cyber Security Operations Center.

## Technology for smart life

Providing its services to companies operating across various industry verticals ranging from public to telecommunication, and from finance to general industry, Netaş has successfully implemented large-scale digital transformation projects both in Turkey and abroad in 2018.

The company hence continued offering technologies for a smarter life.

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SMART TRANSPORTATION

# TECHNOLOGY INFRASTRUCTURE FOR ISTANBUL'S NEW AIRPORT

Turkey completed the first phase of the country's largest investment in its history, Istanbul Airport, on October 29. Delivering the airport's telecommunication infrastructure and data center cloud automation systems, Netaş has continued to transform and simplify the daily life.

Istanbul Airport, which will make Turkey one of the prominent hubs within the global transportation network, stands out with its infrastructure tailored for innovative and smart technologies. Thanks to the technological infrastructure laid by Netaş, Turkey's architect of digital transformation with its over 50 years of experience in communication technologies, Istanbul Airport provides seamless, fast and secure internet access simultaneously to 55 thousand people. This, in return, reduces the waiting times at passport and customs checkpoints and check-in counters, while maximizing the operational efficiency.

A NEW NETWORK COVERAGE RECORD

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.

Almost  
**5,000**  
access points  
on wired and  
wireless networks

Simultaneous,  
uninterrupted,  
fast and secure  
internet access for  
**55,000**  
people

**24/7**  
monitoring





**DATA CENTER CLOUD AUTOMATION SYSTEM**

Netaş has 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 centres.

Netaş will monitor the performance and errors of the data centres on a consolidated dashboard, providing a substantial increase in the efficiency of IT operations, since all alarms and event data coming from thousands of systems can be tracked easily. The monitoring system also allows the tracking of non-IT errors and event notifications. Thanks to this structure, the airport service teams will be able to increase the pace and the efficiency of their operations, using artificial intelligence solutions. Netaş will also provide operation, maintenance and repair of these systems for five years.

Besides the above, Netaş will also build the information infrastructure for the biggest airport hotel in the world to be constructed inside Istanbul Airport.



**TRANSPORTATION SAFETY ON RAILROADS WITH HIGHER CONNECTIVITY**

Having successfully completed a total of seven rail communication projects so far, Netaş is putting its signature under new projects with its vast experience in railway communication networks. The Company provides high-performance connectivity and operational efficiency with its GSM-R solutions, a wireless and secure broadband communication standard optimized for railroads.

Netaş continues to carry its experience in GSM-R projects over to the new projects. The GSM-R infrastructure of Marmaray High-Speed Train Project will be completed in 2019, once the acceptance and the testing procedures are accomplished. As part of the Sivas-Yerköy High-Speed Train Project that started in 2018, the GSM-R exchange, GSM-R Radio Communication Network, and Wired Network Communication Infrastructure will be completed by the end of 2019, and the work for Yerköy-Kayaş line is expected to start in 2019.

Providing solutions for TCDD Line Modernization projects, in addition to the High-Speed Train Lines, Netaş continues to build infrastructures such as network communication systems. Bandırma-Menemen Project, which is currently under construction, is expected to be completed in 2019.

SMART ENTERTAINMENT

# SMART STADIUMS ALL ACROSS TURKEY

Integrating the Turkish football into the digital future, Netaş has deployed the electronic ticketing infrastructure of a total of 52 stadiums as of the end of 2018 within the scope of the Smart Stadium Project which has been in progress since 2014 in cooperation with the Turkish Football Federation (TFF).

Having laid the IT infrastructure by installing the entire network and systems of the facilities including CCTV Surveillance Systems, Access Control Systems, Match Operation Centers, Stadium Data Centers, Netaş transformed these venues into 'smart stadiums'. 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.

Besides the simultaneous and high-speed Wi-Fi service and e-ticket infrastructure provided to thousands of visitors as part of the TFF project, the service portfolio of Netaş also includes offering effective advertisement platforms, smart parking, and indoor location services through beacons that offer customized campaigns. Netaş also continues to provide maintenance and network/system operation services to Spor Toto Super League and Spor Toto Premier League stadiums.

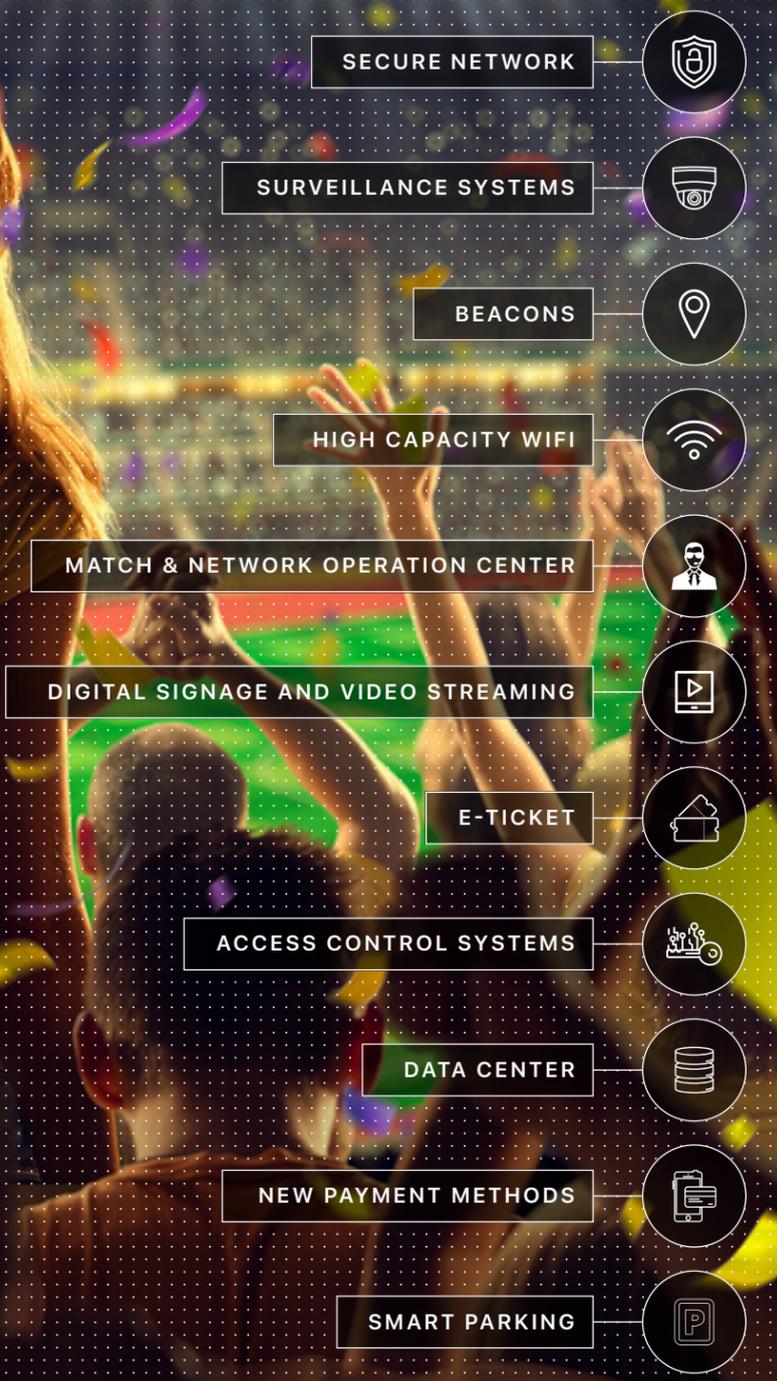
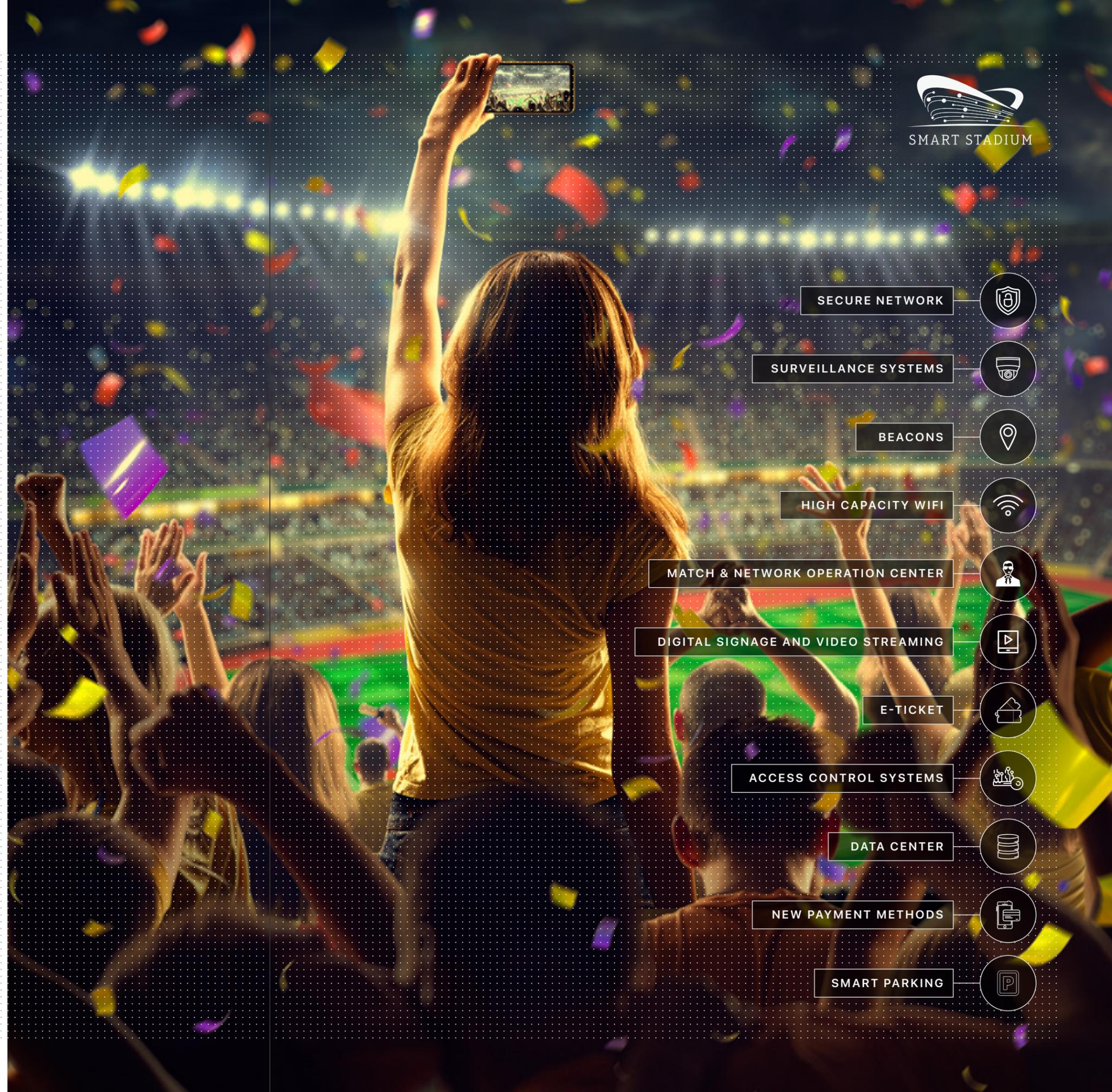
Thanks the systems it has built, Netaş ensured an integrated and single-center management for the entire structure, including central ticketing, network, system, CCTV, GKS, IT infrastructure and aims to continue with the project in 2019.

SMART STADIUM FOR ALGERIA

Transferring its smart entertainment experience to Algeria, Netaş will implement integrated solutions in accordance with international standards identified by FIFA and build Tizi Ouzou Stadium Complex consisting of a stadium with a capacity of 50 thousand visitors and an athleticism center of a capacity of 6 thousand 500 people.

The project that will be an outstanding example for the digital transformation in Algeria encompasses IP CCTV, fire alarm, carbon monoxide detection and announcement systems, SMATV, access control, central clock system, lighting automation system, a broadcast system, stage management system of both stadium and athleticism fields, LED screens, and parking lot systems.

The project differs from its counterparts with an integral solution where multiple weak current systems are integrated, and Netaş will gain significant experience due to the fact that the project accommodates many new technologies at international standards. The project is scheduled for completion in 2020.



## SMART PUBLIC SOLUTIONS

# DIGITAL REVOLUTION IN DISASTER MANAGEMENT

Disaster Management and Decision Support System (AYDES), an AFAD project that Netaş initiated in 2013, was put to service in 2018. Having been developed for the digital management of all phases of a disaster and the efficient use of resources, AYDES is among few digital disaster management systems in the world.

Within the project, Netaş has developed a decision support system based on geographical information, which allows monitoring all phases of integrated disaster management in the electronic environment. The third phase of the project which was developed for the Disaster and Emergency Management Authority (AFAD) and which ensures coordination and emergency decision support mechanism in case of a disaster was completed in 2018.

AYDES enables the effective management of resources in disasters and emergencies and the smooth operation of the command process. AYDES is being used by about 7 thousand active users in 81 cities, among which are institutions/organizations, NGOs 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 30 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.

## CAPABILITIES OF AYDES

Drawing hazard and risk maps depending on the disaster type

Predicting the effect, a possible disaster would create in view of the disaster and emergency drills

Managing the post-disaster work using the decision support system

Managing the post-disaster recovery processes

Collecting field data through mobile applications and transferring them to the central database

Dynamic and instant reporting on the dashboard using the decision support system

**AYDES**  
AFET YÖNETİM VE KARAR DESTEK SİSTEMİ





## TECHNOLOGICAL SOLUTIONS FOR SAFER CITIES AND SCHOOLS

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.

Within the scope of the Safe School Project conducted by the Ministry of National Education, schools and their surroundings can be monitored live by security forces and the CSMS Centers using the integrated cameras of Provincial Safety Management System. Under the project, Netaş has been performing the installation and integration of all network, system, cameras, and infrastructure of a total of 762 schools in 71 cities across Turkey. Netaş will be continuing with the project in 2019 and provide guarantee and maintenance services for two years after the school systems have been commissioned.



## NETAŞ SUPPORTS THE 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. Ministry of Transportation and Infrastructure to transform public institutions and organizations to e-Institution.**

### E-CENSUS SYSTEM PROJECT IN TRNC

It is the most important project of the first phase of the TRNC e-Government Program. Having signed a contract with Türksat at the end of 2012 for this project, which is the core of e-Government, Netaş successfully completed the process and undertook the responsibility for providing the guarantee, maintenance and support for three years by the beginning of 2018.

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. Having digitized millions of census data that from the physical environment, Netaş built an e-Census system through which citizens are given new identity numbers. Thanks to the system, e-identity card applications can also be made via the e-Census system that is integrated with the e-identity system, where the biometric data is collected to issue e-identity cards.

### TRNC E-CORPORATE (CENTRAL REGISTRATION SYSTEM FOR E-COMPANIES) PROJECT

With the success and the experience it gained in the TRNC e-Census System Project, Netaş was awarded the e-Corporate and e-Customs project in the second phase of the country's e-government program. The contract of the project had been signed at the end of 2017 and the development work is still going underway. 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.

This project is aimed at collecting and centralizing up-to-date information of legal entities, keeping this information updated in a secure environment and making the information accessible from a single point for all stakeholders.

### TRNC E-CUSTOMS / CIS (CUSTOMS INFORMATION SYSTEM) PROJECT

The project that was contracted at the end of 2017 and that is still in progress 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.

With the commissioning of the Customs Information System, designed in the light of technological developments and e-Government criteria, at the Customs and Duties Office of TRNC Ministry of Finance, stakeholders will be offered high quality and modern customs services in compliance with the global trade norms and the European Union customs legislation with regard to the administrative organization of customs, the documents and the business processes.

## SMART ENERGY

# DIGITAL TRANSFORMATION IN THE ENERGY INDUSTRY WITH NEOS

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

## IT SAVES TIME AND REDUCES WORK LOAD

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.

In Turkey, about 14 percent of annual power distribution is carried out over OSOS, and about 80 thousand electricity meters are read remotely. The system which is actively used in the field by two major power companies enables the management of street lighting systems in five provinces (Aydın, Muğla, Denizli, İzmir, and Manisa). The project is designed to perform tasks such as monitoring the consumption data of free consumers, tracking the alarms in the field, lighting management, and transformer load optimization.

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.

## EFFICIENT AND ECONOMICAL CITY STREET LIGHTING

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 can provide electricity consumption savings up to 75 percent in city street lighting.

Aiming to use the capabilities of the NEOS family of solutions in the management of other resources as well, Netaş expanded its Big Data Analytics Team in 2018. This team will also play a role in the development of smart city applications based on the data received from the sensors installed in cities, in projects for increasing the industrial productivity and in telecom industry projects for increasing the service efficiency through data analysis.

## GIANT DATA CENTERS IN THE DESERT

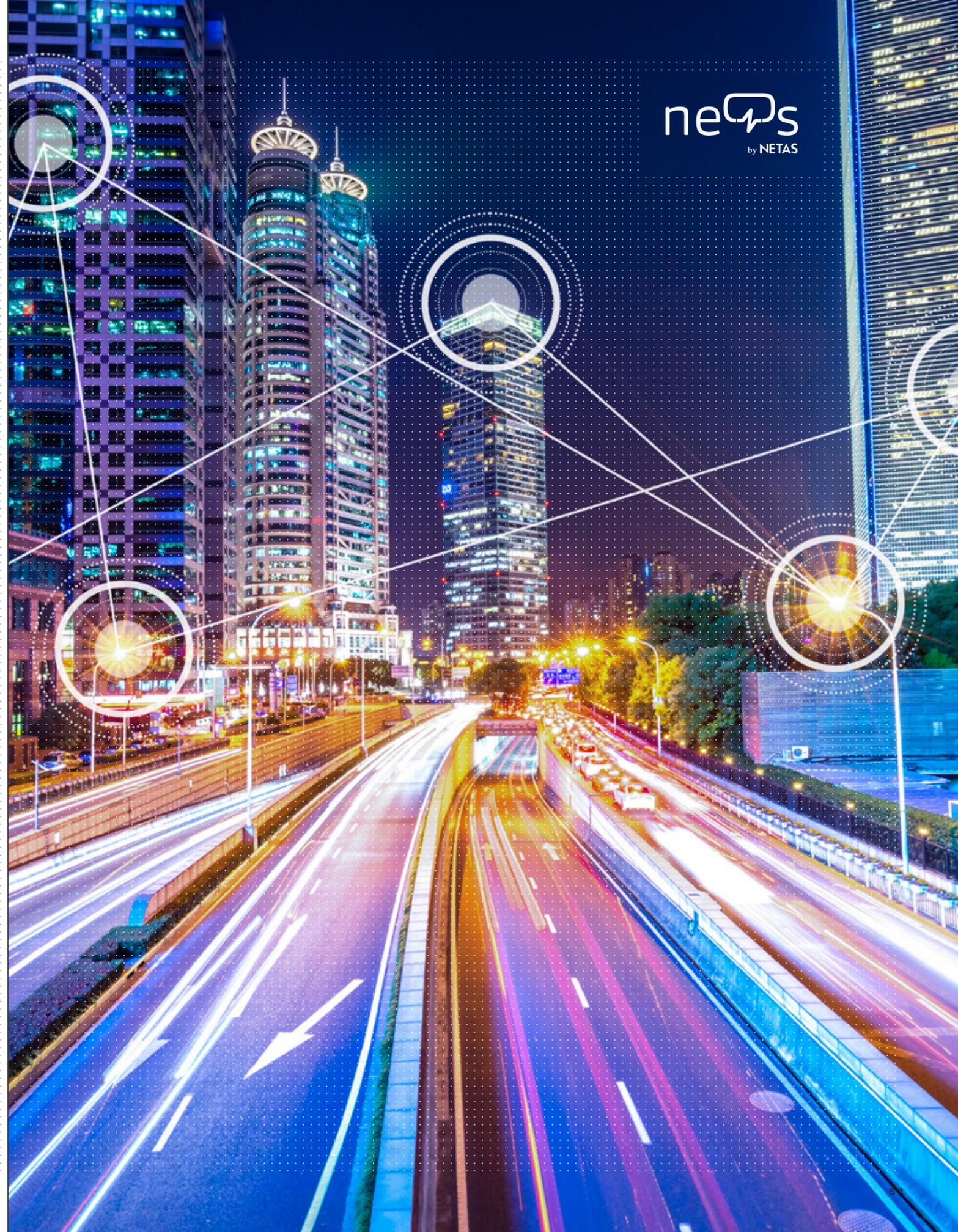
Netaş reached the final stage in the Sonatrach's digital transformation project, which includes the installation and delivery of six data centers. Sonatrach is the largest oil company in Algeria and Africa. Netaş exhibited outstanding performance in this colossal project and successfully commissioned the data centers in four cities in the desert with its project team of over 20 experts. Following the completion of four centers in 2018, Netaş will establish two other data centers in 2019.

Thanks to this important project that will integrate Sonatrach to the digital future, the employer of about 120 thousand people and accounts for 30 percent of the Algerian GDP, operational costs of the corporate IT infrastructure will be reduced, data centers will be easily managed from a single point, the infrastructure will be totally renewed and end-to-end security will be achieved. By the end of the project, the distributed IT infrastructure of Sonatrach will be consolidated and standardized, gaining an expandable and simple structure that is flexible enough for easy integration to new technologies.

## NETAŞ SUPPORTS THE WORLD'S FIRST AND BIGGEST PLANT TO CONVERT NATURAL GAS TO GASOLINE

The Gas-to-Gasoline (GTG) Project developed by Rönesans Holding in Turkmenistan will, once complete, be the world's first and largest production plant equipped with process automation that converts natural gas to gasoline. Having undertaken the development of the project network, telephony infrastructure, IP CCTV and card access systems and the integration software that will enable the integration of operation among them, Netaş plans to complete the project in 2019.

ne<sup>os</sup>  
by NETAS





## SMART CITY

# SMART CITY SOLUTIONS FOR A SUSTAINABLE FUTURE

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 as 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 Taxi Kep Project conducted with Istanbul Metropolitan Municipality has the capability of assessing and analyzing information such as air and road quality and traffic status based on data collected by the sensors attached to taxis. The Yellow Truck Project, on the other hand, implemented through ION is aimed at monitoring the excavation trucks to prevent illegal unloading.

## SMART EDUCATION

# AN INFORMATION INFRASTRUCTURE TO ENSURE EQUALITY OF OPPORTUNITY IN EDUCATION

## TECHNOLOGY INFRASTRUCTURE FOR 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 9 thousand 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.

## ONLINE AND REMOTE EDUCATION TOOLS

VIO Akademi, developed by NETAŞ R&D based on WebRTC technology, stands out as a cost-effective, result-driven, and efficient remote education tool for educational establishments and can be used without any installation. VIO Akademi offers the features of a virtual classroom with multiple and concurrent video connections and the screen sharing feature allows collaborative working on the same document and sharing the whiteboard for working on the same whiteboard.

The first pilot scheme of VIO in higher education institutions was implemented in Isparta Applied Sciences University in 2018. VIO connects the university and the students receiving workplace and practical training in other cities. Thus, the academic staff can now be able to provide support to their students through remote monitoring.



## SMART HEALTHCARE

# DIGITAL TRANSFORMATION IN CITY HOSPITALS

Netaş has completed the installation of data centers and network infrastructures of three city hospitals. The delivery of the technological infrastructure of Yozgat and Adana City Hospitals was followed by Elazığ City Hospital in 2018. Netaş ensures uninterrupted operation in hospitals where system operability is of vital importance with the end-to-end backup systems it has established.

Thanks to the infrastructure built by Netaş, 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. Netaş will establish the ICT infrastructure of Bursa City Hospital in the near future.

## NEXT GENERATION 112 EMERGENCY LINE SYSTEM

Netaş completed the software development, hardware supply, infrastructure deployment, installation of equipment, and testing & commissioning for the 112 Emergency Line Management System project, the first phase of which was started in 2014 by Aselsan. The project aims to provide fast and effective emergency services and its third phase was started in 2018. The installation and commissioning of Next Generation 112 Emergency Line Systems in city centers still continues.

## INCREASED MOBILITY FOR THE VISUALLY IMPAIRED

As the contractor of the Seeing Eye Project conducted by the Ministry of Transportation, Communication and Maritime and the Ministry of Family and Social Policies to increase mobility for to the visually impaired and to get them further involved in social life, Netaş completed the third phase.

As part of the project, a total of 15 thousand devices have been distributed in 67 cities so far, including 5 thousand devices delivered in 2018. Users of Seeing Eye devices can benefit from the audio function as well as the navigation feature, to move in the urban area without assistance, sending location as SMS and making use of smart telephone features.

## A NEW SMART HOSPITAL IN ALGERIA

Another remarkable project Netaş undertook in 2018 in Algeria is the Kayı Ouargla Military Hospital project. Netaş has been building all network, telephone, weak current and automation systems of the 180-bed hospital, which is currently under construction in the city of Ouargla. The project is expected to be completed in 2019.



## DATA AND BUSINESS ANALYTICS

# THE OPERATIONAL DATA GET INTO ACTION

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 continues to develop big data solutions concurrently for different industries in its Big Data Platform and Test Laboratory. Netaş Big Data Platform collects instant and periodical logs from server data to instantly process and assess all kinds of demands received from mobile and web platforms; transfer the data in structural databases to the big data platform as well as processing the data received from the IoT applications.

Having performed PoC work for companies such as Hugo Boss, Tüpraş and Pegasus in 2018 and carried out joint work with Turkcell, Netaş Big Data and Business Analytics Team accomplishes industry-driving innovative solutions.



## COMMUNICATION

# UNIFIED SOLUTIONS TO REDUCE OPERATIONAL LOAD

Netaş offers solutions including instant messaging, status information, voice communication, mobile capabilities, voice/web/video conference, convergence, desktop sharing, call center applications, voice recording and analysis, voice signature and text-to-voice and voice-to-text to the corporate market in the form of real-time integrated solutions as a part of its unified communication solutions.

Netaş has implemented major infrastructure projects, focusing on telecom systems modernization, unified communication/multimedia communication, telecom transfer to cloud and completed numerous related projects with success in 2018.

## EFFECTIVE AND MODERN TELECOMMUNICATION NETWORK FOR CYPRUS

Netaş undertook its first project with ZTE in December 2018 in TRNC. The project which is carried out for the TRNC Telecom Authority involves the installation and maintenance of IMS and number porting systems in Cyprus telecommunication network. Cyprus Telecom Authority will acquire a more effective and modern infrastructure and become compatible with the 5G technology. This project, vitally important for the country, will be completed in June 2019.

## SPECIAL COMMUNICATION SOLUTION FOR THE SMEs IN AUSTRALIA

The communication project developed by Netaş for one of Australia's largest telecom service providers was put into use with success in 2018 in a short time like four months. Netaş designed a brand-new communication system for the 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.

## CORPORATE SOLUTIONS IN SWITZERLAND

Netaş realized a project in 2018 for one of the major service providers in Switzerland in which it 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.

## ETISALAT (EMIRATES TELECOMMUNICATIONS CORPORATION) PROJECT

Netaş started Etisalat (Emirates Telecommunications Corporation) project in the United Arab Emirates in 2018 and has been developing a communication system in line with the local communication legislation. When the project will be completed in 2019, the numerous foreign employees in the country will be able to have access to easy and affordable international communication.



## FINANCE

# SPECIAL SOLUTIONS FOR THE FINANCE INDUSTRY

Netaş left behind a prosperous and successful year with the services offered to the finance industry. Projects such as Ziraat Cisco ACI Project in the field of SDN (2015), Finansbank OKI ATM Project in payment systems (2017), Ergo Insurance Testing Services Project (2017), Borsa Group (Borsa İstanbul, Takasbank, MKK), DC NW (2013) which were started in the previous years were continued successfully in 2018 as well.

And in 2018 Netaş added new projects to its portfolio. Having started providing cyber security operation services to finance institutions for the first time with Ergo Insurance project, Netaş began working in 2018 by undertaking projects such as Halkbank Fortinet product procurement and maintenance and POS maintenance, mobile test automation counseling for Credit Registry Office, Fortinet firewall purchase, video conference, and device farm solution.

## TEST SERVICES

### TESTING SERVICES COUNSELING PROJECT

Ziraat Technology

Netaş has been awarded 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 155 years, and its subsidiaries. Within the scope of the project, Netaş will be 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.

### DSS PROJECT

Turkcell

In 2018, Netaş, which is the only company that provides test services in Turkcell DSS project, started to provide high value-added test services with Visium Go and Visium Load from Netaş portfolio offering automation and performance test solutions. Within the scope of this project, Netaş started to cooperate with Applause, one of the world's leading companies, for the Abroad Crowd Testing Solution, and end-user and exploration tests of Turkcell DSS applications have been started worldwide.

## CYBER SECURITY SERVICES

### SOC AND CYBER INTELLIGENCE SERVICES

sahibinden.com

In 2018, Netaş undertook the "SOC Premium" and "Improved Cyber Intelligence Service" projects of 40 thousand EPS for sahibinden.com, which is one of the largest e-commerce portals in Turkey with 49 million users. Within the project, Netaş Cyber Security team will provide SOC Premium Service and be responsible for managing and 24/7 monitoring the SIEM device and for responding to incidents (IR). The team will also provide cyber intelligence service; the platforms and producer databases in the web, deep web and dark web will be continuously monitored to identify any possible threats to sahibinden.com and develop action plans to remove the threat or perform impact control.

### CYBERSECURITY SYSTEMS

Defacto

Recording a fast growth with every new store, Defacto entrusted its cyber security systems both in Turkey and at the global level to Netaş in May 2018. In the project, which aims to minimize the impact on the company during a possible cyber attack and to ensure uninterrupted workflow, a SIEM device has been deployed from scratch in Defacto to enable 24/7 proactive monitoring of all cybersecurity systems.

### CUSTOMIZED REPORTING PLATFORM

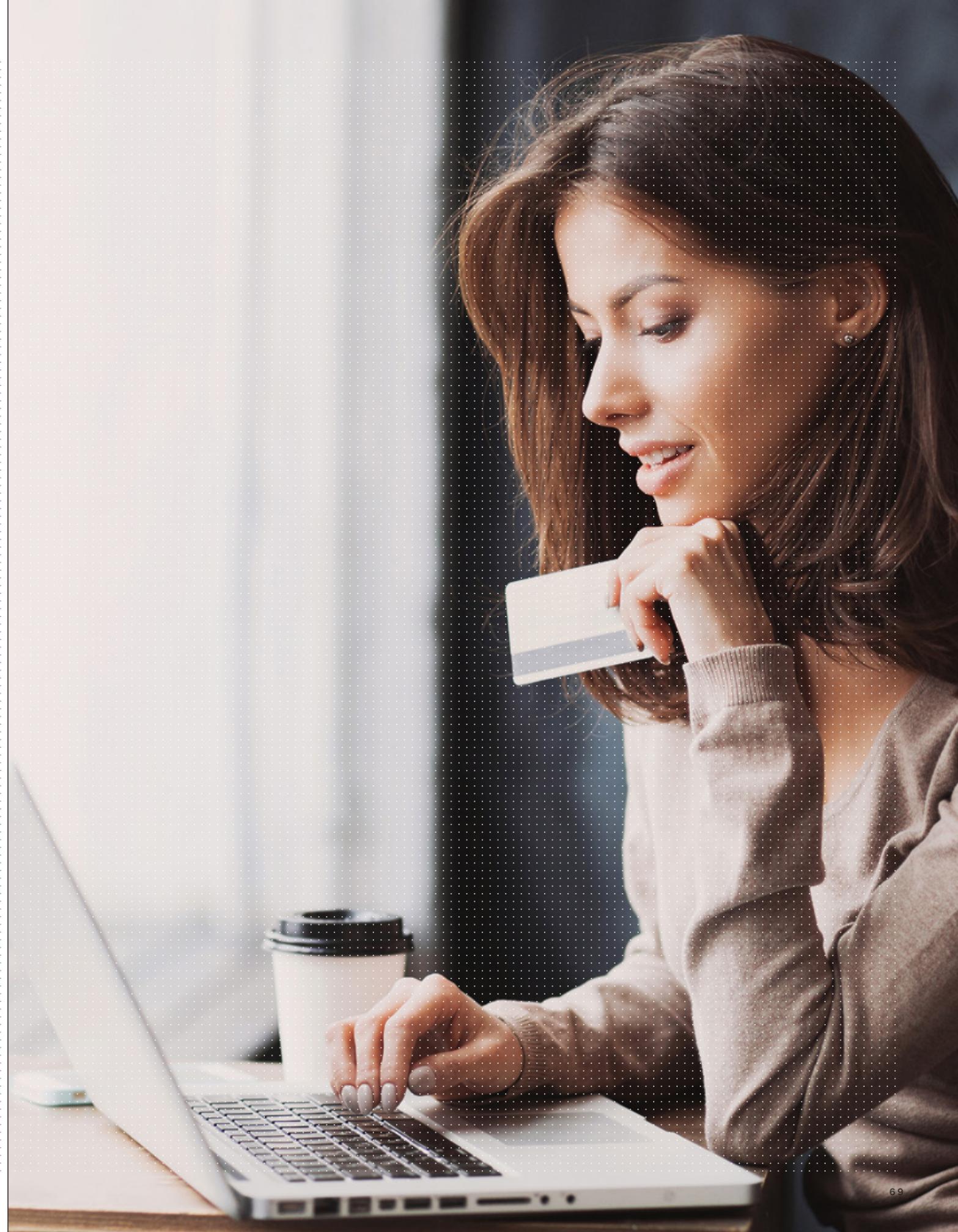
Migros

By customizing and modeling the classic vulnerability management for Migros, Netaş differentiates itself from its competitors, thanks to the customer-based reporting platform that has been developed within the service.

### CYBERSECURITY SERVICES MANAGEMENT

Millenicom

One of the alternative telecom operators, Millenicom, has started to work with Netaş for purposes of managing the cyber security systems of the company. What makes this project different from the others by Netaş and especially outstanding is that it includes a detailed outsource service, including SIEM health-check, SIEM operation dedicated firewall and DLP management, managed GDPR service, static code analysis, and vulnerability management. This is proof of the fact that Netaş is a reliable business partner for Millenicom beyond being a sole external supplier that provides services.



## Sustainable success with strong R&D

In 1973, Netaş established Turkey's first private telecommunications R&D and made a history with its success and firsts. Today, Netaş continues to make a difference with its R&D center where more than 800 engineers work to provide added-value to the country.

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**R&D has always been the locomotive of the sustainable success of Netaş for more than 50 years. Since 1973, Netaş continues to invest in R&D with full focus and is proud to be the leading systems integrator and the largest software exporter of Turkey.**

**COMPETITIVE PRODUCTS AND SOLUTIONS WORLDWIDE**

Continuing to achieve significant achievements with its versatile competencies, R&D power, innovation culture, extensive knowledge and experience, the Company pioneers digital transformation of both corporate and public customers by developing products and solutions that increase productivity, communication, and mobility for every organization.

With its ability to manage a large number of projects simultaneously, Netaş is offering cutting-edge technology products and services, custom-tailored solutions in line with the needs of its customers, in a wide range of areas including mobile communication, cyber security, defense, multimedia, cloud computing, data centers, managed services, and IoT.

**THE COMPANY WITH MOST R&D INVESTMENT AND EMPLOYMENT**

Netaş, being one of the most important names behind Turkey's telecommunication breakthrough with its local R&D culture and production power, has once again come forward with the highest R&D investment and employment in the Turkish ICT industry in 2018\*. Today, more than 800 engineers work in the company, focusing on different fields of next-generation technologies.

Currently, 17 percent of Netaş researchers have completed their undergraduate and post-graduate studies, and 13 percent of the R&D engineers are continuing their post-graduate education and Ph.D.'s.

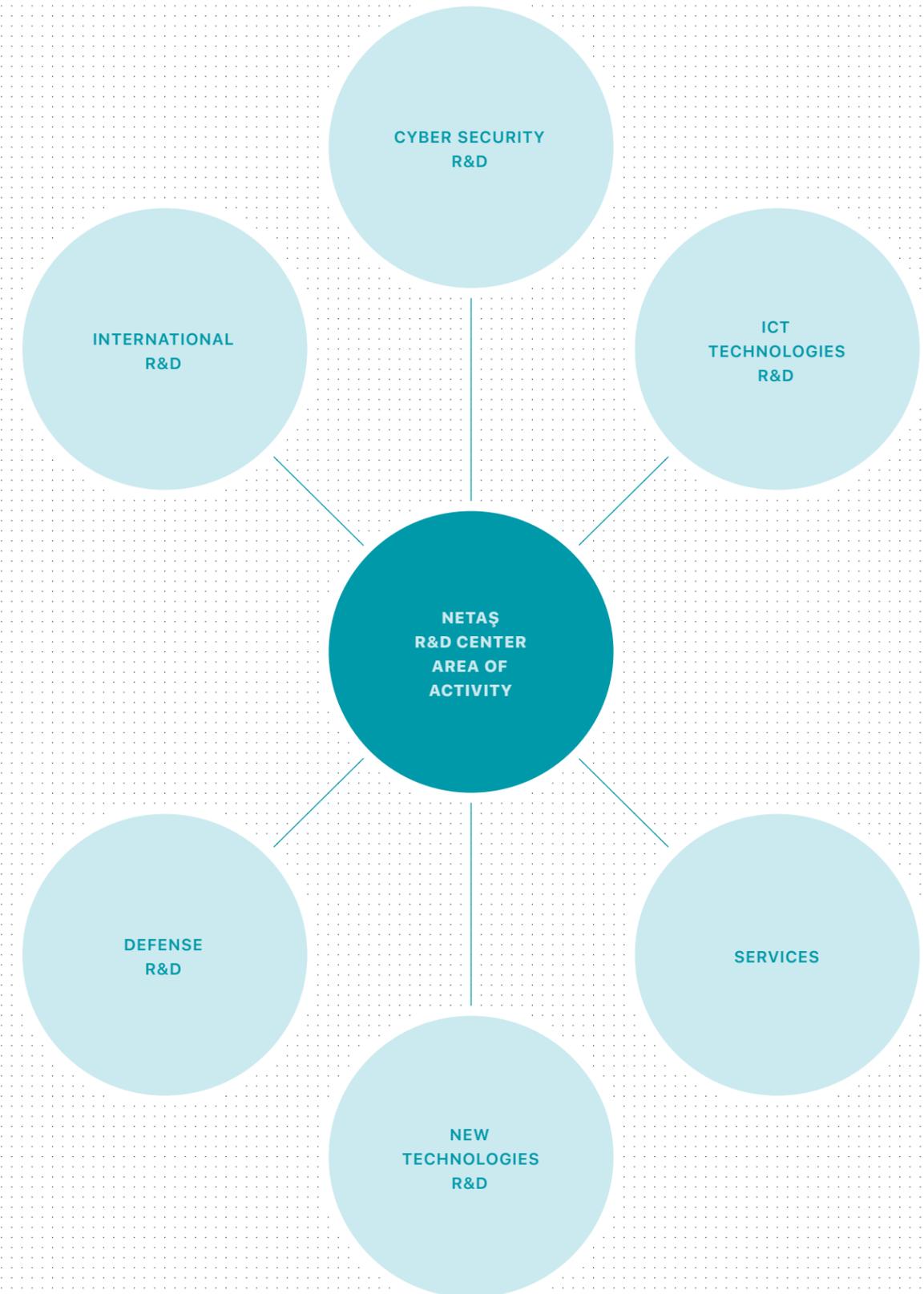
\* According to Turkishtime's "R&D 250, Turkey's Most R&D Spending Companies" research.

**ACTIVE PARTICIPATION IN INTERNATIONAL WORKING GROUPS IN 5G AND BEYOND TECHNOLOGIES**

Netaş is actively participating in ETSI and 3GPP standardization activities for 5G, which it's a member of, in order to follow and contribute to the technological improvements in the European Union. In addition, Netaş was elected to the executive board of NetWorld2020 Platform, one of the most active platforms orienting the European Union's 5G and beyond studies and became a member of 5G IA-Infrastructure Association. Netaş, who has been selected the Vice President in Celtic Plus Organisation that manages technological co-operation in the field of information and communication technologies and telecom, is actively participating in all working groups of these organizations.

**AIMING INNOVATION AND GROWTH**

Netaş R&D Center, which showed a high performance in 2018 in line with previous years, is focusing on innovation and growth for 2019, when it will celebrate its 45<sup>th</sup> anniversary. With its goal for increasing its contribution in Turkey's technology leap forward, by developing new products, Netaş will increase the awareness for Netaş R&D internationally in the following years, with its solutions especially for big data, 5G, and smart cities.



## INTERNATIONAL R&amp;D

# R&D SOLUTIONS AND TECHNOLOGY TRANSFER TO MORE THAN 80 COUNTRIES

Since its development, Netaş has provided communication infrastructure products at an international scale and conducted R&D studies for these products. Today, Netaş is serving more than 80 countries.

More than 350 engineers work in the Netaş' International R&D Unit. This Unit consists of three main teams; software development, software testing, and customer support. Thanks to Netaş R&D expertise and service quality, in addition to skills of Turkish engineers and Turkey's central and strategic position, the Netaş R&D Unit is forming long-term partnerships with its customers in international markets.

#### WORLDWIDE TECHNOLOGY TRANSFER

Netaş software solutions are being used by more than 200 operators worldwide and its largest international R&D customer is USA-based Ribbon Communications. The products of Ribbon Communications, the world leader in VoIP (Voice over Internet Protocol), are being used by more than 800 service providers and companies in more than 80 countries. Leading the world of unified communications, these products and solutions provide a connectivity anywhere on any platform. These next-generation products are being developed by Netaş engineers. Providing both product development and customer support services, Netaş is Ribbon Communications' largest R&D and innovation lab. With a proven-track record of over 40 years, Netaş continues to cooperate with Ribbon Communications and therefore, Netaş is one of the most important technology transfer hubs on a global scale.

#### 2018 – A YEAR FULL OF SUCCESS

Netaş International R&D Unit consists of three main product-based teams: 'Kandy' Cloud communication team, the unified communication team "A2" and "c20" team, which works on the modernization and adaptation of existing telecommunication systems to modern day. In 2018, the International R&D Unit conducted various projects, focusing on telecommunication systems modernization, the unified communication/multimedia communication, and cloud-based telecommunication solutions. For more detailed information about the achievements of this unit, please check Success Stories – Telecommunication section of this report.



#### KANDY R&D

- The product family, which enables SMEs to receive communication services over the cloud, was designed and commissioned at Netaş for one of the largest operators of Australia.
- **SPiDR/WebRTC Gateway (Kandy Link):** New versions were dropped, and new features were added to the product.
- **CPaaS:** Netaş supports the development of CPaaS (Communication Platform as a Service) products, one of the most important products of Ribbon Communications, through platform, DevOps, service and portal R&D activities. The acceptance tests with one of the largest telecom operators in the USA will continue with the more intensive support of Netaş in 2019.
- **CIM:** New versions of CIM were released, and the required developments for the NFC (Network Functions Virtualization) were provided for one of the USA's largest operators.
- **Smart Office (SO):** Test processes were completed and started to be used by major customers in southern US. In this comprehensive project, which started with one of the leading operators of the Gulf region, the final stage of the tests was reached. It will be ready for end-use in the first quarter of 2019.

#### A2 R&D

- With the new version of A2, almost 40 new features were developed. Performance improvements and capacity increases were delivered to customers.
- The A2 product continued to be used for critical secure communication infrastructure renewal projects and unified communications transitions and continued to gain new successes.

#### C20 R&D

- Many original approaches were developed, and challenging software projects were implemented.
- Vulnerabilities have been fixed with kernel-level version changes. Studies were carried out to increase the performance of all platform level products through extensive and architectural changes.
- Canada-owned CBMG products' all software, development and support tasks were transferred to Netaş. A completely new data warehouse design and business intelligence modeling were delivered to the customer. The update time, which was 8 hours in the past, was reduced to approximately 25 minutes with a new design, resulting in a significant performance increase and customer satisfaction.

#### CUSTOMER SUPPORT

- The problems affecting the acceptance of the main operators from all over the world have been quickly addressed and helped Ribbon Communications to meet its quarterly goals.
- Close to 10 thousand customer problems were addressed. More than 700 software solutions were developed in reply to these problems, and more than 800 customer service problems were solved immediately.
- Fast and high-quality solutions were developed for the problems encountered in the acceptance tests of critical projects.

## CYBER SECURITY R&amp;D

# NETAŞ IS EXPANDING ITS CYBERSECURITY SOLUTION SET

**Netaş offers a wide range of cyber security solutions from product development to service and consultancy, with Turkey's first cyber security product family in the VoIP field, commercialized with the brand NOVA by Netaş.**

Offering innovative, end-to-end, value-added, systems integration and technology services in the field of information and communication technologies, Netaş offers locally developed cyber security solutions, with its infrastructure hosting one of the world's top 10 VoIP laboratories. As cyber security is becoming one of the most important front of the national security, Netaş aims to be the leader in this field not only in its homeland, but also in its region with the domestic solutions it develops.

#### EFFECTIVE SOLUTIONS

The NOVA Technology Development Group in Netaş, which developed Turkey's first next-generation telecom and mobile media security products, is working to design cyber security products for the ever-increasing customer needs in reply to rapidly changing technology. This group is conducting web firewall and web services analysis tool projects with the know-how of Netaş on the web and continues to work on systems, developed to detect and prevent frauds using Big Data analytics, business intelligence, and machine learning technologies.

#### NOVA V-GATE

Many attacks targeting the VoIP infrastructure use signaling technologies and the most common signaling protocol used for VoIP communication is SIP (Session Initiation Protocol). Application level firewalls are needed to protect VoIP systems. NOVA V-Gate, designed to meet this need, identifies and prevents the telecom frauds such as toll fraud, premium rate services fraud as well as anomalies.

In 2018, NOVA V-Gate is certified for being developed entirely locally, by Istanbul Chamber of Industry (ISO).

#### NOVA V-SPY

NOVA V-SPY (VoIP Vulnerability Analysis) is a tool that examines all security infrastructures of VoIP/UC systems from end-user phones to call servers, revealing security vulnerabilities in products and that reports system configuration errors. This easy-to-use, modular and high performance vulnerability analysis tool is designed to support penetration tests and system administrators assessing the security of VoIP applications and can be easily operated by both the security personnel and non-technical personnel. NOVA V-SPY tool is compliant with standards and performs comprehensive screening, false numbering, fuzzing, DoS/DDoS, brute-force attacks and man-in-the-middle attacks. This tool also tests previously unknown application-level vulnerabilities through black box test modules that are not available in other products.

#### NOVA S/COM

NOVA S/COM provides security for both inter-client communication and client-server communication, even in non-secure open networks regardless of device and operating system. NOVA S/COM client application benefits from state-of-the-art technologies and offers secure voice and video communication and instant messaging platform that prevents man-in-the-middle, intervention, eavesdropping attack. The S/COM Signaling Server, developed internally is able to perform all signaling operations including initiating calls and sending messages. The NOVA S/COM Signaling Server, developed by Netaş, carries out all signaling operations such as initiating calls and sending messages. Providing secure communication services for standard smartphones and providing services for all companies that need end-to-end secure communication, this product provides a secure environment for many industries from logistics to education with its secure vehicle tracking system and secure whiteboard application features.

#### NOVA PENTEST

NOVA Pentest Services test applications, infrastructures and the devices and reports protection recommendations against network, VoIP, WEB and unified communication linked attacks. With Netaş NOVA Pentest Services, communication system topology detailed analysis and security checks are performed to determine the required security procedures. Basic infiltration and safety tests are conducted and a comprehensive report is provided. Verification tests are carried out after the detection of the findings at the end of the testing. Products developed within Netaş Nova Security product family are used for testing.

#### NOVA FMS

NOVA FMS is a big data security analytics platform that supports deep, holistic, correlative assessment using statistical and machine learning approaches. Key points include complex anomalies, cyber-attacks, cyber-threats, cyber-fraud, user behavioral analysis, analytical rule engine and advanced network monitoring (Web, VoIP, and Netflow data). NOVA FMS platform combines two complementary approaches to analyze high volume of telecom data that either is streamed in near-real time or that has accumulated over time. It offers rule-based detection of known patterns, anomalies and attacks. On the other hand, it runs advanced machine learning to learn normal user and entity behavior and detect changes and anomalies in each user's account and call usage. It assigns scores to users based on their risks, and alerts fraud specialists of potential threats and anomalies. NOVA FMS, additionally, provides operational monitoring and data analysis framework with rich visualizations.



## ICT TECHNOLOGIES R&amp;D

# TARGET IS TO CONTINUE DEVELOPING LOCAL SOFTWARE

**With its robust R&D infrastructure, 800 engineers, and its wide ICT ecosystem, Netaş has a strong competitive advantage. The company proudly continues to develop local software and to be the largest software exporter of Turkey.**

Since its establishment, Netaş has been bringing power and value to Turkey with new products it develops. The company continues to design software solutions tailored for major projects and integrate them into different systems.

Bringing innovation to every project it implements thanks to its R&D know-how and innovative approach, Netaş demonstrates its difference with its ability to manage 50 projects simultaneously in a fast and successful manner.

Aiming to increase its contribution in Turkey's breakthrough in technology Netaş works to develop more local solutions. Some homegrown R&D examples of Netaş in 2018 are as follows:

## TFF-SMART STADIUM PROJECT

As of the end of 2018, Netaş implemented e-ticketing infrastructure for 52 stadiums within the scope of the Smart Stadium Project carried out with Turkish Football Federation (TFF) since 2014. *For detailed information, please check Success Stories- Smart Entertainment section of this report.*

## AFAD - DISASTER MANAGEMENT AND DECISION SUPPORT SYSTEM (AYDES)

Disaster Management and Decision Support System (AYDES), which was started in 2013, was commissioned in 2018. Developed to manage all stages of a disaster in a digital environment and to use resources efficiently, AYDES is among the few digital disaster management systems in the world. *For detailed information, please check Success Stories – Smart Public Solutions section of this report.*

## TRNC - E-GOVERNMENT TRANSFORMATION PROJECTS

Within the scope of e-government transformation projects of TRNC; 'e-Census System Project', e-Corporate (Central Registration System for e-Companies) Project and e-Customs - CIS (Customs Information System) Project were launched. *For detailed information, please check Success Stories – Smart Public Solutions section of this report.*

## NEOS

The NEOS product family developed by Netaş includes, NEOS OSOS (Automatic Meter Reading System), NEOS hydro for the management of the water supply network and NEOS photon for the management of the city lighting have been started to be positioned in new projects. *For detailed information, please check Success Stories – Smart Energy section of this report.*

## ION - IOT (INTERNET OF THINGS) PLATFORM

ION is the IoT (Internet of things) platform developed by Netaş and it continued to provide solutions to local administrations with better productivity and savings in smart city applications. *For detailed information, please check Success Stories – Smart City section of this report.*

## T.C. MINISTRY OF HEALTH - 112 EMERGENCY CALL MANAGEMENT SYSTEM PROJECT

Within the scope of the Turkish Ministry of Health's 112 Emergency Line Management Systems project; supply of software, hardware, infrastructure, setup, test, and start-up activities were completed. The third phase of the project is started in 2018. *For detailed information, please check Success Stories – Smart Health section of this report.*

## DEFENSE R&amp;D

# LOCAL CONTRIBUTION TO THE DEFENSE COMMUNICATIONS

**The Defense R&D unit of Netaş, with the works of its efficient team, aims to increase its local contributions to the defense communications by designing high technology solutions to meet the demands of the Turkish Military Forces.**

Developing domestic defense communications products, Netaş has successfully contributed to the domestication of the Turkish defense industry. Applying all its expertise into defense, Netaş became the company that designs the most competent defense communications equipment provider not only in Turkey, but in the region as well. Having achieved a competitive advantage in communication devices for land, air and naval forces, the Company has demonstrated its difference with its fast and high-quality service.

## SOLUTIONS THAT MAKE A DIFFERENCE

Netaş develops IP/ATM/ISDN switching and routing products, user terminals transmission devices, and power units, with local design and production capabilities to provide the audio, data and video communication for the Turkish Armed Forces. Developed by Netaş engineers, these products come forward with their operability in the harshest environmental conditions of a tactical field, thanks to a durable design at temperatures between -40°C and + 55°C.

Aiming to move local contribution in the defense field further with technology transfer, some of the prominent projects of Netaş in 2018 are as follows:

## DIRECTORATE OF DEFENSE INDUSTRY - ULAK PROJECT

Works on the development of ULAK, Turkey's first domestically developed 4.5G macro base station, continued. The project aims to reduce Turkey's dependency of on imports, through the development of local communications software and hardware components.

## PROJECTS FOR THE TURKISH NAVAL FORCES COMMAND

Implementation works of the local Communication Control System (CCS), which includes hardware, software design, and manufacturing activities developed for all new and modernized platforms of Turkish Naval Forces, were carried out. (TCG Anadolu (LHD), Test and Training Ship, LHD-Multi-Purpose Amphibious Assault Ship, TVEG Test, and Training Ship)

## IDENTIFICATION FRIEND OR FOE SYSTEM (IFF)

Netaş continued to produce its own local Mod 5/S Identification Friend or Foe system, for Turkish Air Forces and Turkish Naval Forces.

## MAINTENANCE REPAIR PROJECT

Netaş, undertaking the Ministry of Defense's Information System Equipment Maintenance and Repair Project, provides fault intervention and maintenance and repair services with critical SLA times as short as one hour in 489 regions as part of the project. The project will continue for three years.

## TACTICAL FIELD COMMUNICATION SYSTEMS

Studies for Tactical Field Communication Systems were continued. The systems are designed to meet all communication requirements in the tactical field, offering a compact, portable, expandable, secure and easy to use solution to its users.

## NEW TECHNOLOGIES R&amp;D

# INNOVATIVE AND CREATIVE SOLUTIONS FROM THE NETAŞ R&D ECOSYSTEM

**With its deep-rooted history, knowledge, experience and visionary perspective, Netaş managed to create a strong innovation culture. Netaş now focuses on enriching its portfolio with high-tech and value-added products, competitive on a global scale.**

As our civilization is passing through a transformation with the introduction of next-generation technologies, Netaş focuses on developing innovative solutions in the areas including but not limited to 4/5G, IoT and GSM, in order to offer higher connectivity and mobility.

#### 4G/5G SOLUTIONS

In 2015, Netaş was the first company to have established a 4G laboratory after the operators, within the scope of its studies to develop 4G LTE Advanced technology. In Netaş' laboratory where the first 4G R&D activities in Turkey took place, studies to develop 4/5G technologies continued in 2018. Integration studies were carried out with global solution partners such as Wind River, Intel, HP, and Mitel to transform mobile and fixed operator networks into NFV-based virtualized networks. Solutions were produced for Turkcell, and Turk Telekom NFV projects and PoC studies were conducted.

The development of MEC (Multi-Access Edge Computing) product that can provide one of the critical components of 4G LTE and 5G network security "Authentication, Authorization and Accounting" (AAA) server, Network slicing for QoE and QoS improvement in 5G network, location and delay sensitive services, network monitoring, continues in Netaş R&D Center.

As a reflection of the company's innovation culture, Netaş aims to make its innovative and creative solutions sustainable. For this purpose, the Company organizes events such as Focus Innovation, hackathons and Innovation Workshops. In its New Technologies R&D unit, the company focuses on developing solutions on 4/5G, IoT and GSM-R.

Netaş has developed projects to be the market leader in vertical industries. While the works continue for "Smart Home" and "Smart Door" projects in the IoT field, which the company started working for the first time when developing smart meter management tools, Netaş has developed the IoT Gateway and an IoT platform, ION by Netaş.

Developed by Netaş R&D Center, two software products/solutions NOVA V-GATE and Mobi-fi, received Local Goods Certificate in 2018 with the rate of 100 percent local contribution.

#### Netaş IoT solution

The Internet of Things (IoT-Internet of Things), a network of physical objects that are connected to each other or larger systems, has been developing rapidly in recent years. The IoT market is expected to accelerate its growth, especially with the improvements in 5G technologies and Industry 4.0. Parameters such as data width, high speed and low latency to be provided by 5G technology are the key technologies for M2M and IoT solutions, and different IoT solutions with heterogeneous structure are intended to provide interoperability with each other and provide end-to-end services. Netaş provides solutions in line with this target and reflects its technological competence to the field in accordance with industrial designs. *For Netaş smart city solutions, please check Success Stories – Smart City and Smart Energy sections of this report.*

#### IoT platform: ION by Netaş

Developed 100 percent locally by Netaş, ION by Netaş provides all device and data management services for large IoT networks. The platform was designed to ensure the end-to-end data security of IoT applications and to be automatically self-scalable depending on the changes of intensity in data traffic. ION by Netaş has been built in horizontal architecture to encourage rapid growth and innovation in the industry by enabling different IoT devices and application providers to operate under a common roof. By isolating the different device and connection types from the application layer, it enables centralized data management and innovative applications between different verticals. ION by Netaş, which can be installed on the cloud or in local systems, can easily adapt and customize any stitch with its customizable structure. Furthermore, IoT provides an easy-to-use interface to network and service managers.

#### Netaş IoT Gateway

The Netaş IoT Gateway product provides software services that allow the integration of various protocol adapters to devices, sensors and actuators in the south direction and also in the north direction towards different IoT Core/cloud platforms. The product plays an important role in ensuring that both the old and non-existing devices and the next generation smart infrastructure are connected to the cloud.

Aiming to increase its effectiveness in international markets with the knowledge and experience it has acquired in IoT, Netaş has made a total of 45 EU applications in 2018. A total of seven H2020 applications were made in 2018.

#### SUPPORT TO INTERNATIONAL PLATFORMS

As a result of its decisive efforts in the European Union (EU) Framework Programs in order to increase international cooperation, Netaş has been holding the Vice Chair for three years at the Celtic-Plus, the Telecommunications and IT Cluster under the umbrella of the European Union EUREKA. As such, Netaş provides active support to the European technology development as a member of the Celtic Plus organization, which has more than 500 members and supports multinational, innovative and competitive R&D projects initiated by industry. Netaş is also a member of 5G IA for the past two years, as well as it is still a board member of the Networld2020 technology platform.

#### LONG-TERM COLLABORATIONS 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 works that could be done together reached 18, as of the end of 2018.

BAU-NETAŞ Techno Academy Computer Engineering Post-Graduate and Ph.D. Program that Netaş started in 2014 still continues.

In order to support the education of the university students, Netaş continues to provide short and long-term internships, scholarships and doctoral dissertation and also forms platforms on which Netaş engineers support students. Netaş engineers are giving lectures at Boğaziçi, Bahçeşehir and Özyeğin Universities to share their knowledge and experiences. Engineers come together with students by attending classes on invitations from various universities.

Netaş also takes consultancy to benefit from the knowledge and research of academic staff in the projects it carries out. Since 2014, the number of academic consultations that Netaş has received from universities has reached 35.

#### THE NUMBER OF BRANDS AND PATENTS ARE INCREASING RAPIDLY

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 86 patent applications in 2018, four of which were international. As such, the total patent application of Netaş since 2012 reached 460, while the number of its registered patent totaled 70. In 2018, Netaş, went for 19 brand applications, eight of which were international. The number of its brand applications increased to 115, while the number of its registered trademark to 40, both since 1984.

As a reputable R&D center, Netaş researchers published 20 scientific publications in 2018, three of which are national, while the number of scientific publications since 2013 reached 163.

## R&amp;D SERVICES

# CUSTOM-TAILORED AND EFFICIENT SERVICES

**Netas Test Center supports its customers in a wide array of industries from finance to telecom, or from retail to energy, insurance and e-commerce, during their software development process, in order to improve the quality they offer through comprehensive testing.**

## NETAŞ

## TEST CENTER

Netaş has been providing testing services since 2011 with its international R&D competency and experience. The company established its Test Center back in 2015, and currently conducts testing services for many industries with its team of about 400 experts.

Netaş Test Center, which supports customers in many industries from finance to telecom, or from retail to energy, insurance, and e-commerce, provides services including software development support, quality checks and performance tests on the highest possible number of devices for mobile and internet applications developed on different platforms. The center also helps to detect system and security vulnerabilities. Providing a large part of these services at its customer locations, Netaş is flexible to offer services periodically as well as continuously.

## ADDING VALUE IN EVERY STEP

One of the most important factors that differentiate Netaş Test Center in the industry is that it develops its own test solutions and takes responsibility in every stage of the service it provides by working as a part of companies, passing beyond the conventional service, in which only personnel is provided. With this approach Netaş provides a significant innovation and contribution to the testing services industry and continues its investments in technology and talent.

In 2018, Netaş Test Center succeeded in conducting many projects that made a difference and offered added value for its customers. Netaş undertook the 'Banking Practise Test Services from Turkey's oldest and largest public bank Ziraat Bank and its technology service provider Ziraat Technology, in order to provide services including the management of end-to-end test processes, creation of test automation strategies, management of project and resources, development and training of test team, monitoring of work outputs and quality, reporting, determining and using the necessary automation tools.

Having strengthened its presence in finance industry in 2018, Netaş extended its successful cooperation with Akbank for three more years. Netaş Test Center has developed a product for Aktif Bank for performance testing and created the Device Farm solution for Credit Registration Bureau (KKB). Netaş increased its effectiveness in the insurance industry by providing services to the leading companies in the industry such as Ak Sigorta, Mapfre, and Ergo.



## NETAŞ TEST CENTER PRODUCT AND SERVICES

## DEVICE FARM

In 2018, Netaş has extended the scope of testing services offered for software developers in all industries and commissioned its device farm, which allows mobile apps to be tested on different devices. Performance tests of all types of mobile and internet applications developed on different platforms can be run on maximum number of devices at Netaş Test Center, which also identifies the system and security gaps of the applications.

## SERVICE VIRTUALIZATION PLATFORM

Netaş Test Center has developed the Netaş Service Virtualization Platform to increase the efficiency of the companies by eliminating the dependence on external services. The product that allows simultaneous development, testing, and verification, improves application quality, reduces costs and risks by eliminating the dependence on live components without the need for "Mock Code".

## TESTING OUTSOURCING SERVICE

Providing test services at world-class standards, Netaş Test Center reduces project costs and allows for the efficient use of resources and technologies.

## SOFTWARE SERVICES

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

## TEST AUTOMATION

NETAŞ Test Automation Service increases the speed and efficiency of the test stage using the most suitable automation method.

## M2M AND MOBILE TERMINAL TESTS

Netaş tests phones, tablets, M2M devices, PCs, modems and routers.

## MOBILE APPLICATION TESTS

NETAŞ 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

Operating performances of software, help determining response behaviors and time under excessive traffic conditions.

## PENETRATION TESTS

NETAŞ 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.

## PROFILE OF THE TEST CENTER TEAM

70 percent work in **finance**, 30 percent in **telecom** and **general industry**.

20 percent are competent in **performance/load testing**

60 percent are competent in **automation and web service/API**

90 percent competent in **database testing**



## NETAŞ MANAGED SERVICES

Netaş Managed Services Unit, taking the responsibility for managing companies' IT assets, provides proactive based management and control, to reduce the operational costs and improve the operational quality of enterprises.

Netaş Managed Services Unit is the name behind many successful projects. As an example, in the scope of Smart Stadium Project of the Turkish Football Federation (TFF), Netaş laid more the IT infrastructure of data centers in more than 40 locations, including the installation of all components such as cameras and turnstile card reader, and managed the operation in relationship with more than 20 product suppliers. This Unit has implemented and managed the IT systems of Turkey's largest and most critical infrastructure investments, such as Yozgat and Adana City Hospitals. The unit began to provide services in Elazığ City Hospital in 2018.

In 2019, the Netaş Managed Services Unit will focus on maintaining the vision of ensuring the companies focus only on their core business, as Netaş manages all their systems in an end-to-end manner, from installation to monitoring, and resolving critical end-user issues. The team, which is agile in developing solutions even for the most exceptional cases, aims to maintain a high-performance uninterrupted service.

## CYBER SECURITY OPERATION CENTER (CSOC)

Netaş' Cyber Security Operation Center (CSOC) offers end-to-end cybersecurity services to companies operating in different industries to increase the importance of data.

The Cyber Security Operation Center (CSOC), which has a strong team of experts in the field of cybersecurity as well as industry-specific threats, provides effective cybersecurity services to many companies from insurance to retail, manufacturing to e-commerce with a distinctive approach in the industry. In the face of the increasing complexity of cyber-attacks, employing adequate personnel, supplying the necessary equipment and products, and allocating an important budget for this investment, Netaş has started to work on behalf of companies. The company designed its services to fill these deficits with more effective expertise and sustainable model.

## 360-DEGREE CYBER SECURITY SERVICE

Netaş Cyber Security Services start with the security analysis of companies to determine the risk status against a cyber attack. Following the recommendations for the necessary measures and an action plan, infiltration tests are carried out to measure the effectiveness of these measures, to see the real status of the company during a cyber attack and to ensure the continuity of the measures. In addition, 360-degree security service is provided by Red Team activities, cyber intelligence services for the brand, social engineering attack

tests for employees, security tightening in systems and 24/7 security events monitoring and intervention services.

The NOVA product family, developed by Netaş R&D Center 100 percent locally for the security of VoIP systems, also takes place among the tools used in the scope of these services.

## OUTLINE OF NETAŞ CYBER SECURITY SOLUTIONS

Security Operations Centre, Threat Detection and Response Services: 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, Enhanced Test Services

## SIEM & SOC MANAGEMENT

Today, organizations are facing new cyber threats and an 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 performs user behaviour 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 conventional data loss prevention (DLP) approach, NETAŞ provides discovery, classification, labelling, monitoring and leak prevention for both structural and non-structural data.

## NETAŞ NETWORK OPERATION CENTER (NOC)

For all companies, managing daily IT operations as well as relationships with multiple services and product suppliers are very difficult and tiring processes. Companies receive all the information and communication technology environment from a reliable service provider, which gives them great productivity. Netaş provides privileged and high-quality services to companies according to their specific needs.

Netaş Network Operation Center (NOC), provides 24/7 network monitoring and management services to companies to provide the highest quality service by keeping the necessary infrastructure installation and employment costs of staff in the most economical level. In this center, the system and network infrastructures that enable all business data of customers are constantly and centrally monitored. The necessary actions are taken as soon as possible, and a proactive approach is taken to manage network and system infrastructure in terms of business continuity.

## 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 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 process 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 new 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.

## HUMAN RESOURCES

### Dynamic, creative and happy employees

The most important force behind Netaş' success journey of over 50 years is its human resource. Today, with over 2500 employees, Netaş create distinctive HR practices by focusing on productivity, education, self improvement and most importantly, happiness.

Conveying information and teaching are some of the most successful areas for Netaş. That's why Netaş is considered as a "school" in the field. Creating exemplarily human resource practices with this mission for many years, Human Resources Department of Netaş is aiming for a sustainable future of the company while maintaining values, culture and business manner which are the result of 50 years of company culture.

#### HUMAN RESOURCE PRACTICES

##### NETAŞ COOP PROGRAM

Netaş COOP Program which we 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 in Netaş technologies to the candidates that are experienced for 8 to 18 months, suitable for Netaş

#### COOP PROGRAM CRITERIA

Being a 3<sup>rd</sup> or 4<sup>th</sup>-grade student

Studying in departments such as computer, electrical-electronic or communication engineering

Being able to come to Netaş at least 3 or 4 days a week

Student insurance to be provided by the school

organizational culture, meet the evaluation criteria, proven themselves with their success, and want to shape their career with Netaş. Up until today, out of 940 students that joined the Netaş COOP Program, 169 of them managed to join the Netaş family, whether with a part-time or full time job.

In 2018, when 775 students from contracted universities participated in the long-term internship program, 29 students found the opportunity to work in full-time engineering positions with R&D teams.

#### BENEFIT&BANAFIT FLEXIBLE SIDE BENEFIT PROGRAM

Netaş has flexible side benefit practice as a part of Benefit&Banafit Program. As one of the pioneer companies in Turkey Netaş crafted this program; within the

frame of different preferences, needs and specific limitations, and allows its employees to choose their own side benefit packages.

#### 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.

#### BAU NETAŞ TECHNO ACADEMY

Netaş employees can get post-graduate education with 75 percent lower fees. Hereby, Netaş office is also a campus for employees.

#### JOBSHOP

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

#### NETAŞ PROACTIVE

Netaş provides its proactive platform as a part of internal communication activities, giving the utmost importance to the communication of employees. ProActive organize internal and external events, aiming to increase the synergy between the units and supporting employee satisfaction and commitment.

#### N-TELLIGENT INSTITUTE BOTH SERVES EMPLOYEES AND THE INDUSTRY

**Netaş Academy, where Netaş employees have been offered technical and personal growth for many years, continues its path as n-telligent Institute from 2018 and onward, with its rich infrastructure that contains brand-new contents and various platforms.**

Within the scope of n-telligent Institute, which came to existence as a result of a hard and meticulous work, an online and sustainable education and training platform was created, and it offers content that Netaş already has and content from ZTE, the new partner of the company.

n-telligent Institute, where Netaş employees are offered skill-based education such as leadership, conflict management, coaching, effective communication, team management and problem-solving since the start of the year 2018, will offer the same training externally and satisfy the industry's educational needs. Education will be offered on issues Netaş has a deep expertise and generally seen as deficient in the industry such as data security, quick methodologies, IoT, machine learning, cloud services, quick thinking, and ethical hacking.

#### TURKEY'S BEST IT TRAINERS ARE IN N-TELLIGENT INSTITUTE

At n-telligent Institute, where Turkey's best IT trainers for online or class education take part in, joining the ecosystem is also considered important for volunteer trainers in Netaş. In 2018, 30 Netaş employees including 18 technical trainers and 12 skill trainers started supporting the institute.

n-telligent Institute also gives great importance to keeping ICT professionals up-to-date on new trends. For this purpose, consultancy service is taken from academicians that follow the latest technology trends and are connoisseurs in their field. Also, experts and directors in Netaş share the knowledge they gain in global events and expositions with the institute.

#### ASSESSMENT CENTER ALSO BEGAN ITS STUDIES

Within the scope of n-telligent Institute, another innovation is the Assessment Center. The Assessment Center that has been laying the groundwork for two years began to determine the competence and education needs of all employees. The center that focuses mainly on bringing out obstacles of potential in performance criteria gains a significant ground for the improvement of employees.

#### N-TELLIGENT INSTITUTE DELIVERS SOLUTIONS IN FOUR DIFFERENT SUBJECTS

**Improving labor force:** The difference between the quickness of employees' self-improvement and the fast progress of technology is getting wider day by day. Thus, when employees and customers do not keep up with the changes in the industry by training, the labor force potential becomes unproductive. Both technological deepening and adaptation to new technologies must be provided. Therefore, within the scope of n-telligent Institute, new technologies are included such as IoT, data analytics, and BitCoin.

**Correct management of the expectations of Generation Y:** learning styles of Generation Y is different from each other. Some learn by listening, some learn by reading, some learn by highlighting, some learn by interacting in class. Consequently, it is not possible to improve or motivate this generation with only online education or class education. The subject that this generation questions the most is whether the companies invest in them or not. That is why n-telligent Institute gives the utmost importance to being aural and visual in its training and focusing on where the employee starts and where he or she is going with pre and post-tests.

**Training leader engineers:** "Blue brain" engineers want to go into more depth by focusing on one subject. When engineers are given the role of management, they need to be supported on how to manage a team or how to coach someone. In this context, n-telligent Institute offers leadership development programs and skill-based education that will meet the special requirements of Netaş employees. The institute also offers "Engineering Leadership" master's degree programs exclusively for information and communication technologies industry, with the cooperation of Bahçeşehir University. This project sets a good example of university-industry cooperation.

**Training new graduates:** University graduates' scholastic aptitude sometimes fails to meet the needs of private industry. For this reason, new graduate training programs are also offered in n-telligent Institute. Cooperation with universities is done in this area as well. The goal is to give the correct training to new graduates and introduce them to the industry.

#### NETAŞ EMPLOYEES IN FIGURES

In Netaş, where 30% of the employees are females, and the average age is 33, the number of employees reached up to 2.395 by the end of the year 2018.

#### AGE

21-25	%19
26-30	%26
31-35	%21
36-40	%16
41-45	%10
46-50	%5
51-55	%2
56+	%1

#### SENIORITY

0-2	%48
3-4	%14
5-9	%15
10-14	%14
15-19	%4
20-24	%3
25+	%2

#### EDUCATION

Doctorate	%1
Primary education	%2
Bachelor's degree	%73
High school	%3
Associate's degree	%3
Technical high school	%1
Master's degree	%17

#### GENDER

Female	%30
Male	%70

## SUSTAINABILITY

**Supporting Turkey's sustainable development since 1967**

**Operating for over 50 years, Netaş proved its success on sustainability; and today it is one of the leading companies in Turkey when it comes to sustainability, with its product and services, its innovations in the industry, the employment it provides, and through its contribution to the economy, while being environment-friendly.**

Sustainability is a term increasingly trending in recent years. The word "sustain" in English, derives from the word "sustinare" from Latin, meaning "support". In time, this word took on a new meaning as "prolonging the activity time with the necessary support and assistance", but today its most common meaning is "maintaining". In plain language, the term sustainability can be described as "the ability to be permanent", and in our personal life; it means living alongside nature and making sure our lifestyle does not affect any "citizen of the world". In the corporate aspect, sustainability means adapting economic, environmental and social factors to corporate actions and decision mechanisms to create long-term value in companies and managing the risks that arise in these areas.

### AN IMPORTANT SUCCESS STORY ON SUSTAINABILITY FOR TURKEY

Since its foundation, Netaş has taken considerable responsibility in the fields of telecommunications technology development and innovation, two driving forces for sustainable economic and social development of societies. In addition to focusing on preserving natural resources, efficiency, clean environment and clean industry in all its activities, Netaş has been playing a major role in the digitalization of every vertical, supporting the sustainable growth of its community. In particular, Netaş aims to support enhancing the welfare and support an economic growth in harmony with the environment through its unique smart solutions.

### IT INCREASES ENERGY EFFICIENCY WITH NEW GENERATION TECHNOLOGY SOLUTIONS

A field Netaş contributes to sustainability with locally developed authentic solutions is the smart grid. The cities that contain more than half of the population of the world are responsible for 75% of energy consumption and 80% of carbon dioxide emission. Netaş developed the NEOS solution family to support efficient use of the resources in the cities.

NEOS photon Smart City Lighting Platform provides energy savings up to 75%, while the NEOS hydro solution prevents frauds and loss during the water supply, thanks to the sensors placed on water meters, increasing the savings in water consumption. NEOS OSOS, on the other hand, a cloud-based automatic meter reading system, provides operational efficiency, since it eliminates manual reading of meters and thus reduces operational costs and saves energy. Currently, about 14% of Turkey's annual power distribution is managed through NEOS OSOS.

The carbon footprint of the companies operating as field services providers are more than other companies. Aware of the situation through its field services providing company BDH, Netaş developed a software, Mobi-fi Smart Field Service Management Platform. Mobi-fi is a powerful field service management software developed with next-generation software technologies, offering efficient and cost-effective solutions. Mobi-fi optimizes a company's resources, improves its service quality and increases productivity. As a result, the fuel consumption and carbon footprint of the user decreases dramatically.

Developments in the telecommunication industry in recent years provide an opportunity to increase energy savings by removing time and space constraints. An example of this is Netaş's SEGBIS project for the ministry of justice. In this project, 600 courthouses, 3 thousand courtrooms, and 550 prisons are connected with a secure video conference system, and defendants are no longer obliged to make long distance travels.

On the other hand, thanks to the powerful cloud solutions Netaş offers, many companies do not have to use their own data and server hardware. By receiving only the service they need, they are no longer forced to invest in large capacity hardware that becomes idle, and they can save on the energy costs.

### ENCOURAGING INCREASE IN WOMEN EMPLOYMENT

NETAŞ encourages women's employment in the technology industry. Currently, engineers make up 70 percent of NETAŞ employees and the rate of women engineers are at 26 percent, compared to 22 percent of national women engineer average. As these figures show the gravity of gender inequality in the overall industry, NETAŞ is a signatory of Women's Empowerment Principles and a participant of 'HeforShe' movement started by United Nations Women. NETAŞ understands that an overall economic development is not possible without increasing women's employment.

### SUSTAINABILITY ON THE SUPPLY CHAIN

A detailed sustainability policy is implemented in the supply chain of Netaş for social and economic sustainability. Netaş uses supervision and blacklist systems, in order to monitor the compliance of its suppliers to its rules of Supply Chain Management Ethics and Principles. Netaş stated straightforwardly that it is against discrimination, unequal wage policies, child labor, precarious work, corruption, and actions that are harmful to the environment, and the company controls its suppliers regarding environment, health, security, quality and social aspects of their work flow.

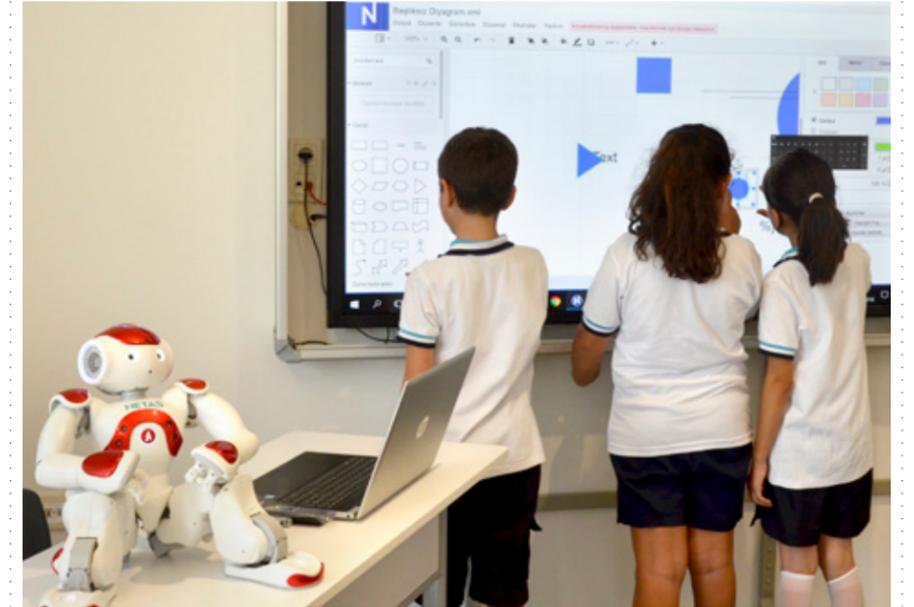
Offering "Fight Against Corruption" education online every year to its all employees, Netaş is committed to work in full compliance with the laws and regulations of the countries it operates.

## CSR PROJECTS: AN IMPORTANT DUTY FOR SUSTAINABILITY

Netaş regards corporate social responsibility projects as an important part of sustainability and within this context puts various projects into practice.



Gaziköy / Şarköy / Tekirdağ



Bahar Yıldırım Elementary School, İzmir

### BIODIVERSITY FOR SUSTAINABILITY: NETAŞ HEALING FOREST

Working in order to support and sustain a healthy ICT ecosystem for years, Netaş has adapted this approach in order to support the bio-diversity. For this purpose, Netaş planted the first saplings of 'Netaş Healing Forest' back in 2015, on an area of 10-hectares near Gaziköy, a village with about 550 habitants in North-western Turkey.

Planting 23 different species of trees and medicinal aromatic plants, including locust, walnut, chestnut, almond, rosemary, lavender and sage among others, Netaş aims to enhance the ecological diversity and create a source of income for the villagers in the area as well. This project underscores commitment of Netaş for a sustainable economic activity for a community, in harmony with the ecosystem surrounding them.

### INCREASING MOBILITY FOR VISUALLY IMPAIRED CITIZENS

NETAŞ is conducting a project to support visually impaired citizens by facilitating their participation to the social life and their mobility in the city, with a technology solution. In cooperation with Turkey's Transport Ministry and Social Policies Ministry, 15,000 devices, which enables users to navigate through the city without asking for help, have been distributed so far.

### INSPIRING A TECH-SAVVY GENERATION

It is no secret that new generations are born into a digital age that even their parents did not experience in their childhood.

As a new age necessitates new approaches in education, NETAŞ donated technology and innovation classrooms for a new pre-school and an elementary school built in a western province of Turkey, İzmir. The classrooms are projected to be a model for a new education model focusing on increasing students' curiosity and supporting their analytical thinking.

Laying the ICT infrastructure of the schools, NETAŞ has supplied a computer for every student. In addition, a 3D printer is procured, so that kids can turn their creative designs into solid objects. The classes are also supplied with various tools, toys and a programmable robot as well, providing the kids with new experiences in science, technology, and coding.

In a separate project, with a similar concern, volunteer engineers from NETAŞ, come together with fourth-grade students and helped them with the basics of coding.

### NETAŞ VOLUNTEERS

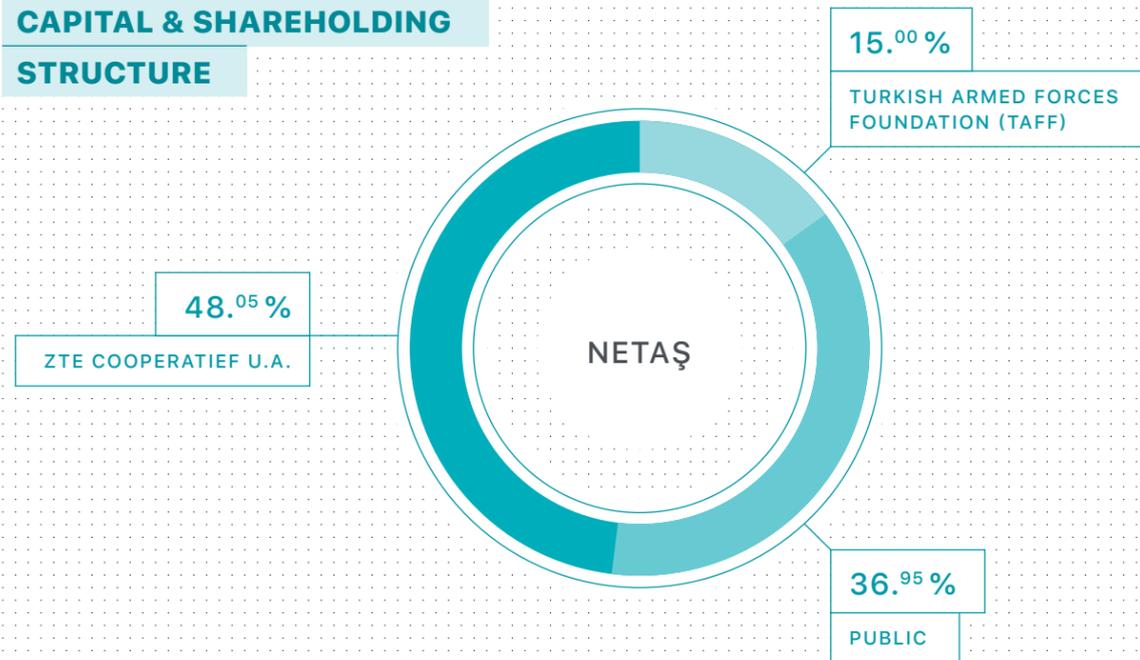
Formed within the scope of internal communication activities, Netaş Volunteers who gathered under the same roof of Netaş ProActive group, banded together as volunteers as a part of social responsibility. Volunteers that work in cooperation with foundations like LÖSEV, TOÇEV, Kızılay and Tomurcuk Foundation, carries out projects in benefit of the society.

### NETAŞ ORPHAN EDUCATION FOUNDATION

Netaş Orphan Education Foundation that has been in existence within Netaş for 30 years provides scholarship support for children whose parents passed away while working in Netaş. The foundation is funded completely by Netaş employees.

## CORPORATE GOVERNANCE

### CAPITAL & SHAREHOLDING STRUCTURE



As of December 31, 2018, ZTE Cooperatief U.A. represents 48.05% of the total shares in the company as the owner of 23,351,328 A shares and 7,817,023 B shares.

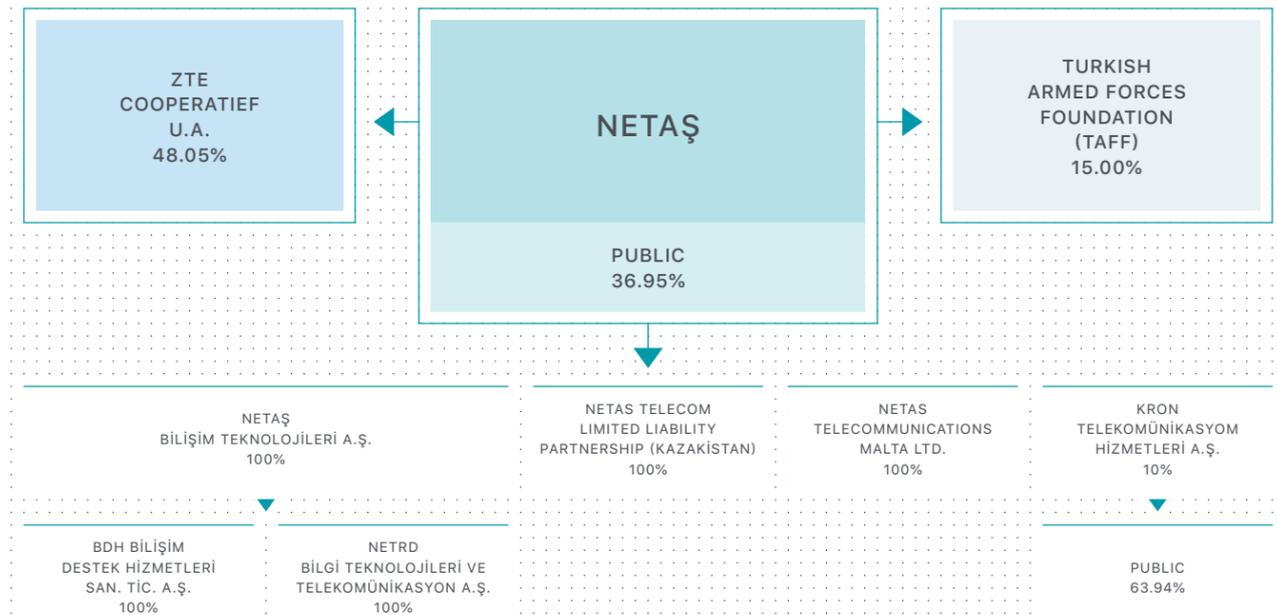
The company shares are divided into two groups and all are registered shares. Separation of the shares into two groups grants no privileges to the mentioned (A) and (B) group shares other than as specified in article 9 and 15 of the Articles of Association.

As of year-end 2018, shareholding structure of the Group is summarized below;

December 31, 2018	Share in Capital (TRY)	Share in Capital (%)
ZTE Cooperatief U.A. (*)	31.168.351,34	48,05%
Turkish Armed Forces Foundation (TAFF)	9.729.720,00	15,00%
Public	23.966.728,66	36,95%
<b>Total Paid Capital</b>	<b>64.864.800,00</b>	
<b>BIST Code</b>	<b>NETAS</b>	

(\*) 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 Netas

## OPERATIONAL STRUCTURE



\* As at 28 July 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. As of 2018 Year end, ZTE Cooperatief holds 48.05% of Netaş.

### NETAŞ BİLİŞİM

The ever increasing global competition and shifting the focus from product to customer focus solutions mandate companies to always keep up with the IT technologies and use the technology more effectively. Probil has been providing a wide range of services from industrial solutions to business solutions, systems integration, outsourcing, care and maintenance services, network solutions and consultancy since 1989.

### BDH

BDH offers brand-independent consultancy, strategic outsourcing, hardware and support services in IT field to a wide range of customers from small scaled companies to enterprises and public institutions. With a service team of experienced and certified specialists in different IT fields, the company has a single point of access to its customers in Turkey.

BDH operates with 36 branches and 46 partners in different cities of Turkey. Centers located in Istanbul, Ankara, Izmir, Bursa and Samsun offer hardware support for all kinds of IT products from servers and storage units to hand-held devices and printers.

### NETAS TELECOM LLP

"Netas Telecom LLP" is founded in Almaty, Kazakhstan in 2012. The company is fully owned by Netaş. The Company operates in line with Netaş' vision "To Become the Regional Systems Integrator".

### NETAŞ TELECOMMUNICATION MALTA

A fully-owned subsidiary is established in Malta with an initial capital of € 1,200 for the purpose of improving the operational effectiveness, and registered with the name of Netas Telecommunications Malta Ltd in 4 November 2014.

### NETRD

A fully-owned subsidiary with the registered name of NETRD Bilgi Teknolojileri ve Telekomünikasyon A.Ş. has been established, with a registered capital of TRY 50,000 on August, 29, 2018 in Istanbul. 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.

### KRON

Kron Telekomünikasyon Hizmetleri A.Ş. is a company that produces software solutions for national and regional telecom operators and service providers. Netaş acquired Group A shares of the company in 2013 in line with the strategic growth goal and the purpose of offering innovative solutions to its customers.

Having strengthened its capabilities in the field of systems integration with the acquisition of Kron, a company that develops customized solutions and products, Netaş now provides a wider range of end-to-end solutions to its customers in Turkey and in the region.

## BOARD OF DIRECTORS AND EXECUTIVE COMMITTEE

BOARD OF DIRECTORS	
Name Surname	Title
Xiao Ming	Chairman
Türk Silahlı Kuvvetleri Güçlendirme Vakfı (TSKGV) (Temsilci: M. Cumhuri Özdemir)	Vice Chairman
Jiang Xiangyang	Board Member
Ding Minzhongxia	Board Member
Yang Jun	Board Member
Ali Zülfü Tigrel*	Independent Board Member
Alpaslan Korkmaz*	Independent Board Member
Emre Şehsuvaroğlu**	Independent Board Member

(\*) The board of directors of our company, which resigned on 30.04.2018, was elected to serve as an independent member of the Board of directors of our company and the approval of the shareholders at the first General Assembly meeting of the matter was presented to the board of directors of our company, Mr. Ali Zülfü Tigrel, who fulfilled the criteria of the Mr. Alpaslan Korkmaz's Corporate Governance Committee presidency, risk early detection Committee presidency and Audit Committee membership will be continued by Mr. Ali Zülfü Tigrel.

(\*\*) Mr. Emre Şehsuvaroğlu resigned as a member of The Independent Board of Directors and chairman of the Audit Committee as of 12.10.2018.

Three committees were formed by the Board of Directors as the Corporate Governance Committee, the Audit Committee and the Committee for early detection of risk. The Corporate Governance Committee consists of one chairman and four members, the audit committee consists of two independent board members and the early determination of the risk committee consists of one independent member and two members.

### CORPORATE GOVERNANCE COMMITTEE

**Chairman:** Ali Zülfü Tigrel(\*),  
Alpaslan Korkmaz(\*)- Independent Board Member  
**Member:** Xiao Ming - Chairman  
**Member:** TAFF (Rep:M. Cumhuri Özdemir)- Board Member  
**Member:** Ding Minzhongxia – Board Member

(\*) The board of directors of our company, which resigned on 30.04.2018, was elected to serve as an independent member of the Board of directors of our company and the approval of the shareholders at the first General Assembly meeting of the matter was presented to the board of directors of our company, Mr. Ali Zülfü Tigrel, who fulfilled the criteria of the Mr. Alpaslan Korkmaz's Corporate Governance Committee presidency, risk early detection Committee presidency and Audit Committee membership will be continued by Mr. Ali Zülfü Tigrel.

### AUDITING COMMITTEE

**Chairman:** Emre Şehsuvaroğlu (\*) - Independent Board Member  
**Member:** Ali Zülfü Tigrel (\*\*)- Independent Board Member  
**Member:** Alpaslan Korkmaz (\*\*)- Independent Board Member

(\*) Mr. Emre Şehsuvaroğlu resigned as a member of The Independent Board of Directors and chairman of the Audit Committee as of 12.10.2018.  
(\*\*) The board of directors of our company, which resigned on 30.04.2018, was elected to serve as an independent member of the Board of directors of our company and the approval of the shareholders at the first General Assembly meeting of the matter was presented to the board of directors of our company, Mr. Ali Zülfü Tigrel, who fulfilled the criteria of the Mr. Alpaslan Korkmaz's Corporate Governance Committee presidency, risk early detection Committee presidency and Audit Committee membership will be continued by Mr. Ali Zülfü Tigrel.

### COMMITTEE FOR EARLY DETECTION OF RISKS

**Chairman:** Ali Zülfü Tigrel(\*),Alpaslan Korkmaz (\*)- Independent member  
**Member:** Ding Minzhongxia – Board Member  
**Member:** TAFF (Rep: M. Cumhuri Özdemir) (\*\*)- Board Member  
**Member:** Emre Şehsuvaroğlu (\*\*\*) - Independent Board Member

(\*) The board of directors of our company, which resigned on 30.04.2018, was elected to serve as an independent member of the Board of directors of our company and the approval of the shareholders at the first General Assembly meeting of the matter was presented to the board of directors of our company, Mr. Ali Zülfü Tigrel, who fulfilled the criteria of the Mr. Alpaslan Korkmaz's Corporate Governance Committee presidency, risk early detection Committee presidency and Audit Committee membership will be continued by Mr. Ali Zülfü Tigrel.

(\*\*) TAFF : Türk Silahlı Kuvvetlerini Güçlendirme Vakfı

(\*\*\*) Mr. Emre Şehsuvaroğlu resigned as a member of The Independent Board of Directors and chairman of the Audit Committee as of 12.10.2018.

Committee meetings are typically held one day before the Board meetings.

Since Nomination Committee and Compensation Committee required by Corporate Governance Principles are not established due to the structure of the Board of Directors, their duties are fulfilled by Corporate Governance Committee.

CVs of the Board Members are available at our Company website.

### EXECUTIVE COMMITTEE

C. Müjdat Altay	Chief Executive Officer
M. İlker Çalışkan	Chief Financial Officer
Yasemin Akad	Chief People Officer
Buket Okumuş*	Brand and Corporate Communications Director
Kamil Orman	Public & Defense and Telecom Sector Business Unit GM
Serdar Urçar**	International Markets Business Unit GM
Selda Parın***	Enterprise Business Unit GM
Bilgehan Çataloğlu	BDH GM
Ömer Aydın	Defense Product Solutions Senior Director
Burak Şalk****	NETRD General Manager
Altay Doğu****	Carrier Telco BU Act. General Manager
Bülent Kemal Mutlu****	Netaş R&D Act. General Manager
Emre Şehsuvaroğlu****	Chief Compliance Officer
Bülent Şeref Şenyürek****	SPC P&D Solutions Senior Director

\* As of 8 January 2018, Buket Okumuş was appointed as Brand and Corporate Communications Director. Selcan T. Taşkıran left his position on 1 February 2018

\*\* As of 6 March 2018, Serdar Urçar was appointed as the General Manager of International Markets after the resignation of Ali İhsan Kuralkan.

\*\*\* Selda Parın was appointed as Enterprise Business Unit General Manager by proxy after Mehmet Ali Tombalak resigned from his position as of June 30, 2018.

\*\*\*\* As of 2 November 2018, they were appointed

### FINANCIAL BENEFITS ALLOCATED TO THE BOARD OF DIRECTORS AND SENIOR MANAGEMENT

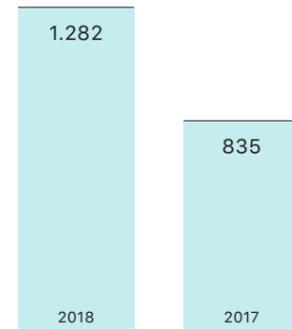
Financial benefits paid and allocated to the Members of the Board of Directors as of the fiscal year that ended by 31 December 2018 was TL 0.6 million. Financial benefits paid and allocated to the Members of the Board of Directors as of the fiscal year that ended by 31 December 2017 was TL 0.6 million. There are no Group credits utilized by the Members of the Board of Directors as of 31 December 2018 and 2017.

Financial benefits paid and allocated to the senior managers as of the fiscal year that ended by 31 December 2018 was TL 13 million. Financial benefits paid and allocated to the senior managers as of the fiscal year that ended by 31 December 2017 was TL 10.2 million.

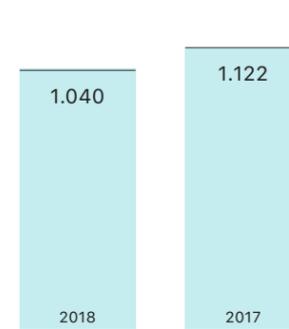
There were no Group credits utilized by the senior managers of the Group as of 31 December 2018 and 2017. Group pays bonuses and premiums to the senior managers in addition to their remuneration.

## FINANCIAL PERFORMANCE

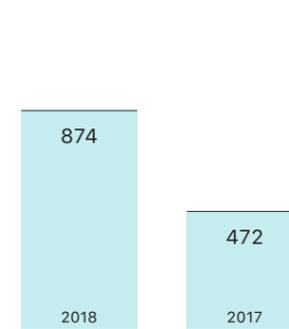
### CONSOLIDATED ORDERS BOOKED (MILLION TL)



### SALES REVENUE (MILLION TL)



### ORDER ON HAND (MILLION TL)



### FINANCIAL HIGHLIGHTS

TL Million	FY18	FY17	y/y %
<b>Revenue</b>	<b>1.040</b>	<b>1.122</b>	<b>(7%)</b>
Cost of Sales	(917)	(950)	(3%)
<b>Gross Profit</b>	<b>123</b>	<b>173</b>	<b>(29%)</b>
<i>Gross margin %</i>	12%	15%	-
<b>Operating Expenses</b>	<b>(117)</b>	<b>(93)</b>	<b>26%</b>
General Administrative Expenses	(45)	(32)	39%
Sales, Marketing & Distribution Expenses	(59)	(56)	5%
Research & Development Expenses	(13)	(4)	215%
Incentives	(1)	-	(100%)
<b>EBIT</b>	<b>5</b>	<b>80</b>	<b>(94%)</b>
<i>EBIT margin %</i>	0%	7%	-
Depreciation	33	26	25%
<b>EBITDA</b>	<b>37</b>	<b>106</b>	<b>(65%)</b>
<i>EBITDA margin %</i>	4%	9%	-

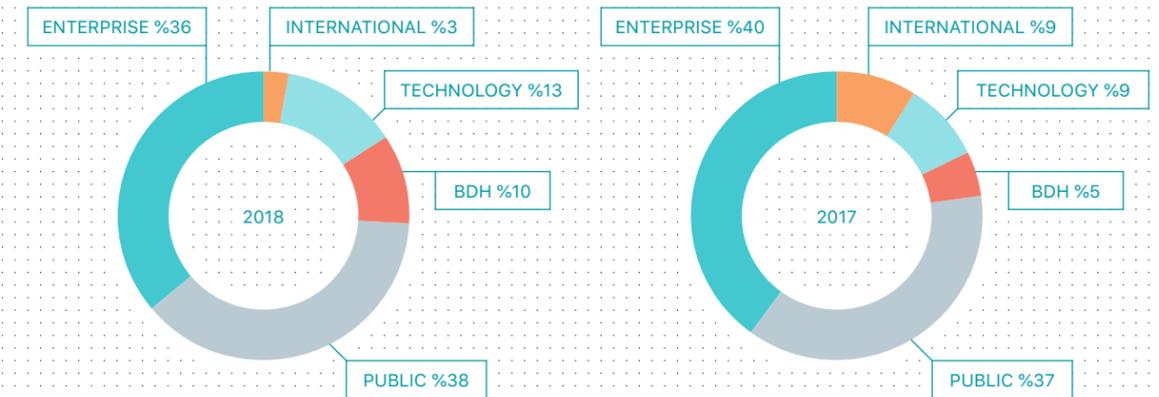
**EBIT =**  
Gross Profit – Sales, Marketing and Distribution Expenses – General Administrative Expenses – Research and Development Expenses + R&D Incentives

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

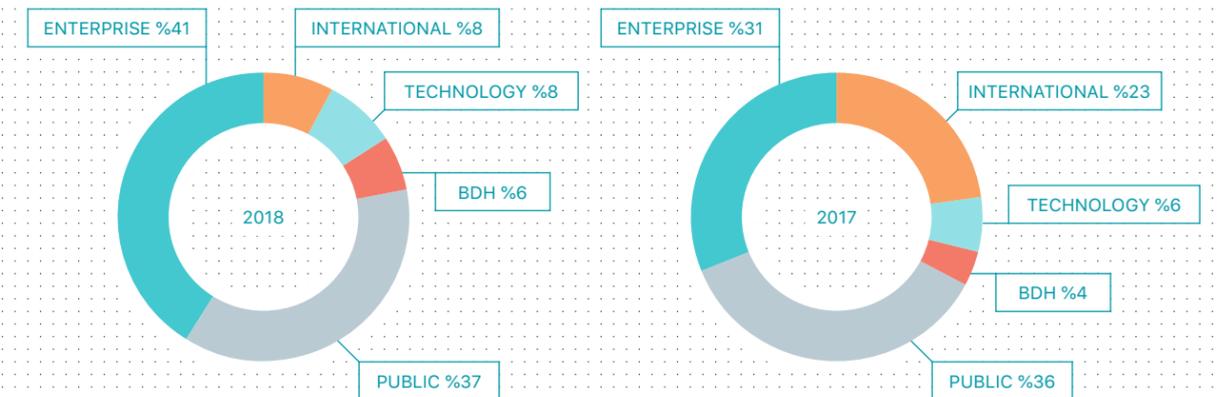
**EBITDA =**  
EBIT + Depreciation

## ORDERS & REVENUE

### ORDERS BOOKED BREAKDOWN



### REVENUE CONTRIBUTION



Group's revenue has decreased 7% compared to previous year, amounting TL 1.040 million.

## OPERATIONAL PERFORMANCE

2018 (Million TL)	Enterprise	Public	International	Technology	BDH	Unallocated	Total
Orders Booked	463,6	490,1	41,4	158,8	128,3		1.282,2
Revenue	425,4	387,3	80,0	86,0	61,1	-	1.039,8
Cost of sales	(385,4)	(320,0)	(60,2)	(77,9)	(60,8)	(12,5)	(916,9)
Gross margin	40,0	67,3	19,8	8,1	0,2	(12,5)	122,9
Sales, marketing and distribution	(23,2)	(23,5)	(12,2)	-	-	-	(58,9)
General administrative expenses	-	-	-	-	-	(45,0)	(45,0)
Research and development expenses	-	-	-	(13,4)	-	-	(13,4)
Operating profit / (loss) of segment	16,8	43,8	7,6	(5,3)	0,2	(57,5)	5,6
Operating Profit Margin	4%	11%	10%	-6%	0%		2%
2017 (Milyon TL)	Enterprise	Public	International	Technology	BDH	Unallocated	Total
Orders Booked	335,1	307,9	77,4	71,1	43,7		835,1
Revenue	351,3	406,9	252,8	67,6	43,7	-	1.122,3
Cost of sales	(312,2)	(334,5)	(196,9)	(65,8)	(30,2)	(10,1)	(949,7)
Gross margin	39,1	72,3	55,9	1,8	13,5	(10,1)	172,5
Sales, marketing and distribution	(22,2)	(21,3)	(12,6)	-	-	-	(56,1)
General administrative expenses	-	-	-	-	-	(32,5)	(32,5)
Research and development expenses	-	-	-	(4,3)	-	-	(4,3)
Operating profit / (loss) of segment	16,9	51,0	43,3	(2,4)	13,5	(42,6)	79,7
Operating Profit Margin	5%	13%	17%	-4%	31%		7%

## PUBLIC SEGMENT

In 2018, Defense overall orders received located greatly decrease disposal while public segments in orders from public institutions and telecom sector with an increase in the amount of orders received by the Company in the industry, winning a high growth compared to 2017 increased by 59% and reached 490 million. Earned Safe City projects, the Safe Schools project, GSM-R projects, handyman Project Phase 2, 112 Emergency System Integration projects for IFF and has contributed positively to the consolidated amount of orders received.

Group revenues derived from the public sector segment decreased by nearly %5 in 2018.

## ENTERPRISE SEGMENT

Despite the negative developments in the global markets group in 2018, the amount of orders received from Enterprise segment and reached the level of TL 464 million with a significant increase of 38%.

The Group's high-margin projects with the amount of orders from large corporate segment recorded sales revenues increased by 21% and reached TL 425 million.

## INTERNATIONAL SEGMENT

The Group extended period of time, depending on the conversion project for the launch of large-volume orders received in international operations and sales revenue figure remained well behind last year compared with 2018.

## TECHNOLOGY SEGMENT

The positive contribution of the ongoing long-term business relationship with Ribbon, 2018 on increased technology at a high rate, the amount of orders has increased 123% and 158.8 million in increased sales revenues due to the growing strength against TL of the dollar compared to last year increased by 27%.

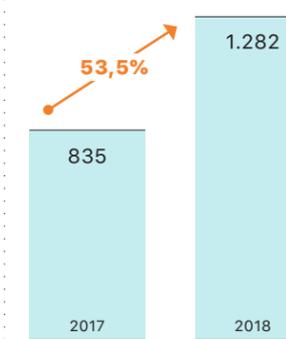
## BDH

Increasing the amount of orders in the BDH 2018 compared to 2017 increased approximately 2-fold to TL 128 million. In addition, in 2018, a 40% increase in sales revenue reached TL 61 million.

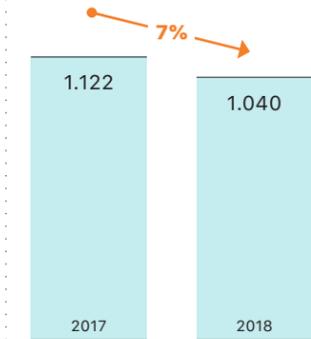
## CONSOLIDATED FINANCIAL PERFORMANCE

The consolidated amount of orders received, has increased to 53.5% in 2018, compared to previous year at a great rate. Despite the macroeconomic uncertainty and turmoil in world markets thanks to awareness and diversified business units of the Group in these high growth markets in the amount of orders received in 2018. Public Enterprise, Technology and BDH realized growth in business units.

## ORDERS BOOKED (TL MILLION)



## REVENUE (TL MILLION)



Considering the amount of sales decreased by 7% in 2018 compared to 2017 was observed. The reason for this decrease is mainly due to the international segment. It has recorded growth in sales in 2018 at Public, BDH and Technology segments. Excluding International segment, the Group's consolidated sales revenues increased by 10% in 2018.

Currency rates in ongoing projects due to the rise in the foreign currency expenses due to imbalance in the Group's consolidated gross profit for 2018 was TL 123 million, a decrease of 29%.

The consolidated operating expenses of the Group's ongoing growth of dollar-denominated cost of the project, provision for TFRS9, the increase in due to a decrease in incentive income and rising due to the increase in the exchange of operational operating expenses negatively impact and the amount of consolidated operating expenses has increased TL 108 million to TL 216 million TL from FY2017 to FY2018.

Consolidated Interest, Depreciation and Profit Before Tax (EBITDA) in 2018 while the figure is realized as TL 37 million.

Due to the increase in interest rates of bank loan financing costs which are used for the execution of operational activities it rose to 87.8 million in 2018. In addition, financial income was recorded at US\$ 153.9 million TL in 2018 due to the appreciation against the Turkish Lira. While netting off financial income and expenses, amounting to TL 25 million in 2017 has been realized TL 66 million in 2018.

Group (Netaş), and even if not directly related to the affiliates, the US Commerce Department's ZTE Corporation to apply During the Export Administration legislation (EUR) no action will do about the subject product and the sanctions being unable to find any activities, the Group's operations are negatively affected. Due to the prohibition, some offer opportunities have been missed and the sale of US products has been halted in order to prevent any potential problems in the Group's commercial activities within the time period until the final decision on the ban. In addition, the Group's plans for international markets with ZTE were suspended in this period.

US Department of Commerce and ZTE, the ban has been removed and there was an agreement on actions to be taken regarding this and ZTE, have taken the necessary steps for the removal of the ban and the ban is canceled with effect from the date of July 13, 2018 by the BIS. This situation, Netaş to offer more opportunities in the coming period and can make a positive contribution in terms of movement in international operations.

In accordance with the resolution adopted at the meeting of the Board of Directors held on 15 August 2018, a settlement agreement -containing terms regarding an aggregate total distribution in the amount of USD 4.400.000 on account of the claims asserted by Netaş Telekomünikasyon, A.S. (the "Netaş Claims") against NNI its U.S. debtor-affiliates (collectively, the "US Debtors"), and a general release of claims between Netaş and US Debtors- has been signed by and between the Company and Nortel Networks Inc. on 23 August 2018. Pursuant to the agreement, USD 4.400.000 has been paid to the Company and parties have released each other.

**DEBT STRUCTURE & NET WORKING CAPITAL**

Group's cash and cash equivalents was TL 192.8 million for the year-ended 2018 with a net debt positioning of TL 295 million. Gross financial debt was TL 487.8 million in 2018 and the total amount of debt is in TL. Maturities of total financial debts are less than one year. The effective interest rate is %19.44.

Group's net working capital\* (incl. non-current trade receivables and trade payables) requirement for the financing of continuing projects decreased to TL 896 million as of year-end 2018 (FY2017: TL640 million).

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

(TL million)	Gross Debt	Cash and Cash Eq.	Net debt
2018	487,8	192,8	295,0
2017	326,1	187,2	138,9

2018	TL	USD
Short term debt	481,6	91,5
Long term debt	-	-
Interest accrual	6,3	1,2
<b>Total Debt</b>	<b>487,8</b>	<b>92,7</b>

**RISK MANAGEMENT****CREDIT RISK**

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 (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 47% of the total liabilities.

**INFORMATION ABOUT INTERNAL CONTROL AND INTERNAL AUDITING ACTIVITIES**

As specified on CMB Corporate Governance Principles, an Audit Committee with independent Board Members was established within the Group to ensure that the Board accurately performs its tasks and liabilities.

The Group performs internal control activities to define the operational, financial and adaption risks associated with the industry and business processes, take the measures against these risks or avoid them. Internal control activities include increasing process efficiency, ensuring same or similar implementations for all processes by setting certain standard procedures for business flows, facilitating the tasks, roles and responsibilities, increasing coordination between departments and ensuring full compliance with the legislation, laws and regulations.

# CORPORATE GOVERNANCE

## PRINCIPLE COMPLIANCE REPORT

### SECTION I CORPORATE GOVERNANCE PRINCIPLES COMPLIANCE DISCLOSURE

In the conduct of its business activities Netaş Telekomünikasyon A.Ş. exerts utmost care to the requirements of Turkish Commercial Code, the Articles of Association of the Company, the Capital Markets Law, the Communiqués of the Capital Markets Board (CMB) and other relevant legislation. Aiming to create the highest level of value to its customers, shareholders, employees, business partners and the society with innovative and creative communication solutions, the Company gives great importance to transparency. In this regard, the Company has adopted "Corporate Governance Principles" published by the Capital Markets Board in July 2003. Since 2004, The Company has issued its Corporate Governance Principles Compliance Report together with its Annual Reports.

With the resolution of CMB, numbered 2/49 and dated 10.01.2019, it has been decided that companies shall make their Corporate Governance Compliance Reporting, which is made in accordance with the Corporate Governance Communiqué numbered II-17.1, by filling the Corporate Governance Compliance Report and Corporate Management Information Form templates via the Public Disclosure Platform (PDP). In accordance with this decision, our Company filled the relevant

### SECTION II SHAREHOLDERS

#### 2.1. INVESTOR RELATIONS

Netaş Telekomünikasyon A.Ş. has an investor relations unit reporting to the Company's Chief Financial Officer (CFO). The investor relations manager is also a member of the Corporate Governance Committee. Çağrı Demirel, who Investor Relations Department Manager, resigned from his duties as Investor Relations Manager and Corporate Governance Committee Member on 03.10.2018. Pursuant to Article 11 of the Corporate Governance Communiqué No II-17.1 of the Capital Markets Board, a new appointment will be made on the Public Disclosure Platform. The contact information for the investor relations department of the Company are as follows:

#### INVESTOR RELATIONS DEPARTMENT

Phone: +90 216 522 5209  
Fax: +90 2016 522 2222  
E-mail: yatirimci@netas.com.tr  
Feral Derya UZAY YILMAZ  
Accounting and Control Director  
Phone: +90 216 522 2951  
Fax: +90 216 522 2222  
E-mail: duzay@netas.com.tr

#### The Investor Relations Department plays an essential role in,

- Ensuring 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;
- Responding to the information requests of shareholders regarding the shareholding;
- With regard to the general meetings; 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;
- Ensuring and monitoring that duties and obligations arising out of the capital market legislation including

the issues related to corporate governance and public disclosure are fully respected.

- The current key activities of the Investor Relations Department are as follows:
- Information requests of our investors communicated through e-mail or phone have been replied in compliance with relevant legal regulations. Except from the requests involving confidential information and trade secrets, all of the information requests are met respecting equality principle.
- It is ensured that general assembly is carried out in compliance with the relevant legislation, articles of association and other internal regulations.
- Prior to the general assembly, informative documents are prepared for the perusal of the shareholders.
- Legal obligations regarding public disclosure are fulfilled and it is ensured that required information is provided to Public Disclosure Platform so that such information is complete, clear, adequate, and direct and does not involve misleading expressions.
- An analysts meeting was held in 2017, where financial and operational performance of the Company were presented and the management review regarding the new business opportunities and ICT market.
- During the period, many information requests were received from shareholders and their representatives through e-mail and phone and these were replied in compliance with relevant legal regulations.

#### 2.2. EXERCISE OF THE INFORMATION RIGHTS BY SHAREHOLDERS

The majority of the requests were after process transfer of the OEP Turkey Tech B.V.'s shares to ZTE Cooperatief U.A., fluctuations in stock prices, investments of the Company and dividend distribution. The requests 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](http://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. During the period no request was made for the appointment of a special auditor.

#### 2.3. GENERAL ASSEMBLY MEETINGS

During the year, one ordinary general meeting were held.

The Ordinary General Meeting was held on 22rd of May, 2018. The required majority of shareholders under the Articles of Association of the Company and the Law were present at this meeting. Shareholders and their 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 meeting was conducted by the physical attendance and electronic participation of shareholders through the Electronic General Assembly System of the 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 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 in 2018.

In order to accommodate wider attendance, the meetings were organized at the head office of the Company in its social facilities. The minutes of the Shareholders Meetings were submitted to CMB, Borsa İstanbul and the regional office of the Ministry of Science, Industry and Technology, announced to the public through Public Disclosure Platform (PDP), registered with the Commercial Registry, published in the Commercial Registry Gazette and copies were sent to shareholders upon request and additional copies are made

available to the shareholders at the head office and the web site of the Company for review.

#### 2.4. 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.

#### 2.5. DIVIDEND RIGHTS

There is no privilege granted to shareholders regarding participation to the company profit. The Dividend Policy of the company has been submitted to shareholders on the corporate website of the company. Dividend Policy shall be submitted to the approval of the general assembly at the first ordinary general assembly meeting.

There are no privileges with regards to participation to company profit, and the profit distribution procedure has been described in article 22 of the Articles of Association. At the general assembly meeting of the company held on May 22, 2018, the Proposal to Not Distribute Profit for the period, presented by the Board of Directors, was submitted to the information and approval of the shareholders and was accepted unanimously by all participants.

Accordingly, it was decided not to distribute profit during the period and to use the undistributed profit in the financing of the operating activities of the Company.

#### 2.6. TRANSFER OF SHARES

The transfer of shares is stipulated in Article 6 subparagraph (c) of the Articles of Association of the Company. Accordingly, bearer shares can be transferred without being subject to any limitation or condition. However, concerning the transfer of registered Company A shares the existing shareholders in Group A are entitled to preemptive 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 favorable to the third party than the price and other conditions contained in the initial offer.

### SECTION III PUBLIC DISCLOSURE AND TRANSPARENCY

#### 3.1. CORPORATE WEBSITE AND CONTENT

The corporate website [www.netas.com.tr/en](http://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.

#### 3.2. ANNUAL REPORT

The annual report is prepared in line with the capital market regulations and the Corporate Governance Principles of the Capital Markets Board.

## SECTION IV

### STAKEHOLDERS

#### 4.1. 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. "Bizbize" meetings are held for the employees and 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, our website, annual and interim reports, our press releases and our 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 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.

#### 4.2. 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 can meet with company executives at any time. The opinions of relevant groups are received through employee satisfaction, customer satisfaction and supplier satisfaction surveys that are periodically conducted by independent organizations and the company, and strategies are developed accordingly.

#### 4.3. HUMAN RESOURCES POLICY

The fundamental aspects of the Company's human resources policy can be outlined as follows;

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. 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. During the period, no discrimination complaint was received from the employees.

#### 4.4. 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. No disclosure was made to the public.

Netaş has been implementing Environment, Health and Safety Program since 1997. Within the scope of this program ISO14001 Environmental Management System and OHSAS 18001 Employee Health and Safety Management System are implemented. No claims were raised against the Company for environmental pollution.

Activities related to social responsibility of the Company include maintenance of relations with universities and the provision of scholarship to successful students in need. Students are offered opportunities for internships. 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.

## SECTION V

### BOARD OF DIRECTORS

#### 5.1. 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. The members of the Board of Directors can be re-elected.

Members of the Board of Directors as of the end 2018 are as follows;			
Name Surname	Title	Executive / Non- Executive / Independent	Start / Due Date
MING XIAO	Chairman	Non-Executive	28.07.2017 / 3 years
Turkish Armed Forces Foundation (TAFF) (Rep:M. Cumhuri Özdemir)	Vice Chairman	Non-Executive	02.05.2016 / 3 years
MINZHONGXIA DING	Member	Non-Executive	28.07.2017 / 3 years
XIANGYANG JIANG	Member	Non-Executive	28.07.2017 / 3 years
YANG JUN	Member	Non-Executive	28.07.2017 / 3 years
ALİ ZÜLFÜ TİGREL (*)	Independent Member	Non-Executive	07.06.2018 / 3 years
EMRE ŞEHSUVAROĞLU	Independent Member	Non-Executive	02.05.2016 / 12.10.2018
ALPASLAN KORKMAZ (*)	Independent Member	Non-Executive	02.05.2016 / 30.04.2018

\* After 30 April 2018, Ali Zülfü Tigrel as a new board members to replace the board members of Alpaslan Korkmaz

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 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:

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.

There have been no events compromising the independence of the independent members serving as members of the board of directors in 2018.

## 5.2. 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. The Board of Directors has held four meetings during the period with the attendance of the required majority. Invitations to meetings were made at least seven days in advance of the meeting together with the notification of the agenda. In order to facilitate communication with the Board Members and to provide related services a Corporate Secretarial Services function exists within the Company. In the event that differences of opinion are 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.

## 5.3. THE NUMBER, STRUCTURE AND INDEPENDENCE OF THE 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.

### CORPORATE GOVERNANCE COMMITTEE

**Chairman:** Ali Zülfü Tigrel(\*), Alpaslan Korkmaz(\*)-Independent Board Member  
**Member:** Ming Xiao - Chairman  
**Member:** TAFF (Rep:M. Cumhur Özdemir)- Board Member  
**Member:** Minzhongxia Ding -Board Member

(\*) After 30 April 2018, Ali Zülfü Tigrel as a new board members to replace the board members of Alpaslan Korkmaz

### AUDITING COMMITTEE

**Chairman:** Emre Şehsuvaroğlu (\*)-Independent Board Member  
**Member:** Ali Zülfü Tigrel(\*\*), Alpaslan Korkmaz(\*\*)-Independent Board Member

(\*)Mr. Emre Şehsuvaroğlu has resigned from his position as the Independent Board Member and the Audit Committee Chairman as of 12.10.2018.  
 (\*\*) After 30 April 2018, Ali Zülfü Tigrel as a new board members to replace the board members of Alpaslan Korkmaz

### COMMITTEE FOR EARLY DETECTION OF RISKS

**Chairman:** Ali Zülfü Tigrel(\*), Alpaslan Korkmaz(\*)-Independent Board Member  
**Member:** Minzhongxia Ding - Board Member  
**Member:** TAFF (Rep: M. Cumhur Özdemir)- Board Member

(\*\*) After 30 April 2018, Ali Zülfü Tigrel as a new board members to replace the board members of Alpaslan Korkmaz

**Member:** Emre Şehsuvaroğlu (\*\*)-Independent Board Member

(\*\*)Mr. Emre Şehsuvaroğlu has resigned from his position as the Independent Board Member and the Audit Committee Chairman as of 12.10.2018.

Committee meetings are held one day before meetings of the Board of Directors.

As the Nomination Committee and the Remuneration Committee specified in the Corporate Governance Principles could not be established due to the structure of the Board of Directors, these duties have been undertaken by the Corporate Governance Committee.

Working principles have been prepared for the committees and arrangements have been made for follow-up by relevant functions. 4 corporate governance committee meetings, 4 audit committee meetings and 6 early detection of risks committee meetings were held in 2018.

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 work of the Investor Relations Department. The Early Detection of Risks Committee which works for early detection of risks endangering the existence, development and sustenance of the company, 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.

## 5.4. RISK MANAGEMENT AND INTERNAL CONTROL MECHANISM

The Board of Directors has formed an Audit Committee composed of independent members and an Early Detection of Risk Committee to establish an internal control mechanism for the Company.

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.

## 5.5. 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.

## 5.6. FINANCIAL BENEFITS

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. Accordingly, Board Members receive a monthly fee payable at the end of each month. 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 our website.

## OTHER ISSUES

The issues contained within the scope of "Determination of the Minimum Content of the Companies' Annual Reports" regulations published by the Ministry of Customs and Trade, are as follows:

- The company acquired none of its own shares during the reporting period.
- The company did not undergo any special audits during the reporting period.
- As of the reporting date, 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.
- As of the reporting date, none of the members of the company's Board of Directors had demanded the issuance of any report as provided for under Article 199/4 of the Turkish Commercial Code.
- The company's financial position is solid. There is no risk of its having insufficient capital or of its becoming insolvent.

None of the persons from the company's management has been engaged in business, on their own behalf or on behalf of someone else that is in competition with the company, in accordance with the permission given by the general assembly.

	Compliance					Explanation
	Yes	Partial	No	Exempted	Not Applicable	
<b>1.1. FACILITATING THE EXERCISE OF SHAREHOLDER RIGHTS</b>						
1.1.2 - Up-to-date information and disclosures which may affect the exercise of shareholder rights are available to investors at the corporate website.	x					
<b>1.2. RIGHT TO OBTAIN AND REVIEW INFORMATION</b>						
1.2.1- Management did not enter into any transaction that would complicate the conduct of special audit.	x					
<b>1.3. GENERAL ASSEMBLY</b>						
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			There is no one insiders with a privileged information
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					
1.3.11 - The General Shareholders' Meeting was held open to the public, including the stakeholders, without having the right to speak.			x			The General Shareholders' Meeting was not held open to the media.
<b>1.4. VOTING RIGHTS</b>						
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 differentiation of the shares in (A) and (B) groups, does not give the owners any rights or privileges,except as provided in Articles 9 and 15.
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	
<b>1.5. MINORITY RIGHTS</b>						
1.5.1- The company pays maximum diligence to the exercise of minority rights.	x					
1.5.2-The Articles of Association extend the use of minority rights to those who own less than one twentieth of the outstanding shares, and expand the scope of the minority rights.			X			Utmost attention is paid for the execution of minority rights in our Company and the provisions of Turkish Code of Commerce.
<b>1.6. DIVIDEND RIGHT</b>						
1.6.1 -The dividend policy approved by the General Shareholders' Meeting is posted on the company website.	x					
1.6.2-The dividend distribution policy comprises the minimum information to ensure that the shareholders can have an opinion on the procedure and principles of dividend distributions in the future.	x					
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					

	Compliance					Explanation
	Yes	Partial	No	Exempted	Not Applicable	
<b>1.7. TRANSFER OF SHARES</b>						
1.7.1 - There are no restrictions preventing shares from being transferred.	x					
<b>2.1. CORPORATE WEBSITE</b>						
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					
<b>2.2. ANNUAL REPORT</b>						
2.2.1-The board of directors ensures that the annual report represents a true and complete view of the company's activities.	x					
2.2.2 - The annual report includes all elements listed in Corporate Governance Principle 2.2.2.	x					
<b>3.1. CORPORATION'S POLICY ON STAKEHOLDERS</b>						
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				The company has partially published.
3.1.4 - A whistleblowing programme is in place for reporting legal and ethical issues.	x					
3.1.5-The company addresses conflicts of interest among stakeholders in a balanced manner.	x					
<b>3.2. SUPPORTING THE PARTICIPATION OF THE STAKEHOLDERS IN THE CORPORATION'S MANAGEMENT</b>						
3.2.1-The Articles of Association, or the internal regulations (terms of reference/manuals), regulate the participation of employees in management.			x			The Company do not any regulate the participation of employees in 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				The company has partially implemented.
<b>3.3. HUMAN RESOURCES POLICY</b>						
3.3.1- The company has adopted an employment policy ensuring equal opportunities, and a succession plan for all key managerial positions.	x					
3.3.2-Recruitment criteria are documented.	x					
3.3.3 - The company has a policy on human resources development, and organises trainings for employees.	x					
3.3.4-Meetings have been organised 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				Employees were notified of decisions impacting them.
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					Explanation
	Yes	Partial	No	Exempted	Not Applicable	
<b>3.4. RELATIONS WITH CUSTOMERS AND SUPPLIERS</b>						
3.4.1-The company measured its customer satisfaction, and operated to ensure full customer satisfaction.	x					
3.4.2-Customers are notified of any delays in handling their requests.	x					
3.4.3 - The company complied with the quality standards with respect to its products and services.	x					
3.4.4 - The company has in place adequate controls to protect the confidentiality of sensitive information and business secrets of its customers and suppliers.	x					
<b>3.5. ETHICAL RULES AND SOCIAL RESPONSIBILITY</b>						
3.5.1-The board of the corporation has adopted a code of ethics, disclosed on the corporate website.		x				The company has partially published.
3.5.2-The company has been mindful of its social responsibility and has adopted measures to prevent corruption and bribery.	x					
<b>4.1. ROLE OF THE BOARD OF DIRECTORS</b>						
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					
<b>4.2. ACTIVITIES OF THE BOARD OF DIRECTORS</b>						
4.2.1-The board of directors documented its meetings and reported its activities to the shareholders.	x					
4.2.2-Duties and authorities of the members of the board of directors are disclosed in the annual report.	x					
4.2.3-The board has ensured the company has an internal control framework adequate for its activities, size and complexity.	x					
4.2.4-Information on the functioning and effectiveness of the internal control system is provided in the annual report.	x					
4.2.5 - The roles of the Chairman and Chief Executive Officer are separated and defined.	x					
4.2.7 - The board of directors ensures that the Investor Relations department and the corporate governance committee work effectively. The board works closely with them when communicating and settling disputes with shareholders.	x					
4.2.8 - The company has subscribed to a Directors and Officers liability insurance covering more than 25% of the capital.	x					
<b>4.3. STRUCTURE OF THE BOARD OF DIRECTORS</b>						
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			The company has not any rules about this point of compliance.
4.3.10-At least one member of the audit committee has 5 years of experience in audit/accounting and finance.	x					

	Compliance					Explanation
	Yes	Partial	No	Exempted	Not Applicable	
<b>4.4. BOARD MEETING PROCEDURES</b>						
4.4.1-Each board member attended the majority of the board meetings in person.	x					
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 are no limitations for the members of the Board of Directors regarding them to carry duties outside the company.
<b>4.5. BOARD COMMITTEES</b>						
4.5.5-Board members serve in only one of the Board's committees.			x			The independent members take part in more than one committee.
4.5.6 - Committees have invited persons to the meetings as deemed necessary to obtain their views.	x					
4.5.7-If external consultancy services are used, the independence of the provider is stated in the annual report.	x					
4.5.8-Minutes of all committee meetings are kept and reported to board members.	x					
<b>4.6. FINANCIAL RIGHTS</b>						
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 is no such practice within the company
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 favour of them.	x					
4.6.5-The individual remuneration of board members and executives is disclosed in the annual report.			x			The individual remuneration are given as a sum

CORPORATE GOVERNANCE INFORMATION FILLINGS	
<b>1. SHAREHOLDERS</b>	
<b>1.1. Facilitating the Exercise of Shareholders Rights</b>	
The number of investor meetings (conference, seminar/etc.) organised by the company during the year	2
<b>1.2. Right to Obtain and Examine Information</b>	
The number of special audit request(s)	-
The number of special audit requests that were accepted at the General Shareholders' Meeting	-
<b>1.3. General Assembly</b>	
Link to the PDP announcement that demonstrates the information requested by Principle 1.3.1. (a-d)	<a href="https://www.kap.org.tr/tr/Bildirim/668172">https://www.kap.org.tr/tr/Bildirim/668172</a>
Whether the company provides materials for the General Shareholders' Meeting in English and Turkish at the same time	Only 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	-
The links to the PDP announcements associated with related party transactions in the context of Article 9 of the Communique on Corporate Governance (II-17.1)	-
The links to the PDP announcements associated with common and continuous transactions in the context of Article 10 of the Communique on Corporate Governance (II-17.1)	-
The name of the section on the corporate website that demonstrates the donation policy of the company	Investor Relations - Corporate Governance - Articles of Association
The relevant link to the PDP with minute of the General Shareholders' Meeting where the donation policy has been approved	<a href="https://www.kap.org.tr/tr/Bildirim/684908">https://www.kap.org.tr/tr/Bildirim/684908</a>
The number of the provisions of the articles of association that discuss the participation of stakeholders to the General Shareholders' Meeting	8
Identified stakeholder groups that participated in the General Shareholders' Meeting, if any	The representatives of the Independent Audit Company and Stakeholder
<b>1.4. Voting Rights</b>	
Whether the shares of the company have differential voting rights	No
In case that there are voting privileges, indicate the owner and percentage of the voting majority of shares.	-
The percentage of ownership of the largest shareholder	48,05%
<b>1.5. Minority Rights</b>	
Whether the scope of minority rights enlarged (in terms of content or the ratio) in the articles of the association	No
If yes, specify the relevant provision of the articles of association	-
<b>1.6. Dividend Right</b>	
The name of the section on the corporate website that describes the dividend distribution policy	Investor Relations - Corporate Governance - Policies
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	The proposed that profit of 2017 should not be distributed and that the undistributed profit will be used for working capital financing. -
PDP link to the related general shareholder meeting minutes in case the board of directors proposed to the general assembly not to distribute dividends	<a href="https://www.kap.org.tr/tr/Bildirim/684910">https://www.kap.org.tr/tr/Bildirim/684910</a>

General Assembly Meetings	
General Meeting Date	22.05.2018
The number of Information Requests received by the Company regarding the clarification of the agenda of the General Shareholders' Meeting	0
Shareholder participation rate to the General Shareholders' Meeting	%64
Percentage of shares directly present at the GSM	%63
Percentage of shares represented by proxy	%64
Specify the name of the page of the corporate website that contains the General Shareholders' Meeting minutes, and also indicates for each resolution the voting levels for or against	Investor Relations - Shareholders-and-investor-relations-General Assembly
Specify the name of the page of the corporate website that contains all questions asked in the general assembly meeting and all responses to them	Investor Relations - Shareholders-and-investor-relations-General Assembly
The number of the relevant item or paragraph of General Shareholders' Meeting minutes in relation to related party transactions	Article 10
The number of declarations by insiders received by the board of directors	6
The link to the related PDP general shareholder meeting notification	<a href="https://www.kap.org.tr/tr/Bildirim/684908">https://www.kap.org.tr/tr/Bildirim/684908</a>

2. DISCLOSURE AND TRANSPARENCY	
<b>2.1. Corporate Website</b>	
Specify the name of the sections of the website providing the information requested by the Principle 2.1.1.	Investor Relations -Corporate Governance
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.	-
List of languages for which the website is available	Turkish, English
<b>2.2. Annual Report</b>	
The page numbers and/or name of the sections in the Annual Report that demonstrate the information requested by principle 2.2.2.	
a) The page numbers and/or name of the sections in the Annual Report that demonstrate the information requested by principle 2.2.2.	Annual Report-Corporate Governance Principles Compliance Reports- Board of Directors
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 Principles Compliance Reports-The Number, Structure and Independence of the Committees
c) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on number of board meetings in a year and the attendance of the members to these meetings	Annual Report-Corporate Governance Principles Compliance Reports-The Number, Structure and Independence of the Committees
ç) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on amendments in the legislation which may significantly affect the activities of the corporation	Annual Report-Corporate Governance Principles Compliance Reports- Other Issues
d) The page numbers and/or name of the sections in the Report that demonstrate the information on significant lawsuits filed against the corporation and the possible results thereof	Annual Report-Corporate Governance Principles Compliance Reports- Other Issues
e) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on the conflicts of interest of the corporation among the institutions that it purchases services on matters such as investment consulting and rating and the measures taken by the corporation in order to avoid from these conflicts of interest	None.
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%	The Company has not any cross ownership subsidiaries that the direct contribution to the 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

3. STAKEHOLDERS	
<b>3.1. Corporation's Policy on Stakeholders</b>	
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	28
The position of the person responsible for the alert mechanism (i.e. whistleblowing mechanism)	Human Resources
The contact detail of the company alert mechanism.	Address: Netaş Telekomünikasyon A.Ş. Yenişehir Disc. Osmanlı Avenue No:11 34912
<b>3.2. Supporting the Participation of the Stakeholders in the Corporation's Management</b>	
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 Board
<b>3.3. Human Resources Policy</b>	
The role of the board on developing and ensuring that the company has a succession plan for the key management positions	The supported by human resources.
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	None
The name of the section on the corporate website that demonstrates the human resource policy covering discrimination and mistreatments and the measures to prevent them. Also provide a summary of relevant parts of the human resource policy.	Netaş/Investor relations/ sustainability
The number of definitive convictions the company is subject to in relation to health and safety measures	0
<b>3.5. Ethical Rules and Social Responsibility</b>	
The name of the section on the corporate website that demonstrates the code of ethics	Corporate/social responsibility
The name of the section on the company website that demonstrates the corporate social responsibility report. If such a report does not exist, provide the information about any measures taken on environmental, social and corporate governance issues.	Corporate/social responsibility
Any measures combating any kind of corruption including embezzlement and bribery	Corporate/social responsibility
<b>4. 4. BOARD OF DIRECTORS-I</b>	
<b>4.2. Activity of the Board of Directors</b>	
Date of the last board evaluation conducted	-
Whether the board evaluation was externally facilitated	None
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	Chairman: MING XIAO, Vice Chairman: TSKGV (Rep. M.Cumhur Özdemir), MINZHONGXIA DING Member, Member XIANGYANG JIANG, Member YANG JUN, Independent Member ALİ ZÜLFÜ TİGREL
Number of reports presented by internal auditors to the audit committee or any relevant committee to the board	None
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	17
Name of the Chairman	MING XIAO
Name of the CEO	CEMİL MÜJDAT ALTAY
If the CEO and Chair functions are combined: provide the link to the relevant PDP announcement providing the rationale for such combined roles	Not the same person
Link to the PDP notification stating that any damage that may be caused by the members of the board of directors during the discharge of their duties is insured for an amount exceeding 25% of the company's capital	-
The name of the section on the corporate website that demonstrates current diversity policy targeting women directors	None
The number and ratio of female directors within the Board of Directors	0

COMPOSITION OF BOARD OF DIRECTORS							
Name, Surname of Board Member	Whether Executive Director Or Not	Whether Independent Director Or Not	The First Election Date To Board Yes	Link to PDP Notification That Includes The Independence Declaration	Whether the Independent Director Considered By The Nomination Committee	Whether She/ He is the Director Who Ceased to Satisfy The Independence Or Not	Whether The Director Has At Least 5 Years' Experience On Audit, Accounting And/Or Finance Or Not
MING XIAO	Non-executive	Not independent	28.07.2017	-	Not considered	No	Yes
TSKGV (Rep.M.Cumhur Özdemir)	Non-executive	Not independent	02.05.2016	-	Not considered	No	Yes
MINZHONGXIA DING	Non-executive	Not independent	28.07.2017	-	Not considered	No	Yes
XIANGYANG JIANG	Non-executive	Not independent	28.07.2017	-	Not considered	No	Yes
YANG JUN	Non-executive	Not independent	28.07.2017	-	Not considered	No	Yes
ALİ ZÜLFÜ TİGREL	Non-executive	Independent Member	07.06.2018	<a href="https://www.kap.org.tr/tr/Bildirim/687920">https://www.kap.org.tr/tr/Bildirim/687920</a>	Considered	No	Yes

4. BOARD OF DIRECTORS-II	
<b>4.4. Meeting Procedures of the Board of Directors</b>	
Number of physical board meetings in the reporting period (meetings in person)	4
Director average attendance rate at board meetings	%70
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	7
The name of the section on the corporate website that demonstrates 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	None
<b>4.5. Board Committees</b>	
Page numbers or section names of the annual report where information about the board committees are presented.	Annual Report-The Number, Structure and Independence of the Committees
Link(s) to the PDP announcement(s) with the board committee charters	<a href="https://www.kap.org.tr/tr/Bildirim/687942">https://www.kap.org.tr/tr/Bildirim/687942</a>

COMPOSITION OF BOARD COMMITTEES-I				
Names Of The Board Committees	Name Of Committees Defined As "Other" In The First Column	Name-Surname of Committee Members	Whether Committee Chair Or Not	Whether Board Member Or Not
Corporate Governance Committee	-	ALİ ZÜLFÜ TİGREL	Yes	Board member
Corporate Governance Committee	-	MING XIAO	No	Board member
Corporate Governance Committee	-	TSKGV (Rep.: M. Cumhuri Özdemir)	No	Board member
Corporate Governance Committee	-	MINZHONGXIA DING	No	Board member
Audit Committee	-	ALİ ZÜLFÜ TİGREL	Yes	Board member
Committee of Early Detection of Risk	-	ALİ ZÜLFÜ TİGREL	Yes	Board member
Committee of Early Detection of Risk	-	TSKGV (Rep.: M. Cumhuri Özdemir)	No	Board member
Committee of Early Detection of Risk	-	MINZHONGXIA DING	No	Board member

## 4. BOARD OF DIRECTORS-III

## 4.5. Board Committees-II

Specify where the activities of the audit committee are presented in your annual report or website (Page number or section name in the annual report/website)	Annual Report-Corporate Governance Principles Compliance Reports-The Number, Structure and Independence of the 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 Principles Compliance Reports-The Number, Structure and Independence of the 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)	The duties of the nomination committee is carried by the Corporate Governance Committee.
Specify where the activities of the early detection of risk committee are presented in your annual report or website (Page number or section name in the annual report/website)	Annual Report-Corporate Governance Principles Compliance Reports-The Number, Structure and Independence of the 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)	The duties of the remuneration committee carried by the Corporate Governance Committee.
<b>4.6. Financial Rights</b>	
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 Reports/Cmb Reports
Specify the section of website where remuneration policy for executive and non-executive directors are presented.	Investor Relations - Corporate Governance Remunerations Policies.
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 Reports-Cmb Reports- Balances and transactions with related parties

## COMPOSITION OF BOARD COMMITTEES-II

Names Of The Board Committees	Name Of Committees Defined As "Other" In The First Column	The Percentage Of Non-executive Directors	The Percentage Of Independent Directors In The Committee	The Number Of Meetings Held In Person	The Number of Reports on its Activities Submitted to the Board
Corporate Governance Committee	-	%100	%25	4	4
Audit Committee	-	%100	%100	4	4
Committee of Early Detection of Risk	-	%100	%33	6	6

NETAŞ TELEKOMÜNİKASYON A.Ş.

AND ITS' SUBSIDIARIES

AS AT AND FOR THE YEAR ENDED

31 DECEMBER 2018

CONSOLIDATED FINANCIAL STATEMENTS

AND INDEPENDENT AUDITORS' REPORT

CONVENIENCE TRANSLATION  
OF THE REPORT AND THE  
CONSOLIDATED FINANCIAL STATEMENTS  
ORIGINALLY ISSUED IN TURKISH



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## INDEPENDENT AUDITOR'S REPORT

To the Shareholder's of Netaş Telekomünikasyon Anonim Şirketi

### A) Audit of the Consolidated Financial Statements

#### Opinion

We have audited the consolidated financial statements of Netaş Telekomünikasyon Anonim Şirketi and its subsidiaries (together will be referred to as "the Group"), which comprise the consolidated statement of financial position as at 31 December 2018, the consolidated statements of profit or loss and other comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at 31 December 2018, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with Turkish Financial Reporting Standards ("TFRS").

#### Basis for Opinion

We conducted our audit in accordance with standards on auditing issued by Capital Markets Board of Turkey ("CMB") and Standards on Auditing which is a component of the Turkish Auditing Standards published by the Public Oversight Accounting and Auditing Standards Authority ("POA") ("Standards on Auditing issued by POA"). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We declare that we are independent of the Group in accordance with the Code of Ethics for Auditors issued by POA ("POA's Code of Ethics") and the ethical requirements in the regulations issued by POA that are relevant to audit of consolidated financial statements, and we have fulfilled our other ethical responsibilities in accordance with the POA's Code of Ethics and regulations. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

#### Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

#### Revenue recognition

Refer to Note 2 and Note 21 to the consolidated financial statements for summary of significant accounting policies and significant accounting estimates and assumptions for revenue recognition.

#### The key audit matter

All contracts made with customers are accounted separately and at the beginning of the contracts, the Group considers the goods or services that are committed by each contract. When the Group fulfills (or as required) the performance obligation by transferring the goods or services to the customer, the revenue is recognized in the financial statements. When the control of an asset is passed (or as passed) to the customer, the ownership of the asset is transferred. The Group determines that each performance obligation will be fulfilled whether over period of a time or at a point of time at the beginning of the contracts.

Since commercial contracts can be complex, to select the appropriate accounting considerations for each situation, the management shall perform significant assessments. There are risks of miscalculation and misrecognition of sales due to management estimations used in the determination of the revenue recognition policy caused by revenue earned but not invoiced or invoiced but not earned and due to any changes at the contract; updated contract price or change in the scope of the contract.

Due the aforementioned reasons, since that the revenue recognition in the correct period by accurate amount requires significant management judgment it is assessed as a key audit matter.

#### How the matter was addressed in our audit

We have performed the following audit procedures to be responsive to this area:

- By understanding the revenue process of the Company, we have tested the design, implementation and operating effectiveness of the controls of revenue process assisted by our Information Technology specialists.
- Evaluate the appropriateness of the revenue recognition policy applied by the management of the Company in respect of the compliance with TFRS.
- By reviewing the selected customer contracts, it has been assessed that whether the obligation is to be fulfilled over the period of a time or at a point of time and we discussed the key contracts with the management. Given the likelihood, that management may intentionally influence the assumptions, the contracts are questioned and analyzed in detail and the findings were discussed,
- In the substantive procedures, we focused on evaluation of revenue recognized that by recording earned but not invoiced or invoiced but not earned amount. Within the scope of these procedures, the management's assessment process was examined, the information in the data for the selected samples was compared with the invoices and the collections, the analytical procedures were performed for the movements during the period and the historical accuracy of the management's estimates that was evaluated by comparing the estimates made in previous periods with the actuals,
- Sending confirmation letters to the counter parties in order to test the existence and accuracy of the outstanding balances of customers and progress billings.

## Goodwill

Refer to Note 13 and to the consolidated financial statements for summary of significant accounting policies and significant accounting estimates and assumptions for goodwill.

<b>The key audit matter</b>	<b>How the matter was addressed in our audit</b>
<p>As of 31 December 2018, goodwill balance recognized in the accompanying consolidated financial statements is amounting to TL 96.422.343. In accordance with TFRSs, the Group is required to test the goodwill annually for impairment.</p> <p>Goodwill balance has a significant effect on the consolidated financial statements and the impairment tests conducted by the Group management includes significant estimates and assumptions. Such assumptions are; growth rate of earnings before interest tax depreciation and amortization ("EBITDA"), long term growth rate, discounted cash flows. Those assumptions are highly sensitive to the expected future market or economic conditions. Thus, this annual impairment test was significant to our audit and impairment testing of intangible assets with indefinite lives considered as a key audit matter.</p>	<p>The audit procedures we have performed to address the risk of "material misstatement" regarding the goodwill impairment include the followings;</p> <ul style="list-style-type: none"><li>▶ Assessment of accuracy of cash generating units identified by the management</li><li>▶ Discussion the future plans with Group management and assessment of the relevance of these plans in light of the macroeconomic data,</li><li>▶ Assessment of accuracy of cash flow projections for every cash generating unit and comparison of the prior year actual financial performances,</li><li>▶ Assessment of the accuracy of key assumptions used in the goodwill impairment testing such as long term growth rates, discount rate used in the discounted cash flows and comparison of these assumptions with the assumptions used in the telecommunication sectors with our valuation specialist,</li><li>▶ Assessment of the discounted cash flow model and the mathematical accuracy,</li><li>▶ Assessment of the sensitivity of the assumptions determined by the management to market conditions</li><li>▶ Assessment of the completeness of the disclosure requirements under TFRS regarding to impairment of tangible assets with indefinite lives and review of the explanations in the consolidated financial statement disclosures.</li></ul>

## Other Matter

The consolidated financial statements of Netaş Telekomünikasyon Anonim Şirketi for the year ended 31 December 2017 were audited by another auditor who expressed an unmodified opinion on those statements on 9 March 2018.

## Responsibilities of Management and Those Charged with Governance for the consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with TFRS, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

## Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Responsibilities of auditors in an audit are as follows:

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with standards on auditing issued by the CMB and Standards on Auditing issued by POA will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with the standards on auditing issued by the CMB and Standards on Auditing issued by POA, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- ▶ Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- ▶ Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- ▶ Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- ▶ Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- ▶ Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- ▶ Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

## B) Other Legal and Regulatory Requirements

1) Pursuant to the fourth paragraph of Article 398 of Turkish Commercial Code ("TCC") no. 6102; the Independent Auditor's Report on System and Committee of Early Identification of Risks is presented to the Board of Directors of the Company on 8 March 2019.

2) Pursuant to the fourth paragraph of Article 402 of the TCC; no significant matter has come to our attention that causes us to believe that for the period between 1 January 2018 and 31 December 2018, the Company's bookkeeping activities and consolidated financial statements are not in compliance with TCC and provisions of the Company's articles of association in relation to financial reporting.

3) Pursuant to the fourth paragraph of Article 402 of the TCC; the Board of Directors provided us the necessary explanations and required documents in connection with the audit.

KPMG Bağımsız Denetim ve Serbest Muhasebeci Mali Müşavirlik Anonim Şirketi  
A member firm of KPMG International Cooperative



Hatice Nesrin Tuncer, SMMM  
Partner  
8 March 2019  
İstanbul, Türkiye

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**NETAŞ TELEKOMÜNİKASYON A.Ş. AND ITS SUBSIDIARIES****AUDITED CONSOLIDATED STATEMENT OF FINANCIAL POSITION****AS OF 31 DECEMBER 2018**

(Unless otherwise stated the amounts are in TL).

	Notes	Current Period 31 December 2018	Previous Period 31 December 2017
<b>ASSETS</b>			
<b>Current Assets</b>		<b>1.563.754.051</b>	<b>1.286.317.631</b>
Cash and Cash Equivalents	5	192.787.683	187.212.070
Trade Receivables		916.704.334	806.226.238
<i>Due from related parties</i>	28	7.142	-
<i>Trade receivables, third parties</i>	7	916.697.192	806.226.238
Other Receivables		1.728.286	1.479.485
<i>Other receivables, third parties</i>	8	1.728.286	1.479.485
Inventories	9	89.377.544	70.801.802
Deferred Costs	11	305.680.684	165.497.546
Prepaid Expenses	10	13.361.876	11.457.890
Other Current Assets	19	44.113.644	43.642.600
<b>Non-Current Assets</b>		<b>297.685.066</b>	<b>263.534.876</b>
Trade Receivables		54.296.299	83.903.835
<i>Trade receivables, third parties</i>	7	54.296.299	83.903.835
Property, Plant and Equipment	12	51.441.407	36.598.628
Financial Investments		4.733.887	2.928.818
Intangible Assets		129.450.068	103.327.185
<i>Goodwill</i>	13	96.422.343	69.131.791
<i>Other intangible assets</i>	13	33.027.725	34.195.394
Associates	3	7.784.350	6.155.424
Other Non-Current Assets	19	25.401.602	18.909.728
Prepaid Expenses	10	554.765	416.766
Deferred Tax Assets	26	24.022.688	11.294.492
<b>TOTAL ASSETS</b>		<b>1.861.439.117</b>	<b>1.549.852.507</b>

The accompanying notes form an integral part of these consolidated financial statements.  
(Convenience translation of the report and the consolidated financial statements originally issued in Turkish)

**NETAŞ TELEKOMÜNİKASYON A.Ş. AND ITS SUBSIDIARIES**  
**AUDITED CONSOLIDATED STATEMENT OF FINANCIAL POSITION**  
**AS OF 31 DECEMBER 2018**

(Unless otherwise stated the amounts are in TL).

	Notes	Current Period 31 December 2018	Previous Period 31 December 2017
<b>LIABILITIES</b>			
<b>Short Term Liabilities</b>		<b>1.016.624.156</b>	<b>845.140.220</b>
Short Term Financial Liabilities	6	487.836.269	302.073.547
Trade Payables		298.956.476	382.578.302
<i>Due to related parties</i>	28	353.107	1.715.824
<i>Trade payables, third parties</i>	7	298.603.369	380.862.478
Other Payables		17.064.203	10.710.962
<i>Other payables, third parties</i>	8	17.064.203	10.710.962
Employee Benefit Obligations	17	22.373.870	11.623.440
Deferred Revenues	11	83.881.957	55.182.524
Provisions		34.856.887	27.300.712
<i>Provision for Employee Benefits</i>	17	28.613.313	21.736.094
<i>Other Short Term Provisions</i>	15	6.243.574	5.564.618
Advances Received	18	66.589.646	52.676.354
Current Tax Liabilities	26	5.064.848	2.994.379
<b>Long Term Liabilities</b>		<b>31.150.023</b>	<b>60.105.663</b>
Long Term Financial Liabilities	6	-	24.044.293
Trade Payables		57.416	46.357
<i>Trade payables, third parties</i>	7	57.416	46.357
Provisions		29.265.838	24.974.362
<i>Provision for Employee Benefits</i>	17	29.265.838	24.974.362
Deferred Tax Liabilities	26	1.826.769	11.040.651
<b>SHAREHOLDERS' EQUITY</b>			
<b>Equity Attributable to Equity Holders of the Parent</b>		<b>813.664.938</b>	<b>644.606.624</b>
Share Capital	20	64.864.800	64.864.800
Share Capital Adjustments		41.612.160	41.612.160
Other comprehensive income to be reclassified in profit and loss		28.564.108	6.008.477
<i>Foreign Currency Translation Adjustment</i>		28.564.108	6.008.477
Other comprehensive income not to be reclassified in profit and loss		487.612.954	282.205.103
<i>Actuarial Loss</i>		(7.862.007)	(8.901.434)
<i>Foreign Currency Translation Adjustment</i>	20	495.474.961	291.106.537
Restricted Reserves Appropriated From Profit	20	34.897.360	34.897.360
Retained Earnings		175.927.647	161.500.522
(Loss)/ Profit for the Year	20	(19.814.091)	53.518.202
<b>TOTAL LIABILITIES AND SHAREHOLDERS' EQUITY</b>		<b>1.861.439.117</b>	<b>1.549.852.507</b>

The accompanying notes form an integral part of these consolidated financial statements.  
(Convenience translation of the report and the consolidated financial statements originally issued in Turkish)

**NETAŞ TELEKOMÜNİKASYON A.Ş. AND ITS SUBSIDIARIES**  
**AUDITED CONSOLIDATED STATEMENT OF PROFIT AND LOSS AND OTHER**  
**COMPREHENSIVE INCOME FOR THE YEAR ENDED 31 DECEMBER 2018**

(Unless otherwise stated the amounts are in TL).

	Dipnot	Current Period 1 January- 31 December 2018	Previous Period 1 January- 31 December 2017
<b>INCOME OR LOSS FROM OPERATIONS</b>			
Revenue	21	1.039.787.975	1.122.265.684
Cost of Sales (-)	21	(916.893.118)	(949.726.015)
<b>GROSS PROFIT</b>		<b>122.894.857</b>	<b>172.539.669</b>
Sales, Marketing and Distribution Expenses (-)	22	(58.914.211)	(56.109.411)
General Administrative Expenses (-)	22	(44.988.291)	(32.452.882)
Research and Development Expenses (-)	22	(13.407.445)	(4.252.477)
Other Income from Operating Activities	23	1.483.323	2.019.542
Other Expenses from Operating Activities (-)	23	(100.233.240)	(17.248.271)
<b>OPERATING (LOSS)/ PROFIT</b>		<b>(93.165.007)</b>	<b>64.496.170</b>
Income from Investment Activities	24	72.674	35.519
Expenses from Investment Activities (-)	24	(18.675)	(44.008)
Income from Associates	3	375.187	820.823
<b>OPERATING (LOSS)/PROFIT BEFORE FINANCE INCOME</b>		<b>(92.735.821)</b>	<b>65.308.504</b>
Financial Income	25	153.910.189	22.711.867
Financial Expenses (-)	25	(87.815.832)	(47.830.723)
<b>(LOSS)/ PROFIT BEFORE TAX</b>		<b>(26.641.464)</b>	<b>40.189.648</b>
<b>Tax Income</b>		<b>6.827.373</b>	<b>13.328.554</b>
<i>Current Tax Expenses</i>	26	(5.150.867)	(3.016.501)
<i>Deferred Tax Income</i>	26	11.978.240	16.345.055
<b>(LOSS)/ PROFIT AFTER TAX</b>		<b>(19.814.091)</b>	<b>53.518.202</b>
<b>OTHER COMPREHENSIVE INCOME</b>			
<b>Other comprehensive income or expenses that will not be reclassified subsequently to profit or loss</b>		<b>220.839.494</b>	<b>52.148.953</b>
Currency translation reserves		219.800.067	52.809.726
Actuarial gain/(loss)	20	1.299.284	(825.966)
Actuarial gain/(loss), deferred tax	20	(259.857)	165.193
<b>Other comprehensive income or expenses that may be reclassified subsequently to profit or loss</b>		<b>22.555.631</b>	<b>(10.756.408)</b>
Currency translation reserves		22.555.631	(10.756.408)
<b>OTHER COMPREHENSIVE INCOME</b>		<b>243.395.125</b>	<b>41.392.545</b>
<b>TOTAL COMPREHENSIVE INCOME</b>		<b>223.581.034</b>	<b>94.910.747</b>
<b>(Loss)/Earnings per share</b>		<b>(0,3055)</b>	<b>0,8251</b>
(Loss)/ Earnings per common share	27	(0,3055)	0,8251

The accompanying notes form an integral part of these consolidated financial statements.  
(Convenience translation of the report and the consolidated financial statements originally issued in Turkish)

**NETAŞ TELEKOMÜNİKASYON A.Ş. AND ITS SUBSIDIARIES**

**AUDITED CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 DECEMBER 2018**

(Unless otherwise stated the amounts are in TL).

	Other comprehensive income or expenses that may be reclassified subsequently to profit or loss		Other comprehensive income or expenses that will not be reclassified subsequently to profit or loss		Retained Earnings		Net Profit/(Loss) for the Year	TOTAL	
	Capital	Capital Reserves	Currency Translation Reserves	Currency Translation Reserves	Actuarial Loss	Restricted Reserves Appropriated from Profit			Retained Earnings (*)
<b>Balance as at 1 January 2017</b>	<b>64.864.800</b>	<b>41.612.160</b>	<b>16.764.885</b>	<b>238.296.811</b>	<b>(8.240.661)</b>	<b>33.182.076</b>	<b>144.545.795</b>	<b>18.670.011</b>	<b>549.695.877</b>
Currency translation differences	-	-	(10.756.408)	52.809.726	(825.966)	-	-	-	42.063.318
Actuarial loss	-	-	-	-	165.193	-	-	-	(825.966)
Deferred tax benefit on actuarial loss	-	-	-	-	-	-	-	-	165.193
Net profit for the year	-	-	-	-	-	-	-	-	53.518.202
<b>Total comprehensive income</b>	<b>-</b>	<b>-</b>	<b>(10.756.408)</b>	<b>52.809.726</b>	<b>(660.773)</b>	<b>-</b>	<b>-</b>	<b>53.518.202</b>	<b>94.910.747</b>
Transfer	-	-	-	-	-	1.715.284	16.954.727	(18.670.011)	-
<b>Balance as at 31 December 2017</b>	<b>64.864.800</b>	<b>41.612.160</b>	<b>6.008.477</b>	<b>291.106.537</b>	<b>(8.901.434)</b>	<b>34.897.360</b>	<b>161.500.522</b>	<b>53.518.202</b>	<b>644.606.624</b>
Mandatory changes in accounting policies (Note 2.3)	-	-	-	(15.431.643)	-	-	(39.091.077)	-	(54.522.720)
<b>Revised reported as of 1 January 2018</b>	<b>64.864.800</b>	<b>41.612.160</b>	<b>6.008.477</b>	<b>275.674.894</b>	<b>(8.901.434)</b>	<b>34.897.360</b>	<b>122.409.445</b>	<b>53.518.202</b>	<b>590.083.904</b>
Currency translation differences	-	-	22.555.631	219.800.067	-	-	-	-	242.355.698
Actuarial gain	-	-	-	-	1.299.284	-	-	-	1.299.284
Deferred tax loss on actuarial gain	-	-	-	-	(259.857)	-	-	-	(259.857)
Net loss for the year	-	-	-	-	-	-	-	(19.814.091)	(19.814.091)
<b>Total comprehensive income</b>	<b>-</b>	<b>-</b>	<b>22.555.631</b>	<b>219.800.067</b>	<b>1.039.427</b>	<b>-</b>	<b>53.518.202</b>	<b>(19.814.091)</b>	<b>223.581.034</b>
Transfer	-	-	-	-	-	-	-	(53.518.202)	-
<b>Balance as at 31 December 2018</b>	<b>64.864.800</b>	<b>41.612.160</b>	<b>28.564.108</b>	<b>495.474.961</b>	<b>(7.862.007)</b>	<b>34.897.360</b>	<b>175.927.647</b>	<b>(19.814.091)</b>	<b>813.664.938</b>

(\*) Retained earnings contain extraordinary reserves.

The accompanying notes form an integral part of these consolidated financial statements.  
(Convenience translation of the report and the consolidated financial statements originally issued in Turkish)

**NETAŞ TELEKOMÜNİKASYON A.Ş. AND ITS SUBSIDIARIES**  
**AUDITED CONSOLIDATED STATEMENT OF CASH FLOWS**  
**FOR THE YEAR ENDED 31 DECEMBER 2018**

(Unless otherwise stated the amounts are in TL).

	Notes	Current Period	Previous Period
		1 January-31 December 2018	1 January-31 December 2017
<b>A. CASH FLOWS FROM OPERATING ACTIVITIES</b>			
<b>(Loss)/Profit for the Year</b>		<b>(19.814.091)</b>	<b>53.518.202</b>
(Loss)/Profit from Continuing Operations	20	(19.814.091)	53.518.202
<b>Adjustments to Reconcile Profit/Loss</b>		<b>5.455.094</b>	<b>75.522.255</b>
Adjustments for Depreciation and Amortisation Expense	12-13-19	32.539.262	26.000.001
Adjustments for (Reversal of) Impairment Loss Recognised in Profit or Loss		12.454.778	6.389.650
Adjustments for (Reversal of) Provision of Receivables	7	28.189.758	6.389.650
Adjustment for Reversal of Provision of Inventory	9	(15.734.980)	-
Adjustments For Provisions		40.757.533	35.571.990
Adjustments for Provisions Related with Employee Benefits	17	38.862.558	33.787.761
Adjustments for (Reversal of) Lawsuit and/or Penalty Provisions	15	1.643.580	2.050.622
Adjustments for (Reversal of) Provisions Arising From Sectoral Requirements	15	251.395	(266.393)
Adjustments for Interest (Income) and Expenses		71.214.846	42.635.718
Adjustments for Interest Income	25	(9.655.423)	(1.777.651)
Adjustments for Interest Expense	25	81.948.273	43.984.031
Unearned Financial Loss/Income from Credit Sales	23	(1.078.004)	429.338
Adjustments For Unrealised Foreign Exchange Losses (Gains)	25	(144.254.766)	(18.255.463)
Other Adjustments for Fair Value Losses (Gains)		-	(2.678.753)
Adjustments for Fair Value Losses (Gains) on Derivative Financial Instruments		-	(2.678.753)
Adjustments for Share of Profit of Investments Accounted for Using the Equity Method	3	(375.187)	(820.823)
Adjustments for Losses Tax Expense	26	(6.827.373)	(13.328.554)
Adjustments for (Gains)/Losses disposal of non-current assets		(53.999)	8.489
Adjustments for (Gains)/Losses Arising From Sale of Tangible Assets	12	(53.999)	8.489
<b>Changes in Working Capital</b>		<b>(68.438.653)</b>	<b>41.006.315</b>
Adjustments for Decrease / (Increase) in Trade Accounts Receivable		252.458.768	(60.842.002)
Decrease (Increase) in Trade Accounts Receivables from Related Parties	28	(6.537)	27.789.680
Decrease (Increase) in Trade Accounts Receivables from Unrelated Parties	7	252.465.305	(88.631.682)
Adjustments for Decrease (Increase) in Other Receivables Related with Operations		15.640.633	11.814.446
Adjustments for Decrease (Increase) in Other Receivables Related with Operations from Third Parties	8-9	15.640.633	11.814.446
Adjustments for Decrease / (Increase) in Inventories	9	24.312.743	18.589.957
Decrease / (Increase) in Prepaid Expenses	10	2.420.927	7.073.134
Adjustments for (Decrease) In Trade Accounts Payable		(195.706.858)	118.780.357
Increase (Decrease) in Trade Accounts Payables to Related Parties	28	(1.866.758)	290.018
(Decrease)/Increase in Trade Accounts Payables to Unrelated Parties	7	(193.840.100)	118.490.339
Increase (Decrease) in Payables due to Employee Benefits	17	5.638.503	(7.236.801)
(Decrease)/Increase in Payables Due from Ongoing Construction or Service Contracts	11	(102.770.389)	(5.935.241)
Adjustments for Decrease in Other Operating Payables		1.944.456	1.354.428
(Decrease) in Other Operating Payables to Unrelated Parties	8	1.944.456	1.354.428
(Decrease)/ Increase in Deferred Income	11	(66.970.996)	(8.738.170)
Other Adjustments for Other (Decrease)/ Increase in Working Capital		(5.406.440)	(33.853.793)
<b>Cash Flows (Used in) Generated From Operations</b>		<b>(82.797.650)</b>	<b>170.046.772</b>
Payments Related with Provisions for Employee Benefits	17	(26.394.579)	(26.962.240)
Income Taxes Paid	26	(3.016.501)	(319.786)
Payments Related with Lawsuits	15	(1.413.608)	(585.907)
		<b>(113.622.338)</b>	<b>142.178.839</b>

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**NETAŞ TELEKOMÜNİKASYON A.Ş. AND ITS SUBSIDIARIES**  
**AUDITED CONSOLIDATED STATEMENT OF CASH FLOWS**  
**FOR THE YEAR ENDED 31 DECEMBER 2018**

(Unless otherwise stated the amounts are in TL).

		Current Period	Previous Period
	Notes	1 January- 31 December 2018	1 January- 31 December 2017
<b>B.CASH FLOWS FROM/ (USED IN) INVESTING ACTIVITIES</b>			
Proceeds from Sales of Property, Plant, Equipment and Intangible Assets		72.674	35.519
<i>Proceeds from Sales of Property, Plant, Equipment</i>	24	72.674	35.519
Purchase of Property, Plant, Equipment and Intangible Assets		(17.732.020)	(7.353.615)
<i>Purchase of Property, Plant, Equipment</i>	12	(15.910.061)	(5.956.774)
<i>Purchase of Intangible Assets</i>	13	(1.821.959)	(1.396.841)
Interest Received	25	9.655.423	1.777.651
Other Outflows of Cash		(1.805.069)	(988.037)
		<b>(9.808.992)</b>	<b>(6.528.482)</b>
<b>C.CASH FLOWS FROM/ (USED IN) FINANCING ACTIVITIES</b>			
Proceeds from Borrowings/Outflows,net	6	234.017.926	(14.176.375)
Interest Paid		(72.299.497)	(40.293.805)
		<b>161.718.429</b>	<b>(54.470.180)</b>
<b>NET INCREASE IN CASH AND CASH EQUIVALENTS BEFORE EFFECT OF EXCHANGE RATE CHANGES (A+B+C)</b>		<b>38.287.099</b>	<b>81.180.177</b>
<b>D. EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS</b>		(32.711.486)	(9.609.857)
<b>NET INCREASE IN CASH AND CASH EQUIVALENTS (A+B+C+D)</b>		<b>5.575.613</b>	<b>71.570.320</b>
<b>E.CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR</b>	5	187.212.070	115.641.750
<b>CASH AND CASH EQUIVALENTS AT END OF YEAR (A+B+C+D+E)</b>	5	<b>192.787.683</b>	<b>187.212.070</b>

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**NETAŞ TELEKOMÜNİKASYON A.Ş. AND ITS SUBSIDIARIES**  
**NOTES TO THE AUDITED CONSOLIDATED FINANCIAL STATEMENTS**  
**FOR THE YEAR ENDED 31 DECEMBER 2018**

(Unless otherwise stated the amounts are in TL).

**1. ORGANIZATION AND OPERATIONS OF THE GROUP**

Netaş Telekomünikasyon A.Ş. (the "Company") and its' subsidiaries (together the "Group") is an incorporated company, registered in Istanbul. The Company is engaged in the manufacture and trade of telecommunication equipment, project installation services, technical support, repair and maintenance services, IT services, strategic outsourcing services, implementation activities, and associated services. The shares of the Company are quoted on the Borsa İstanbul ("BIST") since 1993. The former headquarter which was located at Alemdağ Street No:171 Ümraniye/ Istanbul has been registered at Yenişehir Mah. Osmanlı Bulvarı No:11 34912 Kurtköy-Pendik/Istanbul at Istanbul Trade Registry Office as of 23 July 2013.

The Group works with major clients such as Aselsan Elektronik Sanayi ve Ticaret A.Ş., Türk Telekomünikasyon A.Ş., Vodafone İletişim Hizmetleri A.Ş., Avea İletişim Hizmetleri A.Ş., Turkcell İletişim Hizmetleri A.Ş, service providers, corporate and governmental institutions in Turkey, to provide communications solutions and the infrastructure needed for modern communication systems. The Company is also engaged in research and development and provided design and development services to the foreign customers as well as to local customers.

The title of "Probil Bilgi İşlem Destek ve Danışmanlık Sanayi Ve Ticaret A.Ş." into "Netaş Bilişim Teknolojileri A.Ş." ("Netaş Bilişim") effective as of 2 May 2018. In the meantime, its tax office and number have remained unchanged. The Group, 100% subsidiaries is, Netaş Bilişim Teknolojileri A.Ş. offers industrial solutions, system integration, outsourcing, support services, network solutions and consultancy services to its domestic customers. Founded in 1989, Netaş Bilişim Teknolojileri A.Ş ("Netaş Bilişim") also provides value added solutions to international customers in Commonwealth of Independent States (CIS), mainly in Asia Pasific (Nepal), Kazakhstan, Azerbaijan, Algeria and Uzbekistan with strategic business partnerships.

Specialized in all IT services, The Netaş Bilişim Teknolojileri A.Ş. ("Netaş Bilişim") of 100% subsidiaries is BDH Bilişim Destek Hizmetleri San. Tic.A.Ş. ("BDH") in order to provide consultancy, strategic outsourcing, data center and support services.

Foundation of a "Limited Liability Partnership" (Netaş Telecom Limited Liability Partnership) was completed in Almaty, Kazakhstan, and the amount of capital is TENGE 161.800 (approximately USD 1.100) where all shares belongs to Netaş. Registration was completed and the operations started on 4 July 2012 where it is valid from 25 June 2012.

As of 28 November 2013, an agreement is signed between Kron Telekomünikasyon Hizmetleri A.Ş. ("KRON") and the Company for the acquisition of 10 % of A group is TL 1.700.000.

The Company which is amounted EUR 1.200 Registration of Netaş Telecommunications Malta Ltd. has been established organization in date of 4 November 2014 in Malta.

As of 12 June 2018, the Group's liaison office was established in Azerbaijan.

The Company which is amounted TRY 50.000 registration of NETRD Bilgi Teknolojileri ve Telekomünikasyon A.Ş. has been established organization in date of 29 August 2018 in Istanbul. The subject of the Company, including 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 Group's ultimate partner and the controlling shareholders are ZTE Cooperatief U.A. and Türk Silahlı Kuvvetleri Güçlendirme Vakfı respectively.

As of 31 December 2018 the Group has no blue-collar employees (31 December 2017: None). The average number of personnel employed in the Group as of 31 December 2018 is 2.453 white-collar (31 December 2017: 2.154).

**Approval of Consolidated Financial Statements**

The financial statements were approved by the Board of Directors on 8 March 2019. The General Assembly have the right to amend the financial statements. The relevant regulatory bodies may request changes in the financial statements of the Company.

**NETAŞ TELEKOMÜNİKASYON A.Ş. AND ITS SUBSIDIARIES**  
**NOTES TO THE AUDITED CONSOLIDATED FINANCIAL STATEMENTS**  
**FOR THE YEAR ENDED 31 DECEMBER 2018**

(Unless otherwise stated the amounts are in TL).

**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS**

**2.1 Basis of Presentation**

**a) Statement of Compliance**

The accompanying financial statements are prepared in accordance with Turkish Financial Reporting Standards Accounting Standards ("TFRS") published by Public Oversight Accounting and Auditing Standards Authority ("POA") together with the provisions of accordance with to Capital Market Board of Turkey ("CMB")'s "Principles of Financial Reporting in Capital Market" dated 13 June 2013 and published in the Official Gazette numbered 28676 Series II. No.14.1. IFRS consist of standards and interpretations which are published as Turkish Accounting Standards ("TAS"), Turkish Financial Reporting Standards, TAS interpretations and IFRS interpretations.

The accompanying financial statements are presented in accordance with the TAS Taxonomy issued by POA and announcement regarding with formats of financial statements and notes issued by CMB.

The Group adopted TFRS 9, "Financial Instruments" and TFRS 15, "Revenue from Contracts with Customers" for the first time for the year commencing 1 January 2018.

**b) Basis of presentation of consolidated financial statements:**

The details of the Company's subsidiaries as of 31 December 2018 are as follows:

	Place and establishment of operation	Group's shares in capital and voting rights	Main operating activity
Netaş Bilişim Teknolojileri A.Ş.	Turkey	100%	Consultancy of project installment and network solution
BDH Bilişim Destek Hizmetleri Sanayi ve Ticaret A.Ş.	Turkey	100%	Technical support and maintenance services
Netaş Telecom Limited Liability Partnership	Republic of Kazakhstan	100%	Consultancy of project installment, design and technical support services
Netaş Telecommunications Malta Ltd	Malta	100%	Supply of telecommunication equipment
NETRD Bilgi Teknolojileri ve Telekomünikasyon A.Ş.	Turkey	100%	Computer programming activity

The consolidated financial statements incorporate the financial statements of the Company and entities controlled by the Company and its subsidiaries. Control is achieved when the Company:

- has power over the investee;
- is exposed, or has rights, to variable returns from its involvement with the investee; and
- has the ability to use its power to affect its returns.

The Company reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control listed above.

When the Company has less than a majority of the voting rights of an investee, it has power over the investee when the voting rights are sufficient to give it the practical ability to direct the relevant activities of the investee unilaterally. The Company considers all relevant facts and circumstances in assessing whether or not the Company's voting rights in an investee are sufficient to give it power, including:

- the size of the Company's holding of voting rights relative to the size and dispersion of holdings of the other vote holders;
- potential voting rights held by the Company, other vote holders or other parties;
- rights arising from other contractual arrangements; and
- any additional facts and circumstances that indicate that the Company has, or does not have, the current ability to direct the relevant activities at the time that decisions need to be made, including voting patterns at previous shareholders' meetings.

Consolidation of a subsidiary begins when the Company obtains control over the subsidiary and ceases when the Company loses control of the subsidiary. Specifically, income and expenses of a subsidiary acquired or disposed of during the period are included in the consolidated statement of profit or loss and other comprehensive income from the date the Company gains control until the date when the Company ceases to control the subsidiary.

Profit or loss and each component of other comprehensive income are attributed to the owners of the Company and to the non-controlling interests. Total comprehensive income of subsidiaries is attributed to the owners of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

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**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS (Cont'd)**

**2.1 Basis of Presentation (Cont'd)**

**b) Basis of presentation of consolidated financial statements (Cont'd)**

When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with the Group's accounting policies.

All intragroup assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

As of 31 December 2018 and 2017 the details of associate of the Group is given below:

	Main Operating Activity	Acquisition Date	Acquired Share of Capital	Acquisition Amount
Kron Telekomünikasyon Hizmetleri A.Ş.	Information technology	28 November 2013	10%	TL 1.700.000

An associate is an entity over which the Group has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

The results and assets and liabilities of associates or joint ventures are incorporated in these consolidated financial statements using the equity method of accounting. Under the equity method, an investment in associate or a joint venture is initially recognized in the consolidated statement of financial position at cost and adjusted thereafter to recognize the Group's share of the profit or loss and other comprehensive income of the associate or a joint venture. When the Group's share of losses of an associate or a joint venture exceeds the Group's interest in that associate or a joint venture (which includes any long-term interests that, in substance, form part of the Group's net investment in the associate or a joint venture), the Group discontinues recognizing its share of further losses. Additional losses are recognized only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate or a joint venture.

An investment in an associate is accounted for using the equity method from the date on which the investee becomes an associate. On acquisition of the investment in an associate, any excess of the cost of the investment over the Group's share of the net fair value of the identifiable assets and liabilities of the investee is recognized as goodwill, which is included within the carrying amount of the investment. Any excess of the Group's share of the net fair value of the identifiable assets and liabilities over the cost of the investment, after reassessment, is recognized immediately in profit or loss in the period in which the investment is acquired.

The requirements of TFRS 9 are applied to determine whether it is necessary to recognize any impairment loss with respect to the Group's investment in an associate or a joint venture. When necessary, the entire carrying amount of the investment (including goodwill) is tested for impairment in accordance with TAS 36 Impairment of Assets as a single asset by comparing its recoverable amount (higher of value in use and fair value less costs to sell) with its carrying amount. Any impairment loss recognized forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognized in accordance with TAS 36 to the extent that the recoverable amount of the investment subsequently increases.

The Group discontinues the use of the equity method from the date when the investment ceases to be an associate, or when the investment is classified as held for sale. When the Group retains an interest in the former associate and the retained interest is a financial asset, the Group measures the retained interest at fair value at that date and the fair value is regarded as its fair value on initial recognition in accordance with TFRS 9. The difference between the carrying amount of the associate at the date the equity method was discontinued, and the fair value of any retained interest and any proceeds from disposing of a part interest in the associate is included in the determination of the gain or loss on disposal of the associate. In addition, the Group accounts for all amounts previously recognized in other comprehensive income in relation to that associate on the same basis as would be required if that associate or joint venture had directly disposed of the related assets or liabilities. Therefore, if a gain or loss previously recognized in other comprehensive income by that associate would be reclassified to profit or loss on the disposal of the related assets or liabilities, the Group reclassifies the gain or loss from equity to profit or loss when the equity method is discontinued.

When a group entity transacts with an associate of the Group, profits and losses resulting from the transactions with the associate is recognized in the Group's consolidated financial statements only to the extent of interests in the associate or joint venture that are not related to the Group.

**c) Functional Currency and Reporting Currency**

The Company maintains its books of account in accordance with accounting principles set by Turkish Commercial Code ("TCC") and tax legislation. The subsidiaries in foreign countries prepares their accounting and financial tables in their currency and according to the laws and regulations of their countries.

Nevertheless, US Dollar (US \$) is the currency that the Group's operations are denominated and has a significant impact on the Group's operations. US \$ reflects the economic basis of events and situations that are important to the Group. In accordance with the analysis done by the Group's Management and current economical and operational conditions, the management has concluded that US \$ is the functional currency and TL is the reporting currency of the Group in accordance with Turkish Accounting Standard ("TAS") No:21 - The Effects of Changes in Foreign Exchange Rates ("TAS 21").

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**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS (Cont'd)**

**2.1 Basis of Presentation (Cont'd)**

**c) Functional Currency and Reporting Currency (Cont'd)**

For the purpose of the preparation of the consolidated financial statements and the notes in accordance with TAS 21, monetary balance sheet items in the statutory standalone financial statements of the Group are translated to US \$ by using rates as of the balance sheet date. Consequently, non-monetary balance sheet items, income, expenses and cash flows are translated to US \$ by using rates at the date of transactions (historical rates). Translation gain or losses that are generated from the translation of foreign currency based transactions are recognized in the consolidated statement of profit or loss as net foreign exchange gain or loss.

For the purpose of presentation of the USD financial statements in TL (as explained in the paragraph above), balance sheet (except for some equity accounts) have been translated to TL by using USD rate as of 31 December 2018 (Turkish Central Bank USD Buying rate: 1 USD: 5,2609 TL), statements of income and statements of cash flows have been translated to TL by using twelve months average exchange rate (1 USD: 4,8140 TL) for the year ended 31 December 2018 (for the year ended 31 December 2017 1 USD: 3,6482 TL) in accordance with TAS 21. The functional currency of Netaş Telecom Limited Liability Partnership is Kazakhstan Tenge and converted into TL for consolidated financial statements, which is the presentation currency of the Group. In the accompanying consolidated financial statements capital and legal reserves are carried with their values in statutory accounts.

Translation differences for capital and legal reserves due to preparation of the financial statements in accordance with TAS are presented as currency translation reserves and retained earnings respectively in the accompanying consolidated financial statements. Comparative consolidated financial statements are translated by using USD rates as of 31 December 2017 (31 December 2017: 1 USD: 3,7719 TL).

**2.2 Comparative Information and Restatement of Prior Period Consolidated Financial Statements**

Group's consolidated financial statements have been prepared comparatively with the prior period for allow the determination of financial position and performance trend. Comparative information is reclassified when necessary and important differences are explained, in order to conform to the current period financial statement's presentation. There has no significant changes have occurred in the Group's accounting policies except that the new and revised accounting standards described in Note 2.3 have been applied.

The Group intends to use the cumulative effect method of transition to TFRS 9 and TFRS 15, and accordingly as of 1 January 2018 opening entry based on prior years profit and losses.

**2.3 Change in Accounting Policies**

The accounting policies adopted in preparation of the consolidated financial statements as at 31 December 2018 are consistent with those of the previous financial year, except for the adoption of new and amended TFRS 15 and 9 interpretations effective as of January 1, 2018. The effects of these standards and interpretations on the Group's financial position and performance have been disclosed in the related paragraphs.

**Transition to TFRS 9 "Financial Instruments"**

Group has applied TFRS 9 "Financial instruments", which has replaced TAS 39 on the transition date, 1 January 2018. The amendments include the classification and measurement of financial assets and liabilities and the expected credit risk model which will replace incurred credit risk model. Effect of transition is accounted based on the simplified approach. In accordance with this method, Group recorded the cumulative effect related to the transition of TFRS 9 in retained earnings on the first application date. Therefore, prior year financial statements are not restated and these financial statements are presented in accordance with TAS 39.

Changes related to the classification of financial assets and liabilities are as follows and these changes in the classification do not result in changes in measurement of assets except for financial assets:

Financial assets	Original classification under TAS 39	New classification under TFRS 9
Cash and cash equivalents	Loans and receivables	Amortized cost
Trade receivables	Loans and receivables	Amortized cost
Derivative instruments	Fair value through statement of profit or loss	Fair value through statement of profit or loss
Financial investments	Available for sale financial assets	Fair value through other comprehensive income

Financial liabilities	Original classification under TAS 39	New classification under TFRS 9
Derivative instruments	Fair value through statement of profit or loss	Fair value through statement of profit or loss
Borrowings	Amortized cost	Amortized cost
Financial lease liabilities	Amortized cost	Amortized cost
Trade payables	Amortized cost	Amortized cost

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**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS (Cont'd)**

**2.3 Change in Accounting Policies (Cont'd)**

**First Transition to TFRS 15 "Revenue from contracts with customers"**

The Group applies retrospectively with the cumulative effect of initially applying this Standard recognized at the date of initial application in accordance with related paragraphs of TFRS 15. The Group recognized the cumulative effect of initially applying this Standard as an adjustment to the opening balance of retained earnings of the annual reporting period that includes the date of initial application. Under this transition method, the Group applied this Standard retrospectively only to contracts that are not completed contracts at the date of initial application.

**Consolidated Statement of Financial Position**

Effects of the transactions to TFRS 15 and TFRS 9 on the consolidated financial statements as of 31 December 2018 are as follows:

	31 December 2018 (reported)	TFRS 9 Effects	TFRS 15 Effects	31 December 2018 (excluding adoption)
Deferred Tax Asset	24.022.688	(7.187.505)	(8.073.526)	8.761.657
Deferred Costs	305.680.684	-	(26.238.414)	279.442.270
Trade Receivables	971.000.633	32.670.475	53.980.562	1.057.651.670
Other Assets	560.735.112	-	-	560.735.112
<b>Total Assets</b>	<b>1.861.439.117</b>	<b>25.482.970</b>	<b>19.668.622</b>	<b>1.906.590.709</b>
Deferred Tax Liabilities	1.826.769	-	-	1.826.769
Deferred Revenue	83.881.957	-	(11.152.435)	72.729.522
Trade Payables	299.013.892	-	2.196.739	301.210.631
Other Liabilities	663.051.561	-	-	663.051.561
<b>Total Liabilities</b>	<b>1.047.774.179</b>	<b>-</b>	<b>(8.955.696)</b>	<b>1.038.818.483</b>
Retained Earnings	175.927.647	10.514.429	28.576.648	215.018.724
(Loss)/ Profit for the Year	(19.814.091)	14.968.541	(8.908.026)	(13.753.576)
Other	1.705.325.561	-	-	1.705.325.561
<b>Total Liabilities and Shareholders' Equity</b>	<b>1.861.439.117</b>	<b>25.482.970</b>	<b>19.668.622</b>	<b>1.906.590.709</b>

**Consolidated Statement of Income or Loss**

	31 December 2018 (reported)	TFRS 9 Effects	TFRS 15 Effects	31 December 2018 (excluding adoption)
Revenue	1.039.787.975	-	(12.137.215)	1.027.650.760
Cost of Sales (-)	(916.893.118)	-	12.198.331	(904.694.787)
Other Expenses from Operating Activities (-)	1.483.323	19.190.438	-	20.673.761
Other	(217.543.187)	-	-	(217.543.187)
<b>Operating (Loss)</b>	<b>(93.165.007)</b>	<b>19.190.438</b>	<b>61.116</b>	<b>(73.913.453)</b>
<b>Operating (Loss) before Finance Loss</b>	<b>(92.735.821)</b>	<b>19.190.438</b>	<b>61.116</b>	<b>(73.484.267)</b>
<b>(Loss) Before Tax</b>	<b>(26.641.464)</b>	<b>14.968.541</b>	<b>61.116</b>	<b>(11.611.807)</b>
<b>(Loss) After Tax</b>	<b>(19.814.091)</b>	<b>14.968.541</b>	<b>(8.908.026)</b>	<b>(13.753.576)</b>

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**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS (Cont'd)**

**2.3 Change in Accounting Policies (Cont'd)**

**The Effects of Transition to TFRS 9 "Financial Instruments"**

The amendments include the classification and measurement of financial assets and liabilities and the expected credit risk model which will replace incurred credit risk model. Effects of the transition to TFRS 9 on the consolidated financial statements as of 1 January 2018 are as follows;

	1 January 2018
<b>Retained Earnings - 31 December 2017</b>	<b>215.018.724</b>
Increase in provision for impairment on trade receivables	(13.480.037)
Increase in deferred tax assets	2.965.608
<b>Total impact of adoption in accordance with TFRS 9</b>	<b>(10.514.429)</b>
<b>Retained Earnings Opening – 1 January 2018 (Including TFRS 9- excluding TFRS 15)</b>	<b>204.504.295</b>

**The Effects of Transition to TFRS 15 "Revenue from contracts with customers"**

Effects of the transition to TFRS 15 on the consolidated financial statements as of 1 January 2018 are as follows;

	1 January 2018
<b>Retained Earnings – 31 December 2017 - (TFRS 9 effects-excluding TFRS 15 effects)</b>	<b>204.504.295</b>
Increase in trade receivables	(20.961.870)
Increase in deferred costs	26.857.497
Increase in deferred revenues	(57.431.798)
Decrease in provisions	14.899.443
Deferred tax effect	8.060.080
<b>Total impact of adoption in accordance with TFRS 15</b>	<b>(28.576.648)</b>
<b>Retained Earnings – (Including TFRS 15)</b>	<b>175.927.647</b>

The Group accounted design, equipment, installation, maintenance, warranty, license, outsourcing and support services as separate performance obligation by determining standalone selling price of them.

The group recognizes revenue to depict the transfer of performance obligations to customers in over time or at a point of time.

TFRS 15 defines transfer of control of as the ability to direct the use of and obtain substantially all of the remaining benefits from the asset. In this scope the Group assessed transfer of control of maintenance and installation services.

The Group accounted design, equipment, installation, maintenance, warranty, license, outsourcing and support services as separate performance obligation by determining standalone selling price of them.

The group recognizes revenue to depict the transfer of performance obligations to customers in over time or at a point of time.

**2.4 Change in Accounting Estimates and Errors**

If changes in accounting policies are for only one period, changes are applied on the current year but if the changes affect the future periods, changes are applied both on the current period and future periods prospectively. There has been no significant change in the Group's accounting estimates during the current year.

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**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS (Cont'd)**

**2.5 Summary of Significant Accounting Policies**

**2.5.1 Revenue**

The Group recognizes revenue when the control of an asset transferred (or transferring) to the customer, the asset has transferred.

The Group, recognizes revenue when the control of an asset transferred (or transferring) to the customer, the asset has transferred if all criterias of account for a contract are met according to TFRS 15. The Group provides to customers design, equipment, installation, maintenance, guarantee, licence and other performance obligations. The Group may provide those performance obligations standalone or bundle.

The group recognizes revenue to depict the transfer of promised goods or services to customers in over time or at a point of time (Note 21).

The Group accounts the performance obligations transferred over 3 months with the output method considering the value to the customer of the goods and services. When the Group use output method to recognize revenue, on the basis of direct measurements of the value to the customer of the goods or services transferred to date relative to the remaining goods or services promised under the contract have right to payment and revenue related to invoice is recognized.

When the time between the progress payments is longer than a reporting period, since a significant performance is satisfied and the cost incurred are in proportion to the progress of the performance obligation, the input method is used for this performance obligations' revenue recognition.

**Design Performance Obligation**

Design is the output that for production the economic benefit for the customers. Customers can use it stand alone or together with other resources. Design performance obligation is stated explicitly or is an integral part of production in some contracts.

The Group stated that design is a separate performance obligation in contracts which the design expectation is explicitly stated and the intellectual rights and know-how is transferred. On the other hand, if the design is an integral part of the production process and the customer does not have a know-how transfer after delivery, the highly related and customized stage of the production process is regarded as a combined output as a production process and not considered as a separate performance obligation.

The customer has control over the design product as the design process continues. Additionally, design performance obligation is recognized at overtime due to fact that the design is customer-specific and have no alternative use, and the Group has an enforceable right to payment for performance completed to date. Because of this criterias, in case of the Group can reasonably measure the progress towards complete satisfaction of design performance obligation, the revenue which is related with cost occurred in overtime is recognized by cost based input method.

The Group can provide a certain number of man / day service as determined by the R & D team and purchase orders that demanded from the customers. In this type of contracts, the design is evaluated as a separate performance obligation on behalf of the intellectual property rights of the design belong to customers. In such contracts, the best measuring progress method is specified as "Output Method".

**Hardware Performance Obligation**

Hardware performance obligation is committed in the contracts by its own or with system solution. Hardware performance obligation consists of products that the Group produces itself, as well as products that are supplied by other producers. Hardware integration can be a phase in a complex long term solution projects in which hardware is highly interrelated with installation, or can be sold as stand-alone to the customers.

The Group recognized the hardware that are produced by its own or are sold as a phase in a complex and integrated Project as "overtime" for meeting the overtime criteria; the significant control in the integration process, no alternative use of the hardware of integration process, alternative use is restricted by the contract and the Group has an enforceable right to payment for performance completed to date.

Hardware which are more than one, produced afterwards and integrated and delivered are not concluded as separate performance obligations, but a series of distinct goods or services that are substantially the same and that have the same pattern of transfer to the customer are settled as single performance obligation.

The Group recognizes revenue at a point of time of the hardware which are not produced by the Group or does not need a significant integration process. The Group recognizes revenue when the control, collection right and the legal ownership of the hardware are transferred to the customers.

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**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS (Cont'd)**

**2.5 Summary of Significant Accounting Policies (Cont'd)**

**2.5.1 Revenue (Cont'd)**

**Installation Performance Obligation**

Installation performance obligation is committed in the contracts with the hardware or by its own.

The Group provides installation services with the hardware sales together or provides installation service alone in accordance with customer requirements. The installation service can be obtained from other providers, or the customer can do it with its own facilities.

The group recognizes revenue for installation performance obligation at over time when the customer controls the process simultaneously. The Group recognizes revenue by cost with cost based input method when it can reasonably measure the progress towards complete satisfaction of installation performance obligation.

When the customer does not have a significant control over installation process, and the Group has the collection right, the Group recognizes revenue at a point of time.

The Group accounts the installation performance obligation transferred less than 3 months with the output method considering the value to the customer of the goods and services. When the Group use output method to recognize revenue, on the basis of direct measurements of the value to the customer of the goods or services transferred to date relative to the remaining goods or services promised under the contract have right to payment and revenue related to invoice is recognized.

**Maintenance Performance Obligation**

Maintenance performance obligation is committed in the contracts with the hardware or by its own.

The maintenance is not related to the equipment at a high level, it is also negotiated separately in the contracts and the customer can buy the maintenance service from another providers or the Company can maintain the equipment by itself.

Maintenance service can be offered in three different ways according to customer demands: periodic maintenance regularly, maintenance services provided on an adhoc based on customer requirements, and maintenance services provided for a period agreed upon as a service level agreement (SLA).

Maintenance service is recognized at over time since the customer simultaneously receives and consumes the benefits provided by the Group's performance as the Group performs. In case of the Group can reasonably measure the progress towards complete satisfaction of maintenance performance obligation, the revenue which is related with cost occurred in overtime is recognized by cost based input method.

At the same time, The Group recognizes revenue on the basis of direct measurements of the value to the customer of the goods or services transferred to date relative to the remaining goods or services promised under the contract with output method. When the group accounts for adhoc and periodic maintenance with output method, in case of the customer acquires the collection right for a certain amount that in line with the value of the customer for the completed performance, the Group recognizes the revenue to be billed. For the service level agreements (SLAs), the output method is used for measuring progress towards complete satisfaction but the collection cost is not measured by invoicing, it is measured by the cost incurred.

The Group sells support packages, which is provided from third parties, with the hardware. In cases of the Group is not directly responsible for the performance in the support packages provided by third party, the Group acts as an "agent".

The Group determined standalone selling price of maintenance performance obligation using cost plus margin method considering management's best estimate and experience, observable prices of similar types of contracts. When the sum of the stand-alone selling prices of promised goods or services in the contract exceeds the promised consideration, the Group allocates a discount proportionately to all performance obligations in the contract.

**Warranty Performance Obligation**

Warranty performance obligation is committed by the Group for its own production. In case of the customer has a purchase the warranty separately in other words and the warranty is separately priced and negotiated in the contracts, the warranty is evaluated as a different service and recognized as a separate performance obligation.

Warranty income is recognized when the customer obtains the control of the hardware and accepts it. In other words, each hardware's warranty begins after its delivery and the revenue is recognized after the delivery.

Warranty is recognized at over time since the customer controls as the asset is created or enhanced and the customer simultaneously receives and consumes the benefits provided by the Group's performance as the Group performs. The Group recognizes revenue on the basis of direct measurements of the value to the customer of the goods or services transferred to date relative to the remaining goods or services promised under the contract with output method.

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**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS (Cont'd)**

**2.5 Summary of Significant Accounting Policies (Cont'd)**

**2.5.1 Revenue (Cont'd)**

**Licence Performance Obligation**

The Group sells licenses with three parties' contracts. In such contracts, the Group is acting as agent therefore the Group is not directly responsible for fulfilling the contract (e.g. license updates), the Group does not have inventory risk and the Group has restricted discretion in establishing prices. The Group recognizes the net amount after paying license fee to providers as commission income for the license contracts that the Group is acting as agent.

License performance obligations' income is recognized at "a point of time" when the control of an asset is transferred.

**Outsourcing and Support Services Performance Obligation**

The Group provides outsourcing, support and consultancy services in accordance with the customers' expectations. Outsourcing and some support and consultancy services are recognized at over time since the customer controls as the asset is created or enhanced and the customer simultaneously receives and consumes the benefits provided by the Group's performance as the Group performs.

In case of the Group can reasonably measure the progress towards complete satisfaction of outsourcing and support services performance obligations, the revenue which is related with cost occurred in overtime is recognized by cost based input method. In the case of the Group can not reasonably measure the progress towards complete satisfaction, the Group recognizes revenue to the extent of the right to bill by output method.

The Group recognizes revenue at "a point of time" when the control is transferred for short-term support services and one-off consultancy services.

The training services, which are in the goods and services, specified in the contracts and an integral part of production and integration, are recognized with "Input Method" with considering the total design, hardware and training costs of the projects.

If a customer pays consideration, or the Group has a right to an amount of consideration that is unconditional, before the Group transfers a good or service to the customer, the Group presents the contract as a "deferred revenue" when the payment is made or the payment is due (whichever is earlier). Deferred revenue is Group's obligation to transfer goods or services to a customer for which the Group has received consideration (or an amount of consideration is due) from the customer. The Group defers associated costs until to deliver all contractual obligations and they are presented on the face of balance sheet under "Short and Long Term Deferred Costs" accounts.

If an entity performs by transferring goods or services to a customer before the customer pays consideration or before payment is due, the Group presents the contract as "unbilled receivables", excluding any amounts presented as a receivable. An unbilled receivables are an entity's right to consideration in exchange for goods or services that the Group has transferred to a customer. If the consideration is unconditional, it is recognized as "trade receivables".

Advance payments received on contracts, before corresponding works had been carried out, are booked in "Order Advances" account group under "Advances Received". Costs incurred to date, adjusted by profits and losses recognized and progress billings, is determined on a contract by contract basis. If the amount is positive it is included as asset under "unbilled receivables" under "Trade receivables" group.

The incremental costs of obtaining a contract are those costs that an entity incurs to obtain a contract with a customer that it would not have incurred if the contract had not been obtained. The Group expects to recover those costs.

In the long contracts exceeding one year, depending on the level of materiality, the stamp tax that is paid for the contract and is expected to recover is capitalized as "Contract Costs" throughout the term of the contract and is amortized by depreciation method.

If the contract period or the redemption period of the asset, is one year or less, the stamp tax is recognized as an expense in the financial statements (Note 21).

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**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS (Cont'd)**

**2.5 Summary of Significant Accounting Policies (Cont'd)**

**2.5.1 Revenue (Cont'd)**

**Revenue, Accounting Policies as of 31 December 2017**

Revenue is recognized when the Group transfers the risk of loss and ownership; deliver the products and services to the buyer.

In general, the Group recognizes revenue from the sale of goods and equipment when persuasive evidence of an arrangement with its customer exists, delivery occurs, the amount of revenue can be measured reliably and it is probable that the economic benefits associated with the transaction will flow to the Group. The Group defers revenue and associated costs until to deliver all contractual obligations. Deferred revenues and cost are presented on the face of balance sheet under "Short and Long Term Deferred Revenues" and "Short and Long Term Deferred Costs" accounts.

TAS 11- Construction Accounting ("TAS11") defines a construction contract, as contracts specifically negotiated for the construction of an asset or a combination of assets that are closely interrelated or interdependent in terms of their design, technology and function or their ultimate purpose of use. For revenues generated from construction contracts, the Group applies the percentage of completion method of accounting in application of the above principles, provided certain specified conditions are met, based either on the achievement of contractually defined milestones or on costs incurred compared with total estimated costs. Any probable construction contract losses are recognized immediately in costs of sales. If uncertainty exists relating to customer acceptance, or the contract's duration is relatively short, revenues are recognized only to the extent of costs incurred that are recoverable, or on completion of the contract.

The Group records the revenue according to the percentage of completion for the projects that includes product that includes software which is more than incidental to the product as a whole.

The revenues from software licenses are recorded separately from the revenues from services as the agreement criteria like market value can be determined by the Group. If these criteria cannot be provided, the revenues are deferred and recognized when the service is completed.

The revenues related to the agreements of projects with hardware with minimal engineering and related services, training or consulting are recorded when the service is given or the goods are delivered.

Maintenance revenues including post contract support are deferred during the service and recorded as income when the service is rendered.

Advance payments received on construction contracts, before corresponding works had been carried out, are booked in "Order Advances" account group under "Advances Received". Costs incurred to date, adjusted by profits and losses recognized and progress billings, is determined on a contract by contract basis. If the amount is positive it is included as asset under "unbilled receivables" under "Trade receivables" group.

For revenues generated from licensing, selling or otherwise marketing software solution, the Group recognizes revenue generally upon delivery of the software and on the related services as and when they are performed, in application of the principles described in the first paragraph. For arrangements to sell software licenses with services, software license revenue is recognized separately from the related service revenue, provided that the transaction adheres to certain criteria, such as the existence of sufficient vendor-specific objective evidence of fair value to permit allocation of the revenue to the various elements of the arrangement. If the arrangement does not meet the specified criteria, revenue is deferred and recognized ratably over the service period. For arrangements to sell services only, revenue from training or consulting services is recognized when the services are rendered.

**2.5.2 Inventories**

Inventories are stated at the lower of cost and net realizable value and valued on monthly weighted average method. Net realizable value represents the estimated selling price less all estimated costs of completion and costs necessary to make the sale. When the net realizable value of inventory is less than cost, the inventory is written down to the net realizable value and the expense is included in statement of income/(loss) in the period the write-down or loss occurred. When the circumstances that previously caused inventories to be written down below cost no longer exist or when there is clear evidence of an increase in net realizable value because of changed economic circumstances, the amount of the write-down is reversed. The reversal amount is limited to the amount of the original write-down. (Note 9)

**2.5.3 Plant, Property and Equipment**

Property, plant and equipment are carried at cost less accumulated depreciation and any accumulated impairment losses. Land is not depreciated and carried at cost less accumulated impairment.

Properties in the course of construction for production, supply or administrative purposes are carried at cost, less any recognized impairment loss.

Cost includes professional fees and, for qualifying assets, borrowing costs capitalized in accordance with the Group's accounting policy. Such properties are classified to the appropriate categories of property, plant and equipment when completed and ready for intended use. Depreciation of these assets, on the same basis as other property assets, commences when the assets are ready for their intended use.

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**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS (Cont'd)**

**2.5 Summary of Significant Accounting Policies (Cont'd)**

**2.5.3 Plant, Property and Equipment (Cont'd)**

Depreciation is recognized so as to write off the cost or valuation of assets, other than freehold land and properties under construction, less their residual values over their estimated useful lives, using the straight-line method. The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

Assets held under finance leases are depreciated over their expected useful lives on the same basis as owned assets. However, when there is no reasonable certainty that ownership will be obtained by the end of the lease term, assets are depreciated over the shorter of the lease term and their useful lives.

An item of property, plant and equipment is derecognized upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognized in profit or loss.

**2.5.4 Intangible Assets**

**Intangible assets acquired separately**

Intangible assets with finite useful lives that are acquired separately are carried at cost less accumulated amortization and accumulated impairment losses. Amortization is recognized on a straight-line basis over their estimated useful lives. The estimated useful life and amortization method are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for on a prospective basis. Intangible assets with indefinite useful lives that are acquired separately are carried at cost less accumulated impairment losses.

**Licenses**

Separately acquired licenses is carried at their acquisition costs. Licenses acquired in a business combination are accounted for at their fair values at the acquisition date. Licenses have a finite useful life and are carried at cost less accumulated amortization. Amortization is calculated using the straight-line method to allocate the cost of licenses over their estimated useful lives.

**Computer software**

Acquired computer software licenses are capitalized on the basis of the costs incurred to acquire and bring to use the specific software. These costs are amortized over their estimated useful lives (5-10 years).

Costs associated with developing or maintaining computer software program are recognized as an expense as incurred. Costs that are directly associated with the development of identifiable and unique software products controlled by the Group, and that will probably generate economic benefits exceeding costs beyond one year, are recognized as intangible assets. Costs include the software development employee costs and an appropriate portion of relevant overheads.

Computer software development costs recognized as assets are amortized over their estimated useful lives.

**Contractual customer relationships**

Contractual customer relationships acquired in a business combination are recognized at fair value at the acquisition date. The contractual customer relations have a finite useful life and are carried at cost less accumulated amortization. Amortization is calculated using the straight-line method over the expected life of the customer relationship. (Note 13)

**2.5.5 Impairment of tangible and intangible assets other than goodwill**

At the end of each reporting period, the Group reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss (if any). When it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the cash-generating unit to which the asset belongs. When a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise they are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

Intangible assets with indefinite useful lives and intangible assets not yet available for use are tested for impairment at least annually, and whenever there is an indication that the asset may be impaired.

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**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS (Cont'd)**

**2.5 Summary of Significant Accounting Policies (Cont'd)**

**2.5.5 Impairment of tangible and intangible assets other than goodwill (Cont'd)**

Recoverable amount is the higher of fair value less costs to sell and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or cash-generating unit) is reduced to its recoverable amount. An impairment loss is recognized immediately in profit or loss.

When an impairment loss subsequently reverses, the carrying amount of the asset (or a cash-generating unit) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognized for the asset (or cash-generating unit) in prior years. A reversal of an impairment loss is recognized immediately in profit or loss.

**2.5.6 Borrowing Costs**

Interest expenses directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale. All other borrowing costs are recorded in the profit and loss statement in the period in which they are incurred.

**2.5.7 Financial Instruments**

**Classification and Measurement**

Financial assets are recognized on a trade-date basis and are initially measured at fair value. At subsequent reporting dates, debt securities that the Group has the expressed intention and ability to hold to maturity are measured at amortized cost, less any impairment loss recognized to reflect irrecoverable amounts.

**(a) Financial assets carried at amortized cost**

Assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest, whose payments are fixed or predetermined, which are not actively traded and which are not derivative instruments are measured at amortized cost. They are included in current assets, except for maturities more than 12 months after the balance sheet date. Those with maturities more than 12 months are classified as non-current assets. The Group's financial assets carried at amortized cost comprise "trade receivables" and "cash and cash equivalents" in the statement of financial position. In addition, with recourse factoring receivables classified in trade receivables are classified as financial assets carried at amortized cost since collection risk for those receivables are not transferred to counterparty.

**Impairment**

Group has applied simplified approach and used impairment matrix for the calculation of impairment on its receivables carried at amortized cost, since they do not comprise of any significant finance component. In accordance with this method, if any provision provided to the trade receivables as a result of a specific events, Group measures expected credit loss from these receivables by the life-time expected credit loss. The calculation of expected credit loss is performed based on the past experience of the Group and its expectation based on the macroeconomic indications.

**(b) Financial assets carried at fair value**

Assets that are held by the management for collection of contractual cash flows and for selling the financial assets are measured at their fair value. If the management do not plan to dispose these assets in 12 months after the balance sheet date, they are classified as non-current assets. Group make a choice for the equity instruments during the initial recognition and elect profit or loss or other comprehensive income for the presentation of fair value gain and loss:

**Financial assets carried at fair value through profit or loss**

Financial assets carried at fair value through profit or loss comprise of "derivative instruments" in the statement of financial position. Derivative instruments are recognized as asset when the fair value of the instrument is positive, as liability when the fair value of the instrument is negative. Group's financial instruments at fair value through profit or loss consist of forward contracts and currency swaps.

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**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS (Cont'd)**

**2.5 Summary of Significant Accounting Policies (Cont'd)**

**2.5.7 Financial Instruments (Cont'd)**

**Financial assets carried at fair value through other comprehensive income**

Financial assets carried at fair value through other comprehensive income comprise of "financial assets" in the statement of financial position. In addition, trade receivables collected from factoring companies due to without recourse factoring activities are classified as financial assets carried at fair value through other comprehensive income since the collection risk of these receivables are transferred to the factoring companies and management's business plan for them is "hold to sell". When the financial assets carried at fair value through other comprehensive income are sold fair value gain or loss classified in other comprehensive income is classified to retained earnings.

The Group accounts for expected loan losses in accordance with TFRS 9 that are expected to be equal to their expected life-time losses for their trade receivables, in cases where the trade receivables are not impaired for some reason with realized impairment losses. Expected credit impairment provision is based on the Group's past credit loss experience and expected credit loss ratio as determined based on forward-looking macroeconomic indicators. Expected credit loss reversals are recorded in other operating income/(expenses) (Notes 7 and 23).

**Financial liabilities**

Financial liabilities are initially measured at fair value. Financial liabilities other than fair value through profit or loss are initially measured at fair value, net of transaction costs. Financial liabilities are subsequently measured at amortized cost using the effective interest method, with interest expense recognized on an effective yield basis.

**Credit risk**

The Group has applied the simplified approach stated in TFRS 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 and forward macroeconomic indicators were calculated and the expected credit loss provision was calculated by multiplying the determined ratio by the trade receivable totals.

**Foreign currency risk**

Due to its core business, the Group is subject to exchange rate volatility tied to the value change of foreign currencies. The Group's foreign currency risk for assets and liabilities has been disclosed in Note 29.

**Liquidity risk**

The Group is generally raising funds by liquidating its short-term financial instruments such as collecting its receivables and selling out securities. The Group's proceedings from these instruments generally approximate their fair values.

**Financial Instruments, Accounting Policies as of 31 December 2017**

**Financial Assets**

Financial assets are recognized on a trade-date basis and are initially measured at fair value. At subsequent reporting dates, debt securities that the Group has the expressed intention and ability to hold to maturity are measured at amortized cost, less any impairment loss recognized to reflect irrecoverable amounts.

Financial assets other than held-to-maturity debt securities are classified as either held for trading or available-for-sale and are measured at subsequent reporting dates at fair value. Where securities are held for trading purposes, any gains and losses arising from measurement are recognized in the statements of income. For available-for-sale assets, any gains and losses arising from the measurement are recognized in the shareholders' equity.

Fair value is the amount for which an asset could be exchanged or a liability settled, between knowledgeable willing parties in an arms length transaction. Market value is the amount obtainable from the sale or payable on the acquisition, of a financial instrument in an active market, if one exists.

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**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS (Cont'd)**

**2.5 Summary of Significant Accounting Policies (Cont'd)**

**2.5.7 Financial Instruments (Cont'd)**

**Financial assets at FVTPL**

Financial assets at fair value through profit or loss are financial assets held for trading. A financial asset is classified in this category if acquired principally for the purpose of selling in the short-term. Derivatives are also categorized as held for trading unless they are designated as hedges.

**Held-to-maturity investments**

Held-to-maturity investments are non-derivative financial assets with fixed or determinable payments and fixed maturity dates that the Group has the positive intent and ability to hold to maturity. Subsequent to initial recognition, held-to-maturity investments are measured at amortized cost using the effective interest method less any impairment.

The following methods and assumptions were used to estimate the fair value of each class of financial instrument for which it is practicable to estimate fair value.

**Cash and cash equivalents:** Cash and cash equivalents comprise cash on hand and bank deposits and other short-term highly liquid investments which their maturities are three months or less from date of acquisition and that are readily convertible to a known amount of cash and are subject to an insignificant risk of changes in value. Spot loans bearing no interest are shown under cash and cash equivalents. The carrying amount of these assets approximates their fair value.

**Trade and other receivables:** Trade and other receivables are measured at initial recognition at fair value, and are subsequently measured at amortized cost using the effective interest rate method. Appropriate allowances for estimated irrecoverable amounts are recognized in profit or loss when there is objective evidence that the asset is impaired. The allowance recognized is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows. The Group estimates that the carrying amount of trade and other receivables approximates their fair value.

**Trade and other payables:** Trade and other payables are initially measured at fair value, and are subsequently measured at amortized cost, using the effective interest rate method. The Group estimates that the carrying amount of trade and other payables approximates their fair value.

**Due to/from related parties:** The carrying value of due to and due from related parties are estimated to be their fair value. The details of the receivables from Nortel group companies prior to 14 January 2009 included in trade receivables as of 31 December 2017, where the Group can estimate the recoverability, are provided in Note 7.

**Derecognition of financial assets**

The Group derecognizes a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another party. If the Group neither transfers nor retains substantially all the risks and rewards of ownership and continues to control the transferred asset, the Group recognizes its retained interest in the asset and an associated liability for amounts it may have to pay. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognize the financial asset and also recognizes a collateralized borrowing for the proceeds received. The Group uses financial instruments, such as letter of credits, which have off balance sheet risks for its operations. The possible loss from these instruments to the Group is equal to the amount on the instruments contracts.

**Financial liabilities**

Financial liabilities are initially measured at fair value. Financial liabilities other than fair value through profit or loss are initially measured at fair value, net of transaction costs. Financial liabilities are subsequently measured at amortized cost using the effective interest method, with interest expense recognized on an effective yield basis.

**Credit risk**

The Group's credit risk is primarily dependent upon its trade receivables and exposures to the banks. The amounts presented in the balance sheet are net of allowances for doubtful receivables, (except for the amounts due from Nortel companies prior to 14 January 2009, where the Group has made a provision against the pre-filing receivables from Nortel as the Group is able to estimate the recoverability due to predictable as of the balance sheet date - see note 7) estimated by the Group's Management based on prior experience and the current economic environment. Thus, The Group does not anticipate any risks relevant to the trade receivables except allowances for doubtful receivables. The Group assigns credit limits to its customer and exposures to the customers do not exceed these limits. The Group has significant exposures to the banks. The Group also assigns credit limits to the banks. Treasury and Control department monitors and controls exposures to the banks in order to ensure that the exposures are within the assigned limits.

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**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS (Cont'd)**

**2.5 Summary of Significant Accounting Policies (Cont'd)**

**2.5.8 Business combinations**

The acquisition of subsidiaries and businesses are accounted for using the acquisition method. The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of the acquisition-date fair values of the assets transferred by the Group, liabilities incurred by the Group to the former owners of the acquire and the equity interests issued by the Group in exchange for control of the acquire. Acquisition-related costs are generally recognized in profit or loss as incurred.

At the acquisition date, the identifiable assets acquired and the liabilities assumed are recognized at their fair value, except that:

- Deferred tax assets or liabilities and assets or liabilities related to employee benefit arrangements are recognized and measured in accordance with TAS 12 Income Taxes and TAS 19 Employee Benefits respectively;
- Liabilities or equity instruments related to share-based payment arrangements of the acquiree or share-based payment arrangements of the Group entered into to replace share-based payment arrangements of the acquire are measured in accordance with TFRS 2 Share-based Payment at the acquisition date; and
- Assets (or disposal groups) that are classified as held for sale in accordance with TFRS 5 Non-current Assets Held for Sale and Discontinued Operations are measured in accordance with that Standard.

Goodwill is measured as the excess of the sum of the consideration transferred, the amount of any non-controlling interests in the acquire, and the fair value of the acquirer's previously held equity interest in the acquire (if any) over the net of the acquisition-date amounts of the identifiable assets acquired and the liabilities assumed. If, after reassessment, the net of the acquisition-date amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of the consideration transferred, the amount of any non-controlling interests in the acquire and the fair value of the acquirer's previously held interest in the acquire (if any), the excess is recognized immediately in profit or loss as a bargain purchase gain.

Non-controlling interests that are present ownership interests and entitle their holders to a proportionate share of the entity's net assets in the event of liquidation may be initially measured either at fair value or at the non-controlling interests' proportionate share of the recognized amounts of the acquire's identifiable net assets. The choice of measurement basis is made on a transaction-by-transaction basis. Other types of non-controlling interests are measured at fair value or, when applicable, on the basis specified in another TAS.

When the consideration transferred by the Group in a business combination includes assets or liabilities resulting from a contingent consideration arrangement, the contingent consideration is measured at its acquisition-date fair value and included as part of the consideration transferred in a business combination. Changes in the fair value of the contingent consideration that qualify as measurement period adjustments are adjusted retrospectively, with corresponding adjustments against goodwill. Measurement period adjustments are adjustments that arise from additional information obtained during the 'measurement period' (which cannot exceed one year from the acquisition date) about facts and circumstances that existed at the acquisition date.

The subsequent accounting for changes in the fair value of the contingent consideration that do not qualify as measurement period adjustments depends on how the contingent consideration is classified. Contingent consideration that is classified as equity is not re-measured at subsequent reporting dates and its subsequent settlement is accounted for within equity. Contingent consideration that is classified as an asset or a liability is re-measured at subsequent reporting dates in accordance with TFRS 9, or TAS 37 Provisions, Contingent Liabilities and Contingent Assets, as appropriate, with the corresponding gain or loss being recognized in profit or loss.

When a business combination is achieved in stages, the Group's previously held equity interest in the acquiree is re-measured to fair value at the acquisition date (i.e. the date when the Group obtains control) and the resulting gain or loss, if any, is recognized in profit or loss. Amounts arising from interests in the acquiree prior to the acquisition date that have previously been recognized in other comprehensive income are reclassified to profit or loss where such treatment would be appropriate if that interest were disposed of.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted during the measurement period (see above), or additional assets or liabilities are recognized, to reflect new information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognized at that date.

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**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS (Cont'd)**

**2.5 Summary of Significant Accounting Policies (Cont'd)**

**2.5.9 Goodwill**

Goodwill arising on an acquisition of a business is carried at cost as established at the date of acquisition of the business less accumulated impairment losses, if any.

For the purposes of impairment testing, goodwill is allocated to each of the Group's cash-generating units (or groups of cash-generating units) that is expected to benefit from the synergies of the combination.

A cash-generating unit to which goodwill has been allocated is tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. If the recoverable amount of the cash-generating unit is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro rata based on the carrying amount of each asset in the unit. Any impairment loss for goodwill is recognized directly in profit or loss in the consolidated statement of profit or loss. An impairment loss recognized for goodwill is not reversed in subsequent periods. (Note 13)

**2.5.10 The Effects of Change in Foreign Exchange Rates**

The effects of change in foreign exchange rates on the financial statements have been disclosed in note 2 "Basis of Financial Statements" section 2.1.c "Functional and Reporting Currency". For the purpose of presentation of the consolidated financial statements as TL, balance sheet has been translated to TL by using Turkish Central Bank foreign exchange buying rates as of 31 December 2018 (1 USD = 5,2609 TL , 1 EUR = 6,0280 TL , 1 CAD = 3,8611 TL, 1 GBP = 6,6528 TL and 1 BDT = 0,0624 TL , 1 AZN=3,0859, 1 DZD=0,0440).

Exchange differences are recognized in profit or loss in the period in which they arise except for:

- Exchange differences on foreign currency borrowings relating to assets under construction for future productive use, which are included in the cost of those assets where they are regarded as an adjustment to interest costs on those foreign currency borrowings;
- Exchange differences on transactions entered into in order to hedge certain foreign currency risks (see below for hedging accounting policies); and
- Exchange differences on monetary items receivable from or payable to a foreign operation for which settlement is neither planned nor likely to occur, which form part of the net investment in a foreign operation, and which are recognized in the foreign currency translation reserve and recognized in profit or loss on disposal of the net investment.

**2.5.11 Earnings/ (Losses) per Share**

Earnings per share disclosed in the accompanying consolidated statement of income is determined by dividing net income by the weighted average number of shares in existence during the year concerned. In Turkey, companies can raise their share capital by distributing "Bonus Shares" to shareholders from retained earnings. In computing earnings per share, such "bonus share" distributions are assessed as issued shares. Accordingly, the retrospective effect for those share distributions is taken into consideration in determining the weighted-average number of shares outstanding used in this computation. (Note 27)

**2.5.12 Subsequent Events**

Events after the reporting period are those events that occur between the balance sheet date and the date when the financial statements are authorized for issue, even if they occur after an announcement related with the profit for the year or public disclosure of other selected financial information. The Group adjusts the amounts recognized in its consolidated financial statements if adjusting events occur after the reporting date. (Note 31)

**2.5.13 Provisions, Contingent Liabilities and Assets**

Provisions are recognized when the Group has a present obligation (legal or constructive) as a result of a past event, it is probable that the Group will be required to settle the obligation, and a reliable estimate can be made of the amount of the obligation.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. When a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows. (Note 15)

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, the receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably.

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**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS (Cont'd)**

**2.5 Summary of Significant Accounting Policies (Cont'd)**

**2.5.14 Related Parties**

A related party is a person or entity that is related to the entity that is preparing its financial statements.

**a) A person or a close member of that person's family is related to a reporting entity if that person:**

- i) has control or joint control over the reporting entity;
- ii) has significant influence over the reporting entity; or
- iii) is a member of the key management personnel of the reporting entity or of a parent of the reporting entity.

**(b) An entity is related to a reporting entity if any of the following conditions applies:**

- (i) The entity and the reporting entity are members of the same group (which means that each parent, subsidiary and fellow subsidiary is related to the others).
- (ii) One entity is an associate or joint venture of the other entity (or an associate or joint venture of a member of a group of which the other entity is a member).
- (iii) Both entities are joint ventures of the same third party.
- (iv) One entity is a joint venture of a third entity and the other entity is an associate of the third entity.
- (v) The entity is a post-employment benefit plan for the benefit of employees of either the reporting entity or an entity related to the reporting entity. If the reporting entity is itself such a plan, the sponsoring employers are also related to the reporting entity.
- (vi) The entity is controlled or jointly controlled by a person identified in (a).
- (vii) A person identified in (a) (i) has significant influence over the entity or is a member of the key management personnel of the entity (or of a parent of the entity).

A related party transaction is a transfer of resources, services or obligations between a reporting entity and a related party, regardless of whether a price is charged. (Note 28)

**2.5.15 Reporting of Financial Information on Segment Basis**

An operating segment is a component of the Group that engages in business activities from which it may earn revenues and incur expenses, whose operating results are regularly reviewed by the Group Management to make decisions about resources to be allocated to the segment and assess its performance, and for which discrete financial information is available. Operating segments are affected from different kinds of economic and geographical conditions, and managed as the sole authority. While assessing the performance of the operating segments, Group Management is focused on their gross margin and operating profit.

The Group evaluates the performance of five segments to determine resource allocation. The segments of the Group are system enterprise, public, international, technology and BDH. (Note 4)

**2.5.16 Government Grants and Incentives**

Gains arising from incentives for investment and research and development activities together with government grants are recognized when there is a reasonable assurance for the necessary conditions to be fulfilled and incentive to be acquired by the Group.

Vested government grants related with expense or capitalization realized in previous accounting periods, are recognized in statements of profit or loss when collectible and grants relating to capital assets are accounted for as deferred income in the consolidated balance sheet and are credited to consolidated profit and loss statement on a straight-line basis over the expected lives of related assets.

Government grants are presented in the consolidated financial statements regardless of whether the grants are obtained in cash or by decreasing a liability to the government. Government grants are presented in Note 14.

**2.5.17 Taxes Calculated on Corporation Earnings**

Turkish tax legislation does not permit a parent company and its subsidiary to file a consolidated tax return. Therefore, provisions for taxes, as reflected in the accompanying consolidated financial statements, have been calculated on a separate-entity basis.

Tax expense form continues operation includes current year income tax expense and deferred income tax (expense) / benefit.

**Current tax**

Current year income tax is based on taxable profit for the year. Taxable profit differs from profit as reported in the profit and loss statement because it excludes items of income or expense that are taxable or deductible in other years and it further excludes items that are never taxable or deductible. The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the reporting date.

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**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS (Cont'd)**

**2.5 Summary of Significant Accounting Policies (Cont'd)**

**2.5.17 Taxes Calculated on Corporation Earnings (Cont'd)**

Deferred tax

Deferred tax is recognized on differences between the carrying amounts of assets and liabilities in the financial statements and the corresponding tax bases used in the computation of taxable profit, and are accounted for using the balance sheet liability method. Deferred tax liabilities are generally recognized for all taxable temporary differences and deferred tax assets are recognized for all deductible temporary differences to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilized. Such assets and liabilities are not recognized if the temporary difference arises from goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit.

Deferred tax liabilities are recognized for taxable temporary differences associated with investments in subsidiaries and associates, and interests in joint ventures, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognized to the extent that it is probable that there will be sufficient taxable profits against which to utilize the benefits of the temporary differences and they are expected to reverse in the foreseeable future. The carrying amount of deferred tax assets is reviewed at each balance sheet date and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered. Deferred tax is calculated at the tax rates that expected to apply to the period when asset is realized or the liability is settled.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset realized, based on tax rates (and tax laws) that have been enacted or substantively enacted by the balance sheet date. The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the reporting date, to recover or settle the carrying amount of its assets and liabilities.

Deferred tax assets and liabilities are offset when there is a legally enforceable right to set off current tax assets against current tax liabilities and when they relate to income taxes levied by the same taxation authority and the Group intends to settle its current tax assets and liabilities on a net basis.

Current and deferred tax for the year

Current and deferred tax are recognized as in profit or loss, except when they relate to items that are recognized in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognized in other comprehensive income or directly in equity respectively. (Note 26)

**2.5.18 Employee Benefits**

Termination and retirement benefits

Under Turkish law and union agreements, lump sum payments are made to employees retiring or involuntarily leaving the Group. Such payments are considered as being part of defined retirement benefit plan as per Turkish Accounting Standard No. 19 (revised) "Employee Benefits" ("TAS 19").

The retirement benefit obligation recognized in the consolidated statement of financial position represents the present value of the defined benefit obligation. The actuarial gains and losses are recognized in other comprehensive income.

Profit-sharing and bonus plans

The Group recognizes a liability and an expense for bonuses and profit-sharing, based on a formula that takes into consideration the profit attributable to the company's shareholders after certain adjustments. The group recognizes a provision where contractually obliged or where there is a past practice that has created a constructive obligation.

Retirement Plans

As it is disclosed in Note 17, the Group pays a special pension to employees who have worked over 15 years for the Group. The assumptions used in the calculation of future obligations are disclosed in Note 17.

**2.5.19 Statements of Cash Flows**

In statement of cash flows, cash flows are classified according to operating, investing and financing activities.

**2.5.20 Share Capital and Dividends**

Common shares are classified as equity. Dividends on common shares are recognized in equity in the period in which they are approved and declared.

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**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS (Cont'd)**

**2.5 Summary of Significant Accounting Policies (Cont'd)**

**2.5.21 Determination of Fair Values**

A number of the Group's accounting policies and disclosures require the determination of fair value, for both financial and non-financial assets and liabilities. Fair values have been determined for measurement and/or disclosure purposes based on the following methods. When applicable, further information about the assumptions made in determining fair values is disclosed in the notes specific to that asset or liability.

(a) Property, plant and equipment

The fair value of property, plant and equipment recognized as a result of a business combination is based on market values. The market value of property is the estimated amount for which a property could be exchanged on the date of valuation between a willing buyer and a willing seller in an arm's length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion.

(b) Intangible assets

The fair value of intangible assets recognized as a result of a business combination is based on market values. The market value of intangible assets is the estimated amount for which an intangible could be exchanged on the date of valuation between a willing buyer and a willing seller in an arm's length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion.

The fair values of other intangible assets are carried at cost and are considered to approximate its respective carrying amount.

(c) Inventories

The fair value of inventories acquired in a business combination is determined based on the estimated selling price in the ordinary course of business less the estimated costs of completion and sale, and a reasonable profit margin based on the effort required to complete and sell the inventories.

(d) Trade and Other Receivables/Due From Related Parties

The fair value of trade and other receivables is estimated as the present value of future cash flows, discounted at the market rate of interest at the reporting date. This fair value is determined for disclosure purpose.

(e) Non-derivative financial liabilities

Fair value, which is determined for disclosure purposes, is calculated based on the present value of future principal and interest cash flows, discounted at the market rate of interest at the reporting date. Fair value of trade and other payables is carried out at cost and is considered to approximate its respective carrying amount.

**2.6 Accounting Estimates and Assumptions**

The preparation of consolidated financial statements requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised and in any future periods affected.

In particular, information about significant areas at estimation uncertainty and critical judgments in applying accounting policies that have the most significant effect on the amount recognized in the consolidated financial statements is included in the following notes:

Note 7	Trade receivables and payables: Estimations and accounting judgments regarding to collectability of receivables
Note 9	Inventories: Estimations regarding to inventory provision
Note 12,13	Tangible and intangible assets: Estimations regarding to useful lives
Note 13	Goodwill: Estimations regarding to impairment of goodwill
Note 15	Provisions: Estimations regarding to provision amounts
Note 21	Revenue and cost of sales: Estimation of revenue and cost based on project based analysis
Note 26	Tax Assets and liabilities: Estimations regarding to recoverability of deferred tax assets
Note 29	Financial instruments and risk management: Estimations and accounting judgments regarding to collectability of receivables

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**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS (Cont'd)**

**2.7 Summary of significant accounting policies**

**Standards issued but not yet effective and not early adopted as of 31 December 2018**

**Standards issued but not yet effective and not early adopted**

A number of new standards, interpretations of and amendments to existing standards are not effective at reporting date and earlier application is permitted; however the Group has not early adopted are as follows.

**IFRS 16 Leases**

On 16 April 2018, POA issued the new leasing standard which will replace TAS 17 Leases, TFRS Interpretation 4 Determining Whether an Arrangement Contains a Lease, TAS Interpretation 15 Operating Leases – Incentives, and TAS Interpretation 27 Evaluating the Substance of Transactions Involving the Legal Form of a Lease and consequently changes to TAS 40 Investment Properties. TFRS 16 Leases eliminates the current dual accounting model for lessees, which distinguishes between on-balance sheet finance leases and off-balance sheet operating leases. Instead, there is a single, on-balance sheet accounting model that is similar to current finance lease accounting.

Lessor accounting remains similar to current practice. The standard is effective for annual periods beginning on or after 1 January 2019, with early adoption permitted provided that an entity also adopts TFRS 16 Leases. The Group is assessing the potential impact on its consolidated financial statements resulting from the application of TFRS 16.

The Group intends to apply the simplified transition approach and will not restate comparative amounts for the year prior to first adoption. As a result, all right-of-use assets will be measured at the amount of the lease liability on adoption (adjusted for any prepaid or accrued lease expenses). As at the reporting date, the assessment of the Group related to impacts of TFRS 16 on its consolidated financial statements continues.

**TFRS Interpretation 23 –Uncertainty over Income Tax Treatments**

On 24 May 2018, POA issued TFRS Interpretation 23 Uncertainty over Income Tax Treatments to specify how to reflect uncertainty in accounting for income taxes. It may be unclear how tax law applies to a particular transaction or circumstance, or whether a taxation authority will accept a company's tax treatment. TAS 12 Income Taxes specifies how to account for current and deferred tax, but not how to reflect the effects of uncertainty. TFRS Interpretation 23 provides requirements that add to the requirements in TAS 12 by specifying how to reflect the effects of uncertainty in accounting for income taxes. The Interpretation is effective from 1 January 2019 with earlier application is permitted. The Group does not expect assessing the potential impact on its consolidated financial statements resulting from the application of TFRS Interpretation 23.

**Amendments to TFRS 9 - Prepayment features with negative compensation**

On December 2017, POA has issued amendments to TFRS 9 to clarify that financial assets containing prepayment features with negative compensation can now be measured at amortised cost or at fair value through other comprehensive income (FVOCI) if they meet the other relevant requirements of TFRS 9. Under TFRS 9, a prepayment option in a financial asset meets this criterion if the prepayment amount substantially represents unpaid amounts of principal and interest, which may include 'reasonable additional compensation' for early termination of the contract. The amendments are effective for periods beginning on or after 1 January 2019, with earlier application permitted. The Group does not expect that application of these amendments to TAS 28 will have significant impact on its consolidated financial statements.

**Amendments to TAS 28- Long-term Interests in Associates and Joint Ventures**

On December 2017, POA has issued amendments to TAS 28 to clarify that entities also apply TFRS 9 to other financial instruments in an associate or joint venture to which the equity method is not applied. These include long-term interests that, in substance, form part of the entity's net investment in an associate or joint venture. An entity applies TFRS 9 to such long-term interests before it applies related paragraphs of TAS 28. In applying TFRS 9, the entity does not take account of any adjustments to the carrying amount of long-term interests that arise from applying TAS 28. The amendments are effective for periods beginning on or after 1 January 2019, with earlier application permitted. The Group does not expect that application of these amendments to TAS 28 will have significant impact on its consolidated financial statement.

**The revised Conceptual Framework**

The revised Conceptual Framework issued on 27 October 2018 by the POA. The Conceptual Framework sets out the fundamental concepts for financial reporting that guide the POA in developing TFRS Standards. It helps to ensure that the Standards are conceptually consistent and that similar transactions are treated the same way, so as to provide useful information for investors, lenders and other creditors. The Conceptual Framework also assists companies in developing accounting policies when no TFRS Standard applies to a particular transaction, and more broadly, helps stakeholders to understand and interpret the Standards. The revised Framework is more comprehensive than the old one – its aim is to provide the POA with the full set of tools for standard setting. It covers all aspects of standard setting from the objective of financial reporting, to presentation and disclosures. For companies that use the Conceptual Framework to develop accounting policies when no TFRS Standard applies to a particular transaction, the revised Conceptual Framework is effective for annual reporting periods beginning on or after 1 January 2020, with earlier application permitted.

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**2. BASIS OF PRESENTATION OF THE CONSOLIDATED FINANCIAL STATEMENTS (Cont'd)**

**2.7 Summary of significant accounting policies (Cont'd)**

**The new standards, amendments and interpretations that are issued by the International Accounting Standards Board (IASB) but not yet issued by POA**

The following standards, interpretations of and amendments to existing IFRS standards are issued by the IASB but these standards, interpretations and amendments to existing IFRS standards are not yet adapted/issued to TFRS by the POA, thus they do not constitute part of TFRS. Such standards, interpretations and amendments that are issued by the IASB but not yet issued by the POA are referred to as IFRS or IAS. The Group will make the necessary changes to its consolidated financial statements after the new standards and interpretations are issued and become effective under TFRS.

**Annual Improvements to IFRSs 2015-2017 Cycle**

**Improvements to IFRSs**

IASB issued Annual Improvements to IFRSs - 2015–2017 Cycle. The amendments are effective as of 1 January 2019. Earlier application is permitted. The Group does not expect that application of these improvements to IFRSs will have significant impact on its consolidated financial statements.

**IFRS 3 Business Combinations and IFRS 11 Joint Arrangements**

IFRS 3 and IFRS 11 are amended to clarify how a company accounts for increasing its interest in a joint operation that meets the definition of a business. If a party obtains control, then the transaction is a business combination achieved in stages and the acquiring party re-measures the previously held interest at fair value. If a party maintains (or obtains) joint control, then the previously held interest is not re-measured.

**IAS 12 Income Taxes**

IAS 12 is amended to clarify that all income tax consequences of dividends (including payments on financial instruments classified as equity) are recognized consistently with the transactions that generated the distributable profits – i.e. in profit or loss, other comprehensive income (OCI) or equity.

**IAS 23 Borrowing Costs**

IAS 23 is amended to clarify that the general borrowings pool used to calculate eligible borrowing costs excludes only borrowings that specifically finance qualifying assets that are still under development or construction. Borrowings that were intended to specifically finance qualifying assets that are now ready for their intended use or sale – or any non-qualifying assets – are included in that general pool.

**Amendments to IAS 19 - Plan Amendment, Curtailment or Settlement**

On 7 February 2018, IASB issued Plan Amendment, Curtailment or Settlement (Amendments to IAS 19). The amendments clarify the accounting when a plan amendment, curtailment or settlement occurs. A company now uses updated actuarial assumptions to determine its current service cost and net interest for the period; and the effect of the asset ceiling is disregarded when calculating the gain or loss on any settlement of the plan and is dealt with separately in other comprehensive income (OCI). The amendments are effective for periods beginning on or after 1 January 2019, with earlier application permitted. The Group does not expect that application of these amendments to IAS 19 will have significant impact on its consolidated financial statements.

**Amendments to IAS 1 and IAS 8 - Definition of Material**

In October 2018 the IASB issued Definition of Material (Amendments to IAS 1 and IAS 8). The amendments clarify and align the definition of 'material' and provide guidance to help improve consistency in the application of that concept whenever it is used in IFRS Standards. Those amendments are prospectively effective for annual periods beginning on or after 1 January 2020 with earlier application permitted. The Group does not expect that application of these amendments to IAS 1 and IAS 8 will have significant impact on its consolidated financial statements.

**Amendments to IFRS 3 - Definition of a Business**

Determining whether a transaction results in an asset or a business acquisition has long been a challenging but important area of judgement. The IASB has issued amendments to IFRS 3 Business Combinations that seek to clarify this matter. The amendments include an election to use a concentration test. This is a simplified assessment that results in an asset acquisition if substantially all of the fair value of the gross assets is concentrated in a single identifiable asset or a group of similar identifiable assets. If a preparer chooses not to apply the concentration test, or the test is failed, then the assessment focuses on the existence of a substantive process. The amendment applies to businesses acquired in annual reporting periods beginning on or after 1 January 2020. Earlier application is permitted. The Group does not expect that application of these amendments to IFRS 3 will have significant impact on its consolidated financial statements.

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**3. SHARES IN ASSOCIATES**

Associates

**Details of significant associate:**

As of 31 December 2018, the details of important associates are as in the following:

	Main Operating Activity	Acquisition Date	Acquired Share of Capital	Acquisition Amount
Kron Telekomünikasyon Hizmetleri A.Ş.	Information technology	28 November 2013	10%	1.700.000 TL

On 28 November 2013, the Company made a new investment and came to an agreement on acquisition of 10% of the shares of Kron Telekomünikasyon Hizmetleri A.Ş. for TL 1.700.000. Furthermore, the Company acquired the right to be represented with 3 members out of 6 in the Board of Directors at Kron and to be active in taking strategic growth decisions of the company.

Goodwill arises from the acquisition of Kron Telekomünikasyon Hizmetleri A.Ş. Additionally; the cost includes synergy, the benefits arising from the rising market share and also the labor force of Kron Telekomünikasyon Hizmetleri A.Ş. As these benefits are not separable, they are not recognized in the accompanying consolidated financial statements.

**Goodwill**

	Kron Telekomünikasyon Hizmetleri A.Ş.
Amount transferred	1.700.000
Fair value of the net assets of the acquired company	(1.098.805)
<b>Goodwill</b>	<b>601.195</b>

The summary of the financial information of Kron Telekomünikasyon Hiz. A.Ş. is explained below. This financial information is prepared according to TFRS.

	31 December 2018	31 December 2017
Current assets	31.820.099	32.789.365
Non-current assets	23.512.486	15.602.416
Short term liabilities	13.234.199	9.072.256
Long term liabilities	429.729	888.245
<b>Net assets</b>	<b>41.668.657</b>	<b>38.431.280</b>
Share of the Group in net assets	4.166.866	3.843.128

	1 January 2018 - 31 December 2018	1 January 2017 - 31 December 2017
Net profit	4.529.808	8.230.464
Other comprehensive expenses	(777.941)	(22.231)
Total comprehensive income	3.751.867	8.208.233
<b>Share of the Group in total comprehensive income</b>	<b>375.187</b>	<b>820.823</b>

The movement of acquisition balance arising from Kron Telekomünikasyon Hizmetleri A.Ş. is given below;

	2018	2017
As of 1 January	6.155.424	5.121.827
Share from the profit of the year	375.187	820.823
Currency translation reserves	1.253.739	212.774
<b>As of 31 December</b>	<b>7.784.350</b>	<b>6.155.424</b>

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**4. SEGMENT REPORTING**

The Group evaluates the performance of five segments to decide resource allocation. The following table shows the information about each segment. The operational profit and details below should be considered together in evaluating the performance of segments.

For the year ended 31 December 2018	Enterprise	Public	International	Technology	BDH	Unallocated (*)	Total
Revenue	425.410.089	387.274.916	80.006.029	86.030.718	61.066.223	-	1.039.787.975
Cost of sales (-)	(385.445.740)	(319.951.028)	(60.214.278)	(77.928.493)	(60.846.372)	(12.507.207)	(916.893.118)
<b>Gross margin</b>	<b>39.964.349</b>	<b>67.323.888</b>	<b>19.791.751</b>	<b>8.102.225</b>	<b>219.851</b>	<b>(12.507.207)</b>	<b>122.894.857</b>
Sales,marketing and distribution expenses (-)	(23.193.955)	(23.533.178)	(12.187.078)	-	-	-	(58.914.211)
General administrative expenses (-)	-	-	-	-	-	(44.988.291)	(44.988.291)
Research and development expenses (-)	-	-	-	(13.407.445)	-	-	(13.407.445)
<b>Operating profit / (loss) of segment</b>	<b>16.770.394</b>	<b>43.790.710</b>	<b>7.604.673</b>	<b>(5.305.220)</b>	<b>219.851</b>	<b>(57.495.498)</b>	<b>5.584.910</b>

For the year ended 31 December 2017	Enterprise	Public	International	Technology	BDH	Unallocated (*)	Total
Revenue	351.302.921	406.857.264	252.804.957	67.612.205	43.688.337	-	1.122.265.684
Cost of sales (-)	(312.179.724)	(334.532.286)	(196.886.897)	(65.802.974)	(30.191.862)	(10.132.272)	(949.726.015)
<b>Gross margin</b>	<b>39.123.197</b>	<b>72.324.978</b>	<b>55.918.060</b>	<b>1.809.231</b>	<b>13.496.475</b>	<b>(10.132.272)</b>	<b>172.539.669</b>
Sales,marketing and distribution expenses (-)	(22.200.566)	(21.284.084)	(12.624.761)	-	-	-	(56.109.411)
General administrative expenses (-)	-	-	-	-	-	(32.452.882)	(32.452.882)
Research and development expenses (-)	-	-	-	(4.252.477)	-	-	(4.252.477)
<b>Operating profit / (loss) of segment</b>	<b>16.922.631</b>	<b>51.040.894</b>	<b>43.293.299</b>	<b>(2.443.246)</b>	<b>13.496.475</b>	<b>(42.585.154)</b>	<b>79.724.899</b>

(\*) Unallocated costs of sales are shown as amortization, rent and general expenses etc., and they are not directly allocated to the segments.

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**4. SEGMENT REPORTING (Cont'd)**

31 December 2018	Enterprise	Public	International	Technology	BDH	Unallocated (**)	Total
Trade receivables	217.408.373	597.273.544	98.284.113	39.926.212	17.599.426	501.824	970.993.491
Due from related parties	7.142	-	-	-	-	-	7.142
Inventories	4.728.793	76.981.505	5.989.412	665.120	688.293	324.421	89.377.544
Deferred costs	76.792.792	139.083.350	33.048.918	6.050.035	44.696.344	6.009.245	305.680.684
<b>Segments assets</b>	<b>298.937.100</b>	<b>813.338.399</b>	<b>137.322.443</b>	<b>46.641.367</b>	<b>62.984.063</b>	<b>6.835.490</b>	<b>1.366.058.861</b>
Trade payables (*)	138.439.140	79.949.673	34.247.151	453.664	25.273.763	20.297.394	298.660.785
Due to related parties	353.107	-	-	-	-	-	353.107
Deferred revenues	47.863.364	15.492.835	16.317.930	-	4.163.108	44.720	83.881.957
Advances received	144.297	66.060.272	346.059	29.759	130	9.129	66.589.646
<b>Segment liabilities</b>	<b>186.799.908</b>	<b>161.502.780</b>	<b>50.911.140</b>	<b>483.423</b>	<b>29.437.001</b>	<b>20.351.243</b>	<b>449.485.495</b>

31 December 2017	Enterprise	Public	International	Technology	BDH	Unallocated (*)	Total
Trade receivables (**)	160.689.280	521.839.489	122.086.455	47.622.180	5.346.753	32.545.916	890.130.073
Due from related parties	-	-	-	-	-	-	-
Inventories	8.414.972	56.874.568	4.928.180	343.871	1.708	238.503	70.801.802
Deferred costs	22.874.870	108.419.484	2.373.914	14.049.910	9.238.440	8.540.928	165.497.546
<b>Segments assets</b>	<b>191.979.122</b>	<b>687.133.541</b>	<b>129.388.549</b>	<b>62.015.961</b>	<b>14.586.901</b>	<b>41.325.347</b>	<b>1.126.429.421</b>
Trade payables (**)	128.421.191	139.449.963	81.093.860	1.126.294	14.458.759	16.358.768	380.908.835
Due to related parties	1.715.824	-	-	-	-	-	1.715.824
Deferred revenues	32.335.840	20.591.842	1.099.784	-	1.113.596	41.462	55.182.524
Advances received	2.553.394	49.268.440	845.650	-	130	8.740	52.676.354
<b>Segment liabilities</b>	<b>165.026.249</b>	<b>209.310.245</b>	<b>83.039.294</b>	<b>1.126.294</b>	<b>15.572.485</b>	<b>16.408.970</b>	<b>490.483.537</b>

(\*) Unallocated trade payables are shown as rent, insurance, consultancy and etc. The uncollated amount of trade payables are related to Nortel companies as of 31 December 2018.

(\*\*) Unallocated trade payables are shown as rent, insurance, consultancy and etc. The uncollated amount of trade receivables payables are related to Nortel companies under bankruptcy protection as of 31 December 2017.

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**4. SEGMENT REPORTING (Cont'd)**

Reconciliation of profit/ (loss) before tax, assets, liabilities and other material items:

	For the Year Ended 31 December 2018	For the Year Ended 31 December 2017
Operating profit of segment	5.584.910	79.724.899
Other (expenses)/income from operating activities (net)	(98.749.917)	(15.228.729)
Other (expenses)/income from investments (net)	53.999	(8.489)
Income from associates	375.187	820.823
Finance (expenses)/income (net)	66.094.357	(25.118.856)
<b>(Loss)/Profit before tax</b>	<b>(26.641.464)</b>	<b>40.189.648</b>

Assets	31 December 2018	31 December 2017
Segment assets	1.366.058.861	1.126.429.421
Other assets	495.380.256	423.423.086
<b>Total assets</b>	<b>1.861.439.117</b>	<b>1.549.852.507</b>

Liabilities	31 December 2018	31 December 2017
Segment liabilities	449.485.495	490.483.537
Other liabilities	598.288.684	414.762.346
<b>Total liabilities</b>	<b>1.047.774.179</b>	<b>905.245.883</b>

**5. CASH AND CASH EQUIVALENTS**

	31 December 2018	31 December 2017
Bank- demand deposits	75.451.741	72.023.775
Bank- time deposits	116.933.685	114.553.052
Other cash and cash equivalents (*)	402.257	635.243
	<b>192.787.683</b>	<b>187.212.070</b>

Currency	Original Currency Amount	Interest Rate %	Maturity	31 December 2018
USD	17.925.428	1,65-4,0	Jan 19-Sep 19	94.303.885
EUR	350.000	0,05	Jan 19	2.109.800
TL	20.520.000	21,5	Jan 19	20.520.000
				<b>116.933.685</b>

Currency	Original Currency Amount	Interest Rate %	Maturity	31 December 2017
USD	25.202.584	1,90-2,50	Jan 18-Sep 18	95.061.627
EUR	2.022.000	0,60	Jan 18	9.130.341
TL	10.361.084	12,0	Jan 18	10.361.084
				<b>114.553.052</b>

The credit risk, foreign currency and sensitivity risks of financial assets and liabilities are disclosed in Note 29. As of 31 December 2018 and 2017, there are no restriction / blockage on bank accounts.

(\*) Other cash and cash equivalents are consisted of credit card receivables less than 3 months.

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**6. FINANCIAL LIABILITIES**

	31 December 2018	31 December 2017
Short term financial liabilities		
Short term unsecured loans	482.638.393	302.073.436
Non interest bearing unsecured spot loans	5.197.876	111
	<b>487.836.269</b>	<b>302.073.547</b>

As of 31 December 2018, effective interest rate for TL loans is 19,44 %. (31 December 2017: effective interest rate for TL loans is 15,33 % and effective interest rate for USD loans is 4,44%).

The details of short term loans of the Group are given below;

Currency	Original Currency Amount	Interest Rate(%) (*)	Maturity	31 December 2018
TL	482.638.393	15,10-42,00	Jan 19-May 19	482.638.393
				<b>482.638.393</b>

Currency	Original Currency Amount	Interest Rate(%) (*)	Maturity	31 December 2017
USD	25.102.209	4,30-4,60	April 18-June 18	94.683.023
TL	<b>207.390.413</b>	<b>13,35-15,70</b>	<b>February 18-October 18</b>	<b>207.390.413</b>
				<b>302.073.436</b>

	31 December 2018	31 December 2017
<b>Long term financial liabilities</b>		
Long term unsecured loans	-	24.044.293
	-	<b>24.044.293</b>

The detail of long term loans of the Group is given below;

Currency	Original Currency Amount	Interest Rate(%) (*)	Maturity	31 December 2017
TL	24.044.293	16,51-16,75	January 19	24.044.293

(\*) Presents the lower and upper rates.

The Group has no collaterals given for bank loans as of 31 December 2018 and 2017.

The table below details changes in the Group's liabilities arising from financing activities, including both cash and non-cash changes. Liabilities arising from financing activities are those for which cash flows were, or future cash flows will be, classified in the Group's consolidated statement of cash flows as cash flows from financing activities.

	2018	2017
1 January	326.117.840	354.859.452
Financing cash flows, net	234.017.926	(14.176.375)
Interest accrual changes	(9.648.776)	(3.690.226)
Currency translations	(62.650.721)	(10.875.011)
31 December	<b>487.836.269</b>	<b>326.117.840</b>

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**7. TRADE RECEIVABLES AND PAYABLES**

Trade Receivables from Third Parties	31 December 2018	31 December 2017
Trade receivables	547.646.457	528.318.398
Unbilled receivables	459.993.967	314.170.034
Notes receivables	894.353	-
Discount on trade receivables (*)	(1.133.976)	(599.276)
Allowances for doubtful receivables	(90.703.609)	(35.662.918)
	<b>916.697.192</b>	<b>806.226.238</b>

Movement of Allowance for Doubtful Receivables	2018	2017
1 January-Calculated according to TAS 39	(35.662.918)	(29.733.577)
Impact due to the changes in accounting policies TFRS 9 (Note 2.3)	(13.480.037)	-
<b>Reported as of 1 January</b>	<b>(49.142.955)</b>	<b>(29.733.577)</b>
Charge for the year (**)	(19.190.438)	(3.890.144)
Provision no longer required	-	8.033
Foreign currency exchange differences	(22.370.216)	(2.047.230)
As of 31 December	<b>(90.703.609)</b>	<b>(35.662.918)</b>

(\*) As of 31 December 2018, Group will collect its trade receivable in every year by equal payment; total amount is USD 15.277.832 based on the agreement, and its maturity date spreads 4 years. Trade receivables are measured at initial recognition at fair value, and are subsequently measured at amortized cost using the effective interest rate method.

(\*\*) Explanations on the accounting policy change are included in Note 2.3.

Doubtful receivables, for which no possibility of collection is foreseen and no further cash inflow are expected, are written off from the records along with the related provisions.

Long Term Trade Receivables from Third Parties	31 December 2018	31 December 2017
Receivables from Nortel companies	-	51.685.143
Other trade receivables	64.009.777	66.083.917
Provision amount for Nortel companies	-	(25.842.571)
Discount on trade receivables (*)	(9.713.478)	(8.022.654)
	<b>54.296.299</b>	<b>83.903.835</b>

Movement of Allowance for Nortel Receivables	2018	2017
As of 1 January	(25.842.571)	(21.700.114)
Charge for the period	(8.999.320)	(2.499.506)
Provision no longer required (***)	30.212.447	-
Foreign currency exchange differences	4.629.444	(1.642.951)
As of 31 December	-	<b>(25.842.571)</b>

Trade Payables to Third Parties	31 December 2018	31 December 2017
Trade payables	298.277.489	380.164.376
Other trade payables	325.880	698.102
	<b>298.603.369</b>	<b>380.862.478</b>

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**7. TRADE RECEIVABLES AND PAYABLES (Cont'd)**

Long Term Trade Payables to Third Parties	31 December 2018	31 December 2017
Payables to Nortel companies	25.827	18.517
Other trade payables	31.589	27.840
	<b>57.416</b>	<b>46.357</b>

(\*\*\*) Nortel Networks Corporation, the ultimate parent of Nortel Networks International Finance and Holding B.V. ("NNIFH"), which was shareholder of the Company until 22 December 2010, holding 53,13 % of the share capital of the Company, has announced that it, Nortel Networks Limited, which is another indirect parent of the Company, and certain of its other Canadian subsidiaries have obtained an Order from the Ontario Superior Court of Justice (the "Canadian Court") for creditor protection under the Companies' Creditors Arrangement Act ("CCAA") in Canada filed as of 14 January 2009. Under the terms of the Order, Ernst & Young Inc. serves as the Court-appointed Monitor under the CCAA process and assists the Company in formulating its restructuring plan.

Nortel Networks Corporation's certain subsidiaries (Alteon Websystems International Inc., XROS Inc., Sonoma Systems, CoreTek Inc.) by Nortel Network Inc. and its' subsidiaries (QTERA Corporation, Nortel Networks Optical Components Inc., Nortel Networks Capital Corporation, Nortel Networks International Inc., Northern Telecom International Inc., Nortel Networks Cable Solutions, Inc.) also have made similar filings in the United States under Chapter 11 of the U.S: Bankruptcy Code. The Company offset its payables to Nortel Group Companies by USD 277.820 and made CAD 5.282.370 of payment to Nortel Networks Limited as of 24 April 2013.

On 24 January 2017, the final revised plan is presented to Nortel Networks Inc., Delaware Region High Court of Justice about the payments which will be made to debtors as part of protection from the bankruptcy. According to this plan, Nortel Networks Inc. predicted that payments can be made from sales of different assets that belong to Nortel with the total estimated unsecured receivables between the range of 55,1%-61,2%.

In the frame of this plan, Group has net-off Nortel Companies' trade receivables and payables. The Group Management decided to finalize uncertainty of collections, and book a provision of 45% against for Nortel receivables on a net basis as of 31 December 2016. As of 31 December 2017, considering the changing conditions 5% additional provision is booked for the receivables due from Nortel companies. Total amount of provision 50% reflected into the consolidated financial statements.

The Group filed a lawsuit against Nortel for its receivables on 10 March 2017 amounting to USD 14.261.663 regarding to the invoices issued. Based on the lawyer letter obtained from Law office, is not able to assess the outcome of lawsuit of defending against the Claim Objection Motion. The next hearing will be on September 12, 2017. On 12 September 2017, the bankruptcy judge conducted a hearing and the bankruptcy court denied Nortel's motion for summary judgment. Parties agreed that counsel for each party will exchange written requests for documents to the other party by October 13, 2017, and that each party will respond to the requests for documents by 13 November 2017. After the production and review of documents, the parties might schedule the examination of witnesses.

Pursuant to the "Terms of Settlement of Netas Claims" dated July 25, 2018 (the "Settlement Term Sheet") that was executed at the mediation session held on July 25, 2018, in New York, it is resolved to approve an aggregate total distribution in the amount of USD 4.400.000 from Nortel Networks Inc. ("NNI") and its U.S. debtor-affiliates (collectively, the "US Debtors") on account of the claims asserted by Netas Telekomunikasyon, A.S. (the "Netas Claims") against NNI, and a general release of claims between Netas and US Debtors, and to authorise the Company Management to sign a settlement agreement with the US Debtors containing terms consistent with those contained in the Settlement Term Sheet.

In accordance with the resolution adopted at the meeting of the Board of Directors held on 15 August 2018, a settlement agreement -containing terms regarding an aggregate total distribution in the amount of USD 4.400.000 on account of the claims asserted by Netas Telekomunikasyon, A.S. (the "Netas Claims") against NNI its U.S. debtor-affiliates (collectively, the "US Debtors"), and a general release of claims between Netas and US Debtors- has been signed by and between the Company and Nortel Networks Inc. on 23 August 2018. Pursuant to the agreement, USD 4.400.000 has been paid to the Company and parties have released each other.

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The details of trade receivables and payables of the Company to and from Nortel companies under bankruptcy protection as of 31 December 2018 and the bankruptcy protection filing date of 14 January 2009 are given below:

Country	Company	14 January 2009			31 December 2018			31 December 2017		
		Trade Receivables	Trade Payables	Net Balance	Trade Receivables	Trade Payables	Net Balance	Trade Receivables	Trade Payables	Net Balance
USA	Nortel Networks Inc.	53.793.227	(9.427.673)	44.365.554	-	-	-	61.767.705	(12.613.295)	24.577.204
Ireland	Nortel Networks (Ireland) Limited	1.832.894	-	1.832.894	-	-	-	1.832.895	-	(916.448)
Canada	Nortel Networks Technology Corporation	429.619	(58.179)	371.440	-	-	-	-	-	-
Egypt	Nortel Networks Inc. (Egypt Branch)	326.649	-	326.649	-	-	-	331.024	-	(165.512)
Europe	Nortel Networks N.V.	168.925	-	168.925	-	-	-	168.925	-	(84.463)
India	Nortel Networks (India) Private Limited	51.814	-	51.814	-	-	-	32.247	-	(16.123)
Holland	Nortel Networks BV.	102.311	-	102.311	-	-	-	-	-	-
Italy	Nortel Networks S.p.A.	25.334	-	25.334	-	-	-	25.334	-	(12.667)
Mexico	Nortel de México, S. de R.L. de C.V.	<b>56.730.773</b>	<b>(9.485.852)</b>	<b>47.244.921</b>	-	(25.827)	-	<b>64.158.130</b>	<b>(12.613.295)</b>	<b>(25.772.417)</b>
Germany	Nortel GmbH	-	(18.515)	(18.515)	-	-	(25.827)	-	(18.517)	-
France	Nortel Networks S.A.	38.851	(263.491)	(263.491)	-	-	-	-	-	-
Canada	Nortel Networks Limited	617.146	(112.374)	(73.523)	-	-	-	-	-	-
England	Nortel Networks UK Limited	6.603.635	(1.549.756)	(932.610)	-	-	-	231.872	(91.564)	(70.154)
Canada	Nortel Networks Limited - EMEA Sales	-	(18.082.528)	(18.082.528)	-	-	-	-	-	-
		<b>63.990.405</b>	<b>(36.824.669)</b>	<b>27.165.736</b>	-	<b>(25.827)</b>	-	<b>64.390.002</b>	<b>(12.723.376)</b>	<b>(25.842.571)</b>
										<b>25.824.055</b>

The foreign currency risk and liquidity risk of short term trade receivables and payables are disclosed in Note 29.

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**8. OTHER RECEIVABLES AND PAYABLES**

	31 December 2018	31 December 2017
<b>Other Receivables</b>		
Deposits and guarantees given	299.656	225.264
Other	1.428.630	1.254.221
	<b>1.728.286</b>	<b>1.479.485</b>

	31 December 2018	31 December 2017
<b>Short Term Other Payables</b>		
Taxes and duties payables	16.886.952	10.529.984
Other	177.251	180.978
	<b>17.064.203</b>	<b>10.710.962</b>

**9. INVENTORIES**

	31 December 2018	31 December 2017
Raw materials	31.477.718	26.466.826
Finished goods	38.321.461	37.841.366
Trade goods	19.578.365	17.120.022
Other inventories	-	1.702.373
Allowance for inventory impairment (-)	-	(12.328.785)
	<b>89.377.544</b>	<b>70.801.802</b>

Inventories are stated at their cost values and allocated the provision for impairment on inventories.

Movement for allowance:	2018	2017
Opening balance	(12.328.785)	(11.499.151)
Released for the year	15.734.980	-
Foreign currency exchange differences	(3.406.195)	(829.634)
<b>Closing balance</b>	<b>-</b>	<b>(12.328.785)</b>

**10. PREPAID EXPENSES**

	31 December 2018	31 December 2017
<b>Short term prepaid expenses</b>		
Advances given for inventories	4.829.891	1.602.356
Short term prepaid expenses	8.126.532	6.576.443
Goods in transit	405.453	3.279.091
	<b>13.361.876</b>	<b>11.457.890</b>

	31 December 2018	31 December 2017
<b>Long term prepaid expenses</b>		
Long term prepaid expenses	554.765	416.766
	<b>554.765</b>	<b>416.766</b>

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**11. DEFERRED COSTS AND DEFERRED REVENUES**

Details of the deferred costs are given below;

Customer	31 December 2018			31 December 2017		
	Short Term	Long Term	Total	Short Term	Long Term	Total
Public	135.603.542	-	135.603.542	102.070.916	-	102.070.916
Enterprise	76.792.792	-	76.792.792	22.874.870	-	22.874.870
BDH	44.696.344	-	44.696.344	9.238.440	-	9.238.440
Defense	3.479.808	-	3.479.808	6.348.568	-	6.348.568
International	33.048.918	-	33.048.918	2.373.914	-	2.373.914
Other	12.059.280	-	12.059.280	22.590.838	-	22.590.838
	<b>305.680.684</b>	<b>-</b>	<b>305.680.684</b>	<b>165.497.546</b>	<b>-</b>	<b>165.497.546</b>

Details of the deferred revenue are given below;

Customer	31 December 2018			31 December 2017		
	Short Term	Long Term	Total	Short Term	Long Term	Total
Public	47.863.364	-	47.863.364	32.335.840	-	32.335.840
Enterprise	5.090.299	-	5.090.299	19.435.155	-	19.435.155
BDH	10.402.536	-	10.402.536	1.156.687	-	1.156.687
Defense	4.163.108	-	4.163.108	1.113.596	-	1.113.596
International	16.317.930	-	16.317.930	1.099.784	-	1.099.784
Other	44.720	-	44.720	41.462	-	41.462
	<b>83.881.957</b>	<b>-</b>	<b>83.881.957</b>	<b>55.182.524</b>	<b>-</b>	<b>55.182.524</b>

**12. PROPERTY, PLANT AND EQUIPMENT**

	Machinery and Equipment	Vehicles	Furniture and fixtures	Leasehold Improvements	Construction in Progress	Total
<b>Cost</b>						
1 January 2018	157.159.078	201.200	14.286.158	38.072.808	875.293	210.594.537
Translation difference	62.131.902	79.426	5.764.050	15.234.237	841.090	84.050.705
Purchases	5.910.833	-	1.340.369	2.203.600	6.455.259	15.910.061
Transfers(*)	294.105	-	2.549	538.888	(1.117.120)	(281.578)
Disposals	(2.154.704)	-	(2.549)	(538.888)	-	(2.696.141)
<b>31 December 2018</b>	<b>223.341.214</b>	<b>280.626</b>	<b>21.390.577</b>	<b>55.510.645</b>	<b>7.054.522</b>	<b>307.577.584</b>

	Machinery and Equipment	Vehicles	Furniture and fixtures	Leasehold Improvements	Construction in Progress	Total
<b>Accumulated Depreciation</b>						
1 January 2018	(143.815.845)	(190.936)	(11.042.782)	(18.946.346)	-	(173.995.909)
Translation difference	(57.303.440)	(76.021)	(4.515.865)	(7.964.120)	-	(69.859.446)
Period charge	(7.228.405)	(6.956)	(1.664.693)	(5.222.692)	-	(14.122.746)
Disposals	1.841.924	-	-	-	-	1.841.924
<b>31 December 2018</b>	<b>(206.505.766)</b>	<b>(273.913)</b>	<b>(17.223.340)</b>	<b>(32.133.158)</b>	<b>-</b>	<b>(256.136.177)</b>
<b>Net book value at 31 December 2018</b>	<b>16.835.448</b>	<b>6.713</b>	<b>4.167.237</b>	<b>23.377.487</b>	<b>7.054.522</b>	<b>51.441.407</b>

As of 31 December 2018, property, plant and equipment have been covered by insurance worth of TL 390.804.592.

As of 31 December 2018 depreciation charge is TL 14.122.746 TL 8.539.836 is accounted in cost of sales, TL 5.055.362 in general administrative expenses, TL 527.547 in sales, marketing and distribution expenses.

As of 31 December 2018, there are not any mortgage and financial leasing on property, plant and equipment.

(\*) Consists of transfers amounting TL 281.578 from property, plant and equipment to other intangible assets. (Note 13).

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**12. PROPERTY, PLANT AND EQUIPMENT (Cont'd)**

	Machinery and Equipment	Vehicles	Furniture and fixtures	Leasehold Improvements	Construction in Progress	Total
<b>Cost</b>						
1 January 2017	<b>142.766.848</b>	<b>187.721</b>	<b>12.797.524</b>	<b>35.314.290</b>	-	<b>191.066.383</b>
Translation difference	10.330.015	13.479	937.625	2.543.086	28.705	13.852.910
Purchases	4.320.089	-	574.665	215.432	846.588	5.956.774
Disposals	(257.874)	-	(23.656)	-	-	(281.530)
<b>31 December 2017</b>	<b>157.159.078</b>	<b>201.200</b>	<b>14.286.158</b>	<b>38.072.808</b>	<b>875.293</b>	<b>210.594.537</b>
<b>Accumulated Depreciation</b>						
1 January 2017	<b>(127.865.712)</b>	<b>(172.038)</b>	<b>(8.866.312)</b>	<b>(13.995.166)</b>	-	<b>(150.899.228)</b>
Translation difference	(9.405.979)	(12.568)	(687.427)	(1.134.355)	-	(11.240.329)
Period charge	(6.768.776)	(6.330)	(1.501.943)	(3.816.825)	-	(12.093.874)
Disposals	224.622	-	12.900	-	-	237.522
<b>31 December 2017</b>	<b>(143.815.845)</b>	<b>(190.936)</b>	<b>(11.042.782)</b>	<b>(18.946.346)</b>	-	<b>(173.995.909)</b>
<b>Net book value at 31 December 2017</b>	<b>13.343.233</b>	<b>10.264</b>	<b>3.243.376</b>	<b>19.126.462</b>	<b>875.293</b>	<b>36.598.628</b>

As of 31 December 2017 property, plant and equipment have been covered by insurance worth of TL 359.759.659.

As of 31 December 2017 depreciation charge is TL 12.093.874. TL 7.531.640 is accounted in cost of sales, TL 4.114.608 in general administrative expenses, TL 447.626 in sales, marketing and distribution expenses.

As of 31 December 2017, there are not any mortgage and financial leasing on property, plant and equipment.

Tangible fixed assets are depreciated principally on a straight-line basis using the following rates, which amortize the assets over their expected useful lives:

	Useful Lives
Machinery and Equipment	10
Vehicles	5-10
Leasehold Improvements	5-10
Furniture and fixtures	5-15

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**13. INTANGIBLE ASSETS**

**Goodwill**

The shares transfer of "Netaş Bilişim Teknolojileri A.Ş." ("Netaş Bilişim") and its subsidiary BDH Bilişim Destek Hizmetleri Sanayi ve Ticaret A.Ş. ("BDH") to the Company was completed on 11 October 2011.

During the acquisition, fair value of the customer relations has been identified as a separable intangible asset. Further, a write-up is made on the inventory based on the mark-up margin on the inventory. The difference between the net amount transferred and the total fair value of the net assets acquired is recognized as goodwill.

Changes in goodwill between the acquisition date and the balance sheet date is presented below:

*Goodwill*

Cost	2018	2017
Opening balance	69.131.791	64.500.278
Translation difference	27.290.552	4.631.513
<b>Closing balance</b>	<b>96.422.343</b>	<b>69.131.791</b>

According to accounting policies, refer to Note 2.5.9, Group has put goodwill amount to the test of impairment.

With the estimated profit or loss statement covering the period between 1 January 2019 and 31 December 2023, a valuation report has been prepared by considering Netaş Bilişim's potential projects and income items.

The Company has engaged an independent assessment report to perform a valuation analysis of Netaş Bilişim as of 31 December 2018. The valuation report has been performed by an independent valuation company. An independent assessment has been prepared a valuation of 100% of the share capital of Netaş Bilişim, based on its financial statements on a consolidated basis by applying adjusted Discounted Cash Flow ("DCF") valuation. The present value of cash flows expected to be generated by the Company in the future is calculated by discounting cash flows today using a discount rate appropriate to the Company's risk profile. The variable weighted average cost of capital ratio was used. In this context, it is foreseen that the risk premium of the country, which is observed to be %3 in the previous period, will return to its normal level in the long term. During the projection year, the debt / equity ratio of Netaş Bilişim will be realized at 20% and the standard profit margin will be realized as approximately 10%. Starting from year 2019, EBITDA margin is expected to be around 7%, with the assumption that the public segment and BDH's standard profit margins will continue at 10% and 20%, respectively. Netaş Bilişim does not plan to invest a large amount during the projection year. Investment expenditures are expected to be approximately 0,6% of net sales during the projection year. It is predicted that the company's net working capital needs will continue to normalize to around 32% during the projection year as of 2019.

The result of DCF analysis concluded indicative firm value of Netaş Bilişim is between USD 49 million and USD 60 million. As of the valuation date, the value of the company calculated by considering the net debt of USD 22 million was estimated between USD 27 million and USD 38 million.

As of 31 December 2018, the Company Management has concluded that there is no impairment in the amount of goodwill.

**Significant assumptions used in discounted cash flow projections**

The significant assumptions used in the calculation of recoverable amounts are discount rates and final growth rates. The after-tax discount rate was used in the valuation studies. The Weighted Average Cost of Capital rate used in the study is variable and ranges from %10,2 to %12,5 over the years. The final growth rate was %2,2 based on the IMF's long-term inflation expectations.

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**13. INTANGIBLE ASSETS (Cont'd)**

*Other Intangible Assets*

1 January- 31 December 2018			
	Customer Relations	Other Intangible Assets (*)	Total
<b>Cost</b>			
Opening balance	40.237.278	77.354.124	117.591.402
Purchases	-	1.821.959	1.821.959
Transfers from construction in progress	-	281.578	281.578
Disposals	-	(281.578)	(281.578)
Translation difference	15.884.119	30.698.719	46.582.838
<b>Closing balance</b>	<b>56.121.397</b>	<b>109.874.802</b>	<b>165.996.199</b>
<b>Accumulated amortization</b>			
Opening balance	(25.147.682)	(58.248.326)	(83.396.008)
Translation difference	(10.404.928)	(23.968.393)	(34.373.321)
Period charge	(5.135.403)	(10.063.742)	(15.199.145)
<b>Closing balance</b>	<b>(40.688.013)</b>	<b>(92.280.461)</b>	<b>(132.968.474)</b>
<b>Net book value</b>	<b>15.433.384</b>	<b>17.594.341</b>	<b>33.027.725</b>

As of 31 December 2018 amortization charge is TL 15.199.145. TL 9.312.572 is accounted in cost of sales, TL 5.521.573 in general administrative expenses and TL 365.000 in sales, marketing and distribution expenses.

1 January- 31 December 2017			
	Customer Relations	Other Intangible Assets (*)	Total
<b>Cost</b>			
Opening balance	37.541.565	70.824.796	108.366.361
Purchases	-	1.396.841	1.396.841
Translation difference	2.695.713	5.132.487	7.828.200
<b>Closing balance</b>	<b>40.237.278</b>	<b>77.354.124</b>	<b>117.591.402</b>
<b>Accumulated amortization</b>			
Opening balance	(19.708.705)	(47.240.209)	(66.948.914)
Translation difference	(1.547.208)	(3.641.344)	(5.188.552)
Period charge	(3.891.769)	(7.366.773)	(11.258.542)
<b>Closing balance</b>	<b>(25.147.682)</b>	<b>(58.248.326)</b>	<b>(83.396.008)</b>
<b>Net book value</b>	<b>15.089.596</b>	<b>19.105.798</b>	<b>34.195.394</b>

As of 31 December 2017 amortization charge is TL 11.258.542. TL 7.015.587 is accounted in cost of sales, TL 4.197.706 in general administrative expenses and TL 45.249 in sales, marketing and distribution expenses.

(\*) Other intangible assets are included rights, computer software and licenses.

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**13. INTANGIBLE ASSETS (Cont'd)**

*Other Intangible Assets (Cont'd)*

Intangible fixed assets are amortized principally on a straight-line basis using the following rates, which amortize the assets over their expected useful lives:

	Depreciation Ratio (%)
Softwares	20
Customer Portfolio	10
Licenses	3-15
Rights	20

**14. GOVERNMENT GRANTS**

For the year ended 31 December 2018 the Group has received approved and accrued incentive from TÜBİTAK, TL 6.741.920 (For the year ended 31 December 2017 the Group has received approved and accrued incentive from TÜBİTAK, TL 21.648.681).

The Group is qualified for the incentives and exemptions provided by Support of Research and Development Act, numbered 5746 effective from 24 November 2008.

As of 31 December 2018, the Group has a corporate tax benefit of TL 344.020.426 due to research and development disbursement and this amount is utilized by the year end (As of 31 December 2017, the Group has a corporate tax benefit of TL 268.583.663 due to research and development disbursement and TL 61.227.387 of this amount is utilized by the year end). The Group has booked deferred tax assets for unused R&D tax benefit (Note 26).

For the year ended 31 December 2018, the amount of income tax incentive within the scope of Act numbered 5746 is TL 14.552.522 (31 December 2017: TL 13.278.261) and the total amount of social premium incentive within the scope of Act numbered 5746 and Social Security and General Health Insurance Act numbered 5510 is TL 11.452.614 (31 December 2017: TL 10.089.367).

**15. PROVISIONS, CONTINGENT ASSETS AND LIABILITIES**

Provisions	31 December 2018	31 December 2017
Provision for legal cases	5.353.179	5.123.207
Other provisions	890.395	441.411
	<b>6.243.574</b>	<b>5.564.618</b>

For the year ended 31 December 2018, the Group has cash outflows of TL 1.413.608 for legal cases during the year (31 December 2017: TL 585.907).

	Provision for Legal Cases	Other Provisions (*)	Total
1 January 2018 opening	5.123.207	441.411	5.564.618
Provision booked and no longer required, net	1.643.580	251.395	1.894.975
Payments	(1.413.608)	-	(1.413.608)
Foreign currency translations	-	197.589	197.589
<b>31 December 2018 closing</b>	<b>5.353.179</b>	<b>890.395</b>	<b>6.243.574</b>

	Provision for Legal Cases	Other Provisions (*)	Total
1 January 2017 opening	3.658.492	668.789	4.327.281
Provision booked and no longer required, net	2.050.622	-	2.050.622
Payments	(585.907)	(266.393)	(852.300)
Foreign currency translations	-	39.015	39.015
<b>31 December 2017 closing</b>	<b>5.123.207</b>	<b>441.411</b>	<b>5.564.618</b>

(\*) Including the types of general administrative provisions especially subscription, electric, gas, water and communication.

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**16. COMMITMENTS**

The Group's off-balance sheet commitments and contingencies as of 31 December 2018 and 2017 are as follows:

	31 December 2018	31 December 2017
Guarantee letters given (*)	588.704.899	405.511.901
	<b>588.704.899</b>	<b>405.511.901</b>

(\*) The Group has no off-balance sheet commitments and contingencies in favor of subsidiaries which are fully consolidated as of 31 December 2018 and 2017.

Maturities and currencies of guarantee letters are given below:

31 December 2018		Original Currency			
Maturity	TL Equivalent	TL	USD	EUR	
2018	26.379.699	52.100	4.938.904	57.153	
2019	175.882.235	23.267.280	27.354.784	1.443.957	
2020	25.183.958	10.127.051	2.493.530	321.615	
2021	7.438.233	4.813.238	478.395	17.951	
2022	23.527.361	21.562.173	373.546	-	
2023	11.338.901	9.531.450	343.563	-	
2025	210.000	210.000	-	-	
2026	631.308	-	120.000	-	
2027	255.469	-	48.560	-	
2029	57.449	-	10.920	-	
Indefinite	317.800.286	66.024.198	44.816.144	2.654.751	
	<b>588.704.899</b>	<b>135.587.490</b>	<b>80.978.346</b>	<b>4.495.427</b>	

31 December 2017		Original Currency				
Maturity	TL Equivalent	TL	USD	EUR	DZD	
2017	160.155	-	42.460	-	-	
2018	70.675.401	19.033.528	11.023.989	2.182.801	6.255.408	
2019	51.507.843	1.079.765	13.301.367	56.838	-	
2020	14.402.510	10.104.547	756.246	320.115	-	
2021	2.531.798	1.631.000	238.818	-	-	
2022	4.401.728	2.351.700	543.500	-	-	
2023	649.004	-	172.063	-	-	
2025	210.000	210.000	-	-	-	
Indefinite	260.973.462	69.959.222	47.287.991	2.801.166	-	
	<b>405.511.901</b>	<b>104.369.762</b>	<b>73.366.434</b>	<b>5.360.920</b>	<b>6.255.408</b>	

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**16. COMMITMENTS (Cont'd)**

The off-balance sheet commitments and contingencies as of 31 December 2018 and 2017 are as follows:

Commitments, Pledges, Mortgages ("CPM") are given by the Company	31 December 2018	31 December 2017
A. Total amount of CPM is given on behalf of own legal personality	588.704.899	405.511.901
B. Total amount of CPM is given in favor of subsidiaries which are fully consolidated	-	-
C. Total amount of CPM is given for assurance of third party's debts in order to conduct of usual business activities	-	-
D. Total Amount of other CPM	-	-
i. Total amount of CPM is given in favor of parent company	-	-
ii. Total amount of CPM is given in favor of other group companies, which B and C doesn't include	-	-
iii. The amount of CPM is given in favor of third party which C doesn't include	-	-
	<b>588.704.899</b>	<b>405.511.901</b>

The rate of total amount of other "CPM"s to total equity of the Company is 0%.

The off-balance sheet commitments as of 31 December 2018 and 2017 are as follows:

31 December 2018		Original Currency			
Maturity	TL Equivalent	TL	USD	EUR	
2007-2017 (*)	12.698.430	3.876.800	1.597.437	69.289	
2018	4.981.752	1.242.489	343.195	320.794	
2019	725.893	304.000	80.194	-	
2020	3.393.307	526.116	545.000	-	
Indefinite	599.321	96.500	95.577	-	
	<b>22.398.703</b>	<b>6.045.905</b>	<b>2.661.403</b>	<b>390.083</b>	

31 December 2017		Original Currency			
Maturity	TL Equivalent	TL	USD	EUR	
2007-2016 (*)	7.584.043	1.839.800	1.468.687	45.289	
2017	2.793.880	2.049.000	168.750	24.000	
2018	3.741.895	1.528.533	202.767	320.794	
2019	506.484	204.000	80.194	-	
2020	2.467.754	412.068	545.000	-	
Indefinite	457.007	96.500	95.577	-	
	<b>17.551.063</b>	<b>6.129.901</b>	<b>2.560.975</b>	<b>390.083</b>	

(\*) The related amounts are consisted of the letters to be returned by the customers.

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**16. COMMITMENTS (Cont'd)**

**Rent Agreements**

As of 1 May 2018, the Company signed an additional agreement at 5 (five) year period with ESAS BURDA Turizm İnşaat Sanayi ve Ticaret A.Ş. to rent the real estate addressed in İstanbul city, Pendik district, Kurtköy Mahallesi with 15.716 square meters area. The rent amount for the first year is 1.669.988 USD +VAT and remaining 3 (three) years. The rent amount for the fourth year is 1.827.456 USD+VAT and the fifth year is 1.864.004 USD+VAT. The leased real estate is used as the Head Office and operation building of the Group.

As of 3 October 2012, Netaş Bilişim, the subsidiary of the Company, signed a lease agreement with Ahmet Bülent Koyuncuoğlu for the real estate addressed Orhanlı District, İrfan St. No. 28, Tuzla, İstanbul. The rental period is 5 years beginning from 1 October 2012. It has been agreed that the monthly rent for the period of 5 years starting from October 1, 2017 will be fixed as USD 52.788 + withholding.

Company signed a rent contract with Yudo Leon Mizrahi (Renter) and Salvo Özsarfati (Lessor) for "Buyaka İş Merkezi" which 50 plate, 1840 block of buildings, 233 parcels that registered immovable for 15th floor in C Block each of which is 845 m2 are utilized as an office. The amount which will be paid for the rented place starting on 1 January 2016 for 15th floor is USD 17.705. 3% increase will be applied next year rental. The amount of rent between 1 February 2016 and 31 January 2017 is agreed as USD 18.236 and between 1 February 2017 and 31 January 2018, net USD 18.784 which will be paid. According to the second rent agreement, the amount of rent is agreed as USD 18.167 +Stoppages, which will be paid from February 2018 for 5 years.

Unrevokable Operational Lease Commitments (*)	31 December 2018	31 December 2017
Within 1 year	15.742.390	4.711.622
Between 1-5 years	51.979.745	11.468.797
	<b>67.722.135</b>	<b>16.180.419</b>

(\*)The length of the lease contract has an option of 5+5 year and the lease amount will be adjusted by US WPI and CPI annually.

**Guarantees Given**

According to the System Integration Agreement signed between fully-consolidated subsidiary, Netaş Bilişim, and Cisco System International B.V., the Company agrees that all financial obligations will be jointly performed by the Company and Netaş Bilişim.

According to the contract between the Company and İGA Havalimanları İnşaatı Adi Ortaklığı Ticari İşletmesi, fully-consolidated subsidiary and subcontractor, BDH Bilişim Destek Hizmetleri San. Ve Tic. A.Ş., and its whole commitments are guaranteed by Netaş Telekomünikasyon A.Ş.

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**17. EMPLOYEE BENEFITS**

**Employee Benefit Obligations:**

	31 December 2018	31 December 2017
Payables to employees	13.631.501	753.957
Social security payables	8.742.369	10.869.483
	<b>22.373.870</b>	<b>11.623.440</b>

**Short Term and Long Term Provisions for Employee Benefits:**

Short Term	31 December 2018	31 December 2017
Provision for employee premiums	20.103.031	17.246.698
Unused vacation provision	8.510.282	4.489.396
	<b>28.613.313</b>	<b>21.736.094</b>

**Long Term**

Unused vacation provision	6.508.863	2.573.167
Provision for severance indemnity	21.813.865	21.076.530
Provision for retirement benefits	943.110	1.324.665
	<b>29.265.838</b>	<b>24.974.362</b>

**Total**

Provision for employee premiums	20.103.031	17.246.698
Unused vacation provision	15.019.145	7.062.563
Provision for severance indemnity	21.813.865	21.076.530
Provision for retirement benefits	943.110	1.324.665
	<b>57.879.151</b>	<b>46.710.456</b>

An actuarial valuation was performed by an independent and authorized company named Aon Hewitt for the Company's total liability for severance indemnity and retirement benefit as of 31 December 2018. Expected interest and service charges for 2019 have also been calculated by the actuarial firm. Expected service and interest charges will be amortized on a periodic basis during the year.

**Severance Indemnity**

Under Turkish Law, the Company is required to pay employment termination benefits to each employee who has completed one year of service and whose employment is terminated without due cause, is called up for military service, dies or who retires.

The provision is made in respect of all eligible employees, at a rate of 30 days gross pay for each year of service. The retirement pay provision ceiling at the respective balance sheet dates, is subject to a maximum of TL 5.434,42 per year as of 31 December 2018. (31 December 2017: TL 4.732,48 per year).The provision for employee termination benefits is not funded, as there is no fund requirement.

As the maximum liability is revised semi-annually, the maximum amount of TL 6.017,60 (1 January 2018: TL 5.001,76) which is effective from 1 January 2019 has been taken into consideration in calculating the reserve for employment termination benefits of the Company and its subsidiaries in Turkey.

In accordance with Turkish Labor Code, employment termination benefit is the present value of the total estimated provision for the liabilities of the personnel who may retire in the future. The provision made for present value of determined social relief is calculated by the prescribed liability method. All actuarial gains and losses are accounted in equity as other comprehensive income.

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**17. EMPLOYEE BENEFITS (Cont'd)**

**Severance Indemnity (Cont'd)**

The movement for severance indemnity provision is as follows:

	31 December 2018	31 December 2017
Present value of severance indemnity provision	21.813.865	21.076.530
<b>Net liability in balance sheet</b>	<b>21.813.865</b>	<b>21.076.530</b>
Current service cost	2.892.335	2.577.704
Interest cost	2.142.275	1.830.487
Extra payment or loss / (gain)	90.507	416.012
<b>Period charge at 31 December</b>	<b>5.125.117</b>	<b>4.824.203</b>
<b>Movement for severance indemnity provision:</b>	<b>2018</b>	<b>2017</b>
1 January	21.076.530	18.668.568
Period charge	5.125.444	4.824.203
Severance indemnity paid	(3.269.873)	(3.226.321)
Actuarial (gain)/ loss	(1.118.236)	810.080
<b>31 December</b>	<b>21.813.865</b>	<b>21.076.530</b>

**Retirement Benefit Provision**

As of 31 December 2012 the Company repealed the Lump Sum plan for new eligibility and HR department announced this to all employees on 27 December 2012. Accordingly, only the employees who are already entitled to Lump Sum as of 31 December 2012 will continue to be considered as members and also continue accrual of future benefits as well. This calculation is yearly prepared by Aon Hewitt and reported at their current value.

The movement for retirement benefit provision is as follows:

	2018	2017
<b>Movement for retirement benefit provision:</b>	<b>2018</b>	<b>2017</b>
1 January	1.324.665	1.942.466
Period charge	76.169	105.811
Actuarial (gain) / loss	(181.048)	15.886
Benefit paid	(276.676)	(739.498)
<b>31 December</b>	<b>943.110</b>	<b>1.324.665</b>

The assumption calculated to determine present value of severance indemnity and retirement benefit provision as of 31 December 2018 and 2017 are as follows:

Assumptions	31 December 2018	31 December 2017
Annual inflation rate	12,00%	8,30%
Annual discount rate	16,30%	11,50%

**Provision for Employee Premiums and Unused Vacation**

The movement for employee premiums provision is as follows:

	2018	2017
<b>Movement for unused vacation provision:</b>	<b>2018</b>	<b>2017</b>
1 January	17.246.698	12.560.168
Period charge	24.122.480	26.272.933
Payments	(21.266.147)	(21.586.403)
<b>31 December</b>	<b>20.103.031</b>	<b>17.246.698</b>

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**17. EMPLOYEE BENEFITS (Cont'd)**

**Provision for Employee Premiums and Unused Vacation (Cont'd)**

The movement for unused vacation provision is as follows:

	2018	2017
<b>Movement for unused vacation provision:</b>	<b>2018</b>	<b>2017</b>
1 January	7.062.563	5.887.767
Period charge	9.538.465	2.584.814
Payments	(1.581.883)	(1.410.018)
<b>31 December</b>	<b>15.019.145</b>	<b>7.062.563</b>

**18. ADVANCES RECEIVED**

As of 31 December 2018, the amount of advances received is consisted of TL 26.124.604 related to the defense projects and TL 40.465.042 related to system integration projects (31 December 2017: the TL 23.836.043 related to the defense projects and TL 28.840.311 system integration projects).

**19. OTHER ASSETS AND LIABILITIES**

Other Current Assets	31 December 2018	31 December 2017
VAT receivable	35.646.342	41.655.642
Prepaid taxes	6.455.260	1.030.170
Personnel and business advances	562.076	441.836
Other	1.449.966	514.952
	<b>44.113.644</b>	<b>43.642.600</b>

Other Non-Current Assets	31 December 2018	31 December 2017
Other non-current assets (*)	12.573.486	7.945.069
Long term prepaid taxes	12.828.116	10.964.659
	<b>25.401.602</b>	<b>18.909.728</b>

(\*) The balance includes of spare parts which will be used in long term. The total depreciation expenses for spare parts is TL 3.217.372, which is fully under cost of sales (31 December 2017: TL 2.647.585, which is fully under cost of sales). It is the service products that are provided by BDH, customer and BDH inventories to be followed in all steps by giving special identification to each product, followed by event and inventory records related to the contract conditions and mobile use in the field.

**20. SHAREHOLDERS' EQUITY**

**Paid in Capital**

As of 31 December 2018 and 2017, capital structure as in the following:

	Share % 31 December 2018	Share % 31 December 2017	Nominal Value 31 December 2018	Nominal Value 31 December 2017
ZTE (*)	48,05	48,05	31.168.351	31.168.351
TSKGV (**)	15,00	15,00	9.729.720	9.729.720
Public	36,95	36,95	23.966.729	23.966.729
<b>Total</b>	<b>100,00</b>	<b>100,00</b>	<b>64.864.800</b>	<b>64.864.800</b>

(\*) ZTE Cooperatief U.A.

(\*\*) Turkish Armed Forces Foundation

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**20. SHAREHOLDERS' EQUITY (Cont'd)**

**Paid in Capital (Cont'd)**

The capital of the company is TL 64.864.800 which is divided into 64.864.800 shares with a nominal value of TL 1 each (31 December 2017: TL 64.864.800 which is divided into 64.864.800 shares with a nominal value of TL 1 each). The share capital of the Company is fully paid.

In accordance with the Capital Market Board Communiqué No. II-18.1 numbered Registered Capital System, the registered capital system of the Company has been expired due to the expiry date of the authorized capital ceiling (TL 300.000.000).

In the public disclosure made by Netaş Telekomünikasyon A.Ş. ("Company") ,and OEP Turkey Tech B.V. ("OEP") on 6 December 2016 and subsequent updates made thereafter, it was announced that a share purchase agreement ("Agreement") for the transfer of shares representing 48,04% of the Company ("Shares") has been executed between Company's shareholder OEP and ZTE Cooperatief U.A. ("ZTE Cooperatief") and that the share purchase price which was agreed between the parties through bargaining shall be paid at the date of completion of the share transfer which is subject to amongst other, approval of the Competition Board.

Following the above mentioned disclosure, it was announced on 8 May 2017 that several supplemental agreements were signed between the parties related to the transfer of the Shares and accordingly USD 10.000.000 was paid by ZTE Cooperatief to OEP as deposit of a portion of the share purchase price.

According to Article 23/7 of the Communiqué on Special Circumstances numbered (II/15.1), we hereby submit to the investors' attention that as informed by OEP, the Shares of OEP was transferred to ZTE Cooperatief as of 28 July 2017. Following the transaction, ZTE Cooperatief has become a shareholder of our Company whose ratio of the shares to the entire share capital of Netaş is 48,04%.

Mandatory takeover bid process in relation to the purchase of other shareholders' shares in Company conducted by ZTE Cooperatief U.A. ("ZTE Cooperatief") in line with the Communiqué on Takeover Bids II-26.1 of the Capital Markets Board is completed between 4 October 2017 and 17 October 2017.

At the end of the takeover bid process, 12 shareholders have accepted the offer; and accordingly, ZTE Cooperatief has acquired 5.781,71 shares owned by 12 tendering shareholders.

Shareholding structure of Company after completion of the takeover bid process is as follows:

Name	Share Class	Capital Nominal Value (TL)	Capital Amount (Number)	Shareholding Ratio (%)
ZTE Cooperatief U.A.	A	23.351.328	23.351.328	36,00%
ZTE Cooperatief U.A.	B	7.817.023	7.817.023	12,05%
<b>ZTE Cooperatief U.A. (Total)</b>		<b>31.168.351</b>	<b>31.168.351</b>	<b>48,05%</b>
Turkish Armed Forces Foundation	A	9.729.720	9.729.720	15,00%
Other Shareholders	B	23.966.729	23.966.729	36,95%
<b>Total</b>		<b>64.864.800</b>	<b>64.864.800</b>	<b>100,00%</b>

ZTE Cooperatief's shareholding in Company share capital before and after the takeover bid process is shown below:

Nominal Value and Shareholding Ratio Before the Takeover Bid: 31.162.569,63 shares, 48,04%.

Nominal Value and Shareholding Ratio After the Takeover Bid: 31.168.351,34 shares, 48,05%.

The shares of the company are divided into two groups, consisting of (A) and (B) group registered shares. 33.081.048 (thirty-three million eighty-one thousand and forty-eight) of these shares constitute the registered (A) group of shares, and 31.783.752 (Thirty-one million seven hundred and eighty-three thousand seven hundred and fifty-two) shares constitute the (B) group registered shares. The differentiation of the shares in (A) and (B) groups, does not give the owners any rights or privileges, except as provided in Articles 9 and 15.

The proportion of (A) group registered shares within the issued capital shall be maintained in capital increases. Pre-emptive rights of shareholders shall be exercised within the respective share groups.

(B) group registered shares can be freely transferred without being subject to any limitation or condition within the framework of Turkish Commercial Code ("TCC") and Capital Markets Legislation. However, concerning the transfer of (A) group registered shares the existing shareholders in Group (A) are entitled to preemptive 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.

The required quorum for meetings and the required majority for resolutions of the shareholders at ordinary and extraordinary meetings shall be subject to the provisions of the TCC 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.

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**20. SHAREHOLDERS' EQUITY (Cont'd)**

**Share Capital Adjustments**

According to CMB Decree No: XI-26 "Changes to CMB Decree No: XI-20 Accounting Principles in Hyperinflationary Periods", shareholders' equity are shown at their normal values in the financial statements and the account differences occurred in correction of shareholders' equity are shown under the "Equity Foreign Currency Translation Adjustments" account. According to Board of Directors decision on 5 April 2004 referring to the Annual General Meeting decision and related CMB Decrees, conversion differences within the meaning of the law, occurred in prior periods were net-off with accumulated losses. Equity Foreign Currency Translation Adjustments are shown in the consolidated statement of financial position under "Share Capital Adjustments" in the Shareholders' Equity.

**Legal Reserves**

Legal reserves are reserves appropriated from the profit of prior periods for certain purposes other than profit distribution or due to legal or contractual requirements. These reserves are shown in the amounts in the legal records of the Company, and the differences in the preparation of the consolidated financial statements in accordance with TFRS are associated with retained earnings.

The details of restricted reserves are as follows as of 31 December 2018 and 2017:

	31 December 2018	31 December 2017
Primary legal reserves	11.997.507	11.997.507
Secondary legal reserves	22.899.853	22.899.853
<b>Total</b>	<b>34.897.360</b>	<b>34.897.360</b>

According to Turkish Commercial Code, legal reserves consist of first and second legal reserves. The first legal reserves, appropriated out of historical statutory profit at the rate of 5% per annum, until the total reserve reaches 20% of the historical paid in share capital. The second legal reserve is appropriated after the first legal reserves and dividends, at the rate of 10% per annum of all cash distribution.

As of 31 December 2018, the first legal reserve amount of the group is 18% of the paid-in capital and there is no limit to the second legal reserve amount. These reserves can only be used to cover losses, to maintain the company in times when things are not going well, or to prevent unemployment and to mitigate the effects of such losses, unless they exceed half of the paid-in capital of the company.

The total amount of the Company's net income and all available resources that can be distributed in its' statutory financial statements as of 31 December 2018 are TL 139.923.267 (31 December 2017: TL 192.931.629).

**Other comprehensive income or expenses that will not be reclassified subsequently to profit of loss**

**Actuarial (loss)/gain**

As of 31 December 2018, it consists of actuarial (gain)/loss amounting to TL 1.039.427 (31 December 2017: (TL 660.773)) which are accounted for as other comprehensive income.

**Currency translation reserves**

Foreign currency translation differences are consisted of the financial statements of the Group arising from the translation of foreign operations into the reporting currency from the current currency is composed of foreign currency exchange rate differences. As of 31 December 2018, the Group has foreign currency translation difference amounting to TL 495.474.961 (31 December 2017: TL 291.106.537) in the accompanying consolidated financial statements.

**Retained Earnings**

Retained earnings other than net period profit are presented in this item. The extraordinary reserves that are retained by the nature of their accumulated profit and are therefore not restricted, are also recognized as retained earnings.

**Net (Loss)/ Profit**

As of 31 December 2018, the Group has net loss for the year amounting to (TL 19.814.091) (2017: net profit for the year TL 53.518.202).As of 31 December 2018, the net profit of the Company in legal books kept in accordance with the Tax Procedure Laws is TL 3.570.143 (31 December 2017: TL 56.578.505).

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**21. REVENUE AND COST OF SALES**

**Revenue:**

	For the Year Ended 31 December 2018	For the Year Ended 31 December 2017
<b>Net domestic sales</b>	<b>864.981.249</b>	<b>794.437.003</b>
United States	78.236.836	64.894.151
Asia	1.360.210	1.957.982
Africa	66.075.431	245.980.928
Europe	29.134.249	14.995.620
<b>Net export</b>	<b>174.806.726</b>	<b>327.828.681</b>
<b>Total net sales</b>	<b>1.039.787.975</b>	<b>1.122.265.684</b>

Performance Obligations:	Enterprise	Public	International	Technology	BDH	Total
Design performance obligation	577.739	83.045.399	5.659.217	86.030.718	-	175.313.073
Hardware performance obligation	107.030.498	139.336.746	22.955.082	-	-	269.322.326
Installation performance obligation	9.514.328	72.518.690	17.956.250	-	-	99.989.268
Maintenance performance obligation	72.213.898	31.540.573	17.650.766	-	61.066.223	182.471.460
Licence performance obligation	185.711.348	32.759.405	14.754.757	-	-	233.225.510
Other performance obligations	50.362.278	28.074.103	1.029.957	-	-	79.466.338
	<b>425.410.089</b>	<b>387.274.916</b>	<b>80.006.029</b>	<b>86.030.718</b>	<b>61.066.223</b>	<b>1.039.787.975</b>

**Satisfaction of Performance Obligations:**

	Enterprise	Public	International	Technology	BDH	Total
Overtime	401.635.281	169.257.466	17.876.949	86.030.718	61.066.223	735.866.637
A point of time	23.774.808	218.017.450	62.129.080	-	-	303.921.338
	<b>425.410.089</b>	<b>387.274.916</b>	<b>80.006.029</b>	<b>86.030.718</b>	<b>61.066.223</b>	<b>1.039.787.975</b>

**Cost of Sales:**

	For the Year Ended 31 December 2018	For the Year Ended 31 December 2017
Service/Support Expenses	358.510.266	183.121.121
Personnel Expenses	266.952.949	204.717.615
Equipment Expenses	233.765.754	511.480.917
Depreciation and amortization expenses	21.069.780	17.194.811
Rent expenses	10.319.842	7.877.066
Transportation expenses	4.379.270	3.664.291
Other	21.895.257	21.670.194
	<b>916.893.118</b>	<b>949.726.015</b>

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**22. RESEARCH AND DEVELOPMENT, SALES, MARKETING AND DISTRIBUTION, AND GENERAL ADMINISTRATIVE EXPENSES**

	For the Year Ended 31 December 2018	For the Year Ended 31 December 2017
Sales, marketing and distribution expenses	58.914.211	56.109.411
General administrative expenses	44.988.291	32.452.882
Research and development expenses	13.407.445	4.252.477
	<b>117.309.947</b>	<b>92.814.770</b>

*The details of research and development, sales, marketing and distribution and general administrative expenses are as in the following:*

	For the Year Ended 31 December 2018	For the Year Ended 31 December 2017
Personnel expenses	71.674.628	49.727.208
Depreciation and amortization expenses	11.469.483	8.805.190
Consultancy, audit and legal expenses	6.526.209	5.534.514
Travel and meeting expenses	4.647.747	3.999.018
Maintenance expenses	3.704.306	4.048.571
Rent expenses	3.369.683	1.436.551
Fair and advertising expenses	2.775.665	6.073.738
Software expenses	1.712.201	2.147.807
Cafeteria expenses	1.655.086	977.860
Severance indemnity and pension provision expenses	1.550.178	854.257
Private health insurance expenses	1.151.451	756.302
Personnel service expenses	1.049.722	492.390
Communication expenses	986.498	819.001
Electricity,water and gas expenses	776.975	491.911
Training expenses	579.403	279.390
Salaries of the BOD and BOA members	286.888	565.430
Provision expenses	222.129	4.420.779
Other	3.171.695	1.384.853
	<b>117.309.947</b>	<b>92.814.770</b>

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**23. OTHER INCOME AND EXPENSES FROM OPERATING ACTIVITIES**

	For the Year Ended 31 December 2018	For the Year Ended 31 December 2017
<b>Oher Income from Operating Activities</b>		
Discount income on receivables, net (*)	1.078.004	-
Service income	249.824	167.434
Other income and gains	155.495	1.852.108
	<b>1.483.323</b>	<b>2.019.542</b>

	For the Year Ended 31 December 2018	For the Year Ended 31 December 2017
<b>Oher Expenses from Operating Activities</b>		
Foreign exchange expenses, net	63.842.626	8.458.256
Provision for doubtful receivables expenses (TFRS 9)	19.190.438	-
Uncollectible receivables (**)	8.999.320	2.499.506
Legal case expenses	3.687.732	2.452.679
Other tax expenses	518.201	945.239
Discount loss on receivables, net (*)	-	429.338
Other expenses and losses	3.994.923	2.463.253
	<b>100.233.240</b>	<b>17.248.271</b>

(\*) Discount income/ (expenses) related to trade receivables are accounted under Other Income/ (Expenses) from Operating Activities.

(\*\*) On August 23, 2018, the Company and Nortel Networks Inc. in accordance with the agreement, it includes the amount of waived receivables' expenses at the negotiation after the payment of USD 4.400.000 (Note 7).

**24. INCOME AND EXPENSES FROM INVESTING ACTIVITIES**

	For the Year Ended 31 December 2018	For the Year Ended 31 December 2017
<b>Income from Investing Activities</b>		
Income from sales of tangible assets	11.235	-
Income from scrap sales	61.439	35.519
	<b>72.674</b>	<b>35.519</b>

	For the Year Ended 31 December 2018	For the Year Ended 31 December 2017
<b>Expenses from Investing Activities</b>		
Losses from sales of tangible assets	18.675	44.008
	<b>18.675</b>	<b>44.008</b>

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**25. FINANCE INCOME / (EXPENSES)**

	For the Year Ended 31 December 2018	For the Year Ended 31 December 2017
<b>Financial Income</b>		
Foreign exchange gains, net (*)	144.254.766	18.255.463
Interest income	9.655.423	1.777.651
Gains from derivative instruments	-	2.678.753
	<b>153.910.189</b>	<b>22.711.867</b>

	For the Year Ended 31 December 2018	For the Year Ended 31 December 2017
<b>Financial Expenses</b>		
Bank interest expenses	81.948.273	43.984.031
Guarantee letter commissions	5.103.929	2.814.487
Other financial expenses	763.630	1.032.205
	<b>87.815.832</b>	<b>47.830.723</b>

(\*) Foreign exchange gain and loss related to cash and cash equivalents, financial borrowings, and other financial liability.

**26. TAX ASSETS AND LIABILITIES**

**Corporate Tax**

The Company and its subsidiaries in Turkey is subject to Turkish corporate taxes. Provision is made in the accompanying consolidated financial statements for the estimated charge based on the Company's results for the year.

Corporate tax is applied on taxable corporate income, which is calculated from the statutory accounting profit by adding non-deductible expenses, and by deducting dividends received from resident companies, other exempt income and investment incentives utilized.

As of 31 December 2018 tax rate is %22. (31 December 2017:%20). Institutions tax rate is applied to commercial income of corporations by finding out the deduction of deductible expenses and deductions of tax exemptions and deductions in accordance with the tax legislation. In Turkey, advance tax returns are filed on a quarterly basis.

Accumulated losses are allowed to be carried 5 years maximum to be deducted from the taxable profit of the following years. However, accumulated losses cannot be deducted from the profit occurred in the prior years retroactively.

In Turkey, there is no procedure for a final and definitive agreement on tax assessments. Companies file their tax returns between 1-25 April following the close of the fiscal year to which they relate. Tax authorities may, however, examine such returns and the underlying accounting records and may revise assessments within five years. Tax legislation in Turkey does not allow to fill consolidated tax returns of the Company and its subsidiaries. Therefore, provisions for taxes, as reflected in the consolidated financial statements, it has been calculated on the basis of individual companies.

Corporate tax rate in Malta is 35% (2017: 35 %). Corporate tax rate in Kazakhstan is 20% (2017: 20 %).

**Withholding tax**

In addition to corporate taxes, companies should also calculate withholding taxes surcharge on any dividends distributed, except for companies receiving dividends who are resident companies in Turkey and Turkish branches of foreign companies. The rate of income withholding tax is 10% starting from 24 April 2003. This rate was changed to 15 % with the code numbered 5520 article 15 commencing from 23 July 2006. Transfer from retained earnings to share capital is not subject to withholding taxes.

**Deferred Taxes**

The Company recognizes deferred tax assets and liabilities based upon temporary differences arising from its financial statements prepared in accordance with TFRS and its statutory tax financial statements. These differences usually result in the recognition of revenue and expenses in different reporting periods for TFRS and tax purposes and are set out below.

In accordance with the regulation numbered 7061, published in Official Gazette on 5 December 2017,"Law on the Amendment of Certain Tax Laws and Some Other Laws", corporate tax rate for the years 2018, 2019 and 2020 has increased from 20% to 22%. Therefore, deferred tax assets and liabilities as of 31 December 2017 are calculated with 22% tax rate for the temporary differences which will be realized in 2018, 2019 and 2020, and with 20% tax for those which will be realized after 2021 and onwards.

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**26. TAX ASSETS AND LIABILITIES (Cont'd)**

Deferred tax assets/ (liabilities)	31 December 2018	31 December 2017
Trade receivables	(75.646.543)	(63.950.025)
Tangible and intangible assets	(12.255.815)	(10.581.353)
Trade payables and cost provisions	4.904.937	1.178.940
Carryforward tax losses	4.930.763	2.431.458
Unused R&D tax exemption	75.684.494	42.695.803
Provision for unused vacation	3.304.216	1.553.766
Inventory and deferred costs	45.559	3.272.470
Provisions for employee premiums	4.422.667	3.794.273
Advances received	1.182.359	2.124.862
Deferred revenues	(725.388)	12.141.644
Severance indemnity and retirement provisions	4.031.681	4.480.239
Impact of TFRS 15 and 9	11.025.688	-
Other	1.291.301	1.111.764
	<b>22.195.919</b>	<b>253.841</b>

The movement of deferred tax assets/ (liabilities) is as follows:

Movement for deferred taxes is as follows:	2018	2017
<b>Balance as of January, 1- reported</b>	<b>253.841</b>	<b>(15.231.761)</b>
Impacts due to the changes in accounting policies (Note 2.3)	10.894.667	-
<b>Balance as of January, 1- restated</b>	<b>11.148.508</b>	<b>(15.231.761)</b>
Current charge deferred tax expenses	11.978.240	16.345.055
Charge to equity	(259.857)	165.193
Translation difference	(670.972)	(1.024.646)
Closing, 31 December	<b>22.195.919</b>	<b>253.841</b>

	31 December 2018	31 December 2017
Corporate tax	(5.150.867)	(3.016.501)
Prepaid taxes	11.978.240	16.345.055
<b>Current tax liabilities</b>	<b>6.827.373</b>	<b>13.328.554</b>

The Group recognizes deferred tax assets and liabilities based upon temporary differences arising between their statement of financial position accounts prepared in accordance with TFRS promulgated by POA Financial Reporting Standards and their statutory financial statements. These temporary differences usually results from the recognition of revenue and expenses in different reporting periods for TFRS and Tax Laws.

	31 December 2018	31 December 2017
Corporate tax	5.150.867	3.016.501
Prepaid taxes	(86.019)	(22.122)
<b>Current tax liabilities</b>	<b>5.064.848</b>	<b>2.994.379</b>

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**26. TAX ASSETS AND LIABILITIES (Cont'd)**

Movement for deferred taxes as of 31 December 2018 and 2017 are as follows;

	1 January 2018	TFRS 15 and 9 Impacts	Charge to Profit	Charge to Equity	Translation Difference	31 December 2018
Tangible and intangible assets	(10.581.353)	-	4.370.913	-	(6.045.375)	(12.255.815)
Trade receivables	(63.950.025)	-	12.140.537	-	(23.837.055)	(75.646.543)
Trade payables and cost provisions	1.178.940	-	2.983.618	-	742.379	4.904.937
Inventory and deferred costs	3.272.470	-	(4.076.159)	-	849.248	45.559
Advances received	2.124.862	-	(1.688.739)	-	746.236	1.182.359
Provisions for employee bonuses	3.794.273	-	(795.582)	-	1.423.976	4.422.667
Provision for unused vacation	1.553.766	-	1.040.492	-	709.958	3.304.216
Severance indemnity and retirement provisions	4.480.239	-	(1.791.056)	(259.857)	1.602.355	4.031.681
Deferred revenues	12.141.644	-	(16.159.904)	-	3.292.872	(725.388)
Unused R&D tax exemption (Note 14)	42.695.803	-	14.763.496	-	18.225.195	75.684.494
Carryforward tax losses	2.431.458	-	1.408.686	-	1.090.619	4.930.763
Other	1.111.764	-	(218.062)	-	397.599	1.291.301
Impact of TFRS 9 (Note 2.3)	-	2.930.367	-	-	35.241	2.965.608
Impact of TFRS 15 (Note 2.3)	-	7.964.300	-	-	95.780	8.060.080
	<b>253.841</b>	<b>10.894.667</b>	<b>11.978.240</b>	<b>(259.857)</b>	<b>(670.972)</b>	<b>22.195.919</b>

	1 January 2017	Charge to Profit	Charge to Equity	Translation Difference	31 December 2017
Tangible and intangible assets	(11.361.781)	1.853.364	-	(1.072.936)	(10.581.353)
Trade receivables	(64.660.327)	5.017.969	-	(4.307.667)	(63.950.025)
Trade payables and cost provisions	1.299.169	(206.515)	-	86.286	1.178.940
Inventory and deferred costs	1.537.007	1.571.802	-	163.661	3.272.470
Advances received	2.490.727	(526.850)	-	160.985	2.124.862
Provisions for employee bonuses	2.512.033	1.065.725	-	216.515	3.794.273
Provision for unused vacation	1.177.554	282.091	-	94.121	1.553.766
Severance indemnity and retirement provisions	4.122.207	219.773	165.193	(26.934)	4.480.239
Deferred revenues	12.125.739	(826.763)	-	842.668	12.141.644
Unused R&D tax exemption (Note 14)	32.995.943	7.090.144	-	2.609.716	42.695.803
Carryforward tax losses	1.829.948	454.691	-	146.819	2.431.458
Other	700.020	349.624	-	62.120	1.111.764
	<b>(15.231.761)</b>	<b>16.345.055</b>	<b>165.193</b>	<b>(1.024.646)</b>	<b>253.841</b>

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**26. TAX ASSETS AND LIABILITIES (Cont'd)**

Reconciliation between tax expenses for the years ended 31 December 2018 and 2017 and calculated tax expense using corporate tax rate in Turkey (%22) is as follows:

	31 December 2018	31 December 2017
<b>Tax reconciliation</b>		
(Loss)/Profit before tax	(26.641.464)	40.189.648
Tax rate	22%	20%
Computed tax expense	5.861.122	(8.037.930)
<b>Tax effects of:</b>		
Non-deductible expenses	(2.284.552)	(1.351.984)
Tax exempt income	5.009.707	304.882
Used R&D deduction	-	12.245.477
Unused R&D deduction	(30.066.113)	(21.342.412)
Tax effect of other adjustments (Effects on deferred tax balances due to change in income tax rate from %20 to %22)	-	1.528.115
Other adjustment and monetary loss/gain	28.307.209	29.982.406
<b>Total tax income</b>	<b>6.827.373</b>	<b>13.328.554</b>

As of 31 December 2018, the Company has TL 344.020.426 unused R&D tax exemption provided by Support of Research and Development Act, numbered 5746 (31 December 2017: TL 207.356.276).

The Group has tax losses amounting to TL 11.242.518 which can be used in the future as of 31 December 2018 (31 December 2017: TL 11.242.518). Group's total unused tax losses of which deferred tax assets have been calculated and their maturity years are below:

	31 December 2018	31 December 2017
At the end of 2019	6.135.314	6.135.314
At the end of 2021	3.012.410	3.012.410
At the end of 2022	2.094.794	2.094.794
	<b>11.242.518</b>	<b>11.242.518</b>

**27. (LOSS)/ EARNINGS PER SHARE**

	For the Year Ended 31 December 2018	For the Year Ended 31 December 2017
Number of shares	64.864.800	64.864.800
Net (loss)/profit for the year	(19.814.091)	53.518.202
(Loss)/Profit earning per share (kurus)	(0,3055)	0,8251
(Loss)/Profit earning per common share (kurus)	(0,3055)	0,8251

Earnings per share is calculated by dividing profit or loss attributable to ordinary equity holders of the parent entity by the weighted average number of ordinary shares outstanding during the year.

**28. BALANCES AND TRANSACTIONS WITH RELATED PARTIES**

Due from related parties as of 31 December 2018 and 2017 is as follows:

Due from Related Parties	31 December 2018	31 December 2017
Kron Telekomünikasyon A.Ş.	7.142	-
	<b>7.142</b>	<b>-</b>

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**28. BALANCES AND TRANSACTIONS WITH RELATED PARTIES (Cont'd)**

Due to Related Parties	31 December 2018	31 December 2017
Kron Telekomünikasyon A.Ş.	353.107	1.715.824
	<b>353.107</b>	<b>1.715.824</b>

According to "IAS 24 Related Party Disclosures", providers of finance, trade unions, public utilities, departments and agencies of a government that does not control, jointly control or significantly influence the reporting entity, and a customer, supplier, franchisor, distributor or general agent with whom an entity transacts a significant volume of business, simply by virtue of the resulting economic dependence are not evaluated as related parties. The Group has a significant business relation with Aselsan Elektronik Sanayi ve Ticaret A.Ş. ("Aselsan"), and evaluated in that context.

Main transactions with related parties are as follows for the year ended 31 December 2018 and 2017:

Sales	For the Year Ended 31 December 2018	For the Year Ended 31 December 2017
Genband US LLC (*)	-	34.168.311
Genband Ireland Ltd. (*)	-	1.840.097
Kron Telekomünikasyon A.Ş.	6.535	74.223
	<b>6.535</b>	<b>36.082.631</b>

Purchases	For the Year Ended 31 December 2018	For the Year Ended 31 December 2017
Genband Ireland Ltd. (*)	-	2.471.693
Kron Telekomünikasyon A.Ş.	837.949	1.565.460
Genband US LLC (*)	-	25.385
	<b>837.949</b>	<b>4.062.538</b>

(\*) Genband US LLC and its associates are not accounted as related parties effective from 28 July 2017, after the shares of OEP (48,04 %) was transferred to ZTE Cooperatief. Amount of purchases and sales to Genband companies are included from 1 January to 28 July 2017. The sales and purchases from the Genband group companies for the period 1 January-31 December 2018 are not stated in the related note.

For the year ended 31 December 2018, total remuneration for the directors and management board of the Group is TL 13.531.021 (for the year ended 31 December 2017 total remuneration for the directors and management board of the Group is TL 10.796.299). As of 31 December 2018 and 2017 there is no credit granted to the Group's Management.

**29. FINANCIAL INSTRUMENTS AND RISK MANAGEMENT**

**Capital risk management**

The Group's objectives when managing capital are to safeguard the Group's ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders and to maintain an optimal capital structure to reduce the cost of capital.

As of 31 December 2018 and 2017 the Group's net debt / total equity ratios are as follows:

	31 December 2018	31 December 2017
Short-term and long-term borrowings (Note 6)	487.836.269	326.117.840
Cash and cash equivalents (Note 5)	(192.787.683)	(187.212.070)
Net financial debt	295.048.586	138.905.770
Equity	813.664.938	644.606.624
<b>Net financial debt/ Equity</b>	<b>%36</b>	<b>%22</b>

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**29. FINANCIAL INSTRUMENTS AND RISK MANAGEMENT (Cont'd)**

The Group's financial risk management policies are as follows.

**Credit risk**

Carrying values of the financial assets represents their maximum exposed credit risk. As of the date of balance sheet maximum credit risks are as follows.

31 December 2018	Trade Receivables		Other Receivables	Deposits at Banks
	Related Parties	Other	Other (*)	
<b>Maximum credit risks as of balance sheet date (A+B+C+D)</b>	<b>7.142</b>	<b>970.993.491</b>	<b>1.728.286</b>	<b>192.385.426</b>
Maximum risk guaranteed by collateral	-	-	-	-
(A) Net book value of unexpired or not impaired financial assets	7.142	768.219.325	1.728.286	192.385.426
(B) Net book value of overdue but not impaired financial assets (**)	-	202.774.166	-	-
Guaranteed by collateral	-	-	-	-
(C) Net book value of impaired assets	-	-	-	-
Overdue (gross book value)	-	90.703.609	-	-
Impairment (-)	-	(90.703.609)	-	-
Guaranteed by collateral	-	-	-	-
Unexpired (gross book value)	-	-	-	-
Impairment (-)	-	-	-	-
Guaranteed by collateral	-	-	-	-
(D) Off balance sheet risks	-	-	-	-

(\*) VAT receivable, prepaid taxes are not classified as financial assets and therefore are not included in other receivables and other current assets.

31 December 2017	Trade Receivables		Other Receivables	Deposits at Banks
	Related Parties	Other	Other (*)	
<b>Maximum credit risks as of balance sheet date (A+B+C+D)</b>	<b>-</b>	<b>890.130.073</b>	<b>1.479.485</b>	<b>186.576.827</b>
Maximum risk guaranteed by collateral	-	-	-	-
(A) Net book value of unexpired or not impaired financial assets	-	774.149.759	1.479.485	186.576.827
(B) Net book value of overdue but not impaired financial assets (**)	-	115.980.314	-	-
Guaranteed by collateral	-	-	-	-
(C) Net book value of impaired assets	-	-	-	-
Overdue (gross book value)	-	61.505.489	-	-
Impairment (-)	-	(61.505.489)	-	-
Guaranteed by collateral	-	-	-	-
Unexpired (gross book value)	-	-	-	-
Impairment (-)	-	-	-	-
Guaranteed by collateral	-	-	-	-
(D) Off balance sheet risks	-	-	-	-

(\*) VAT receivable, prepaid taxes are not classified as financial assets and therefore are not included in other receivables and other current assets.

(\*\*) The amount of overdue but not impaired financial assets is consisted of TL 25.842.572 receivables from Nortel companies. As a result of net-off Nortel companies' receivables and payables, 5 % provision amount is adjusted.

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**29. FINANCIAL INSTRUMENTS AND RISK MANAGEMENT (Cont'd)**

The Group has applied the simplified approach stated in TFRS 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 and forward macroeconomic indicators were calculated and the expected credit loss provision was calculated by multiplying the determined ratio by the trade receivable totals.

As of the date of balance sheet aging of overdue and undue but not impaired financial assets are as follows.

31 December 2018	Year End Balance	Expected Credit Loss Ratio	Expected Credit Loss
Undue	758.545.725	0,32%	(22.989.730)
1-30 days overdue	66.988.771	1,06%	(158.127)
1-3 months overdue	18.055.677	1,99%	(397.323)
3-6 months overdue	21.093.116	3,28%	(1.069.870)
6-12 months overdue	52.047.199	7,48%	(2.144.742)
1-5 years overdue	54.270.145	21,63%	(5.910.680)
	<b>971.000.633</b>		<b>(32.670.472)</b>

31 December 2017	Receivables	
	Trade Receivables	Other Receivables
Undue	774.149.759	-
1-30 days overdue	51.302.959	-
1-3 months overdue	7.531.226	-
3-12 months overdue	18.473.277	-
1-5 years overdue	12.830.280	-
Overdue more than 5 years	25.842.572	-
<b>Total</b>	<b>890.130.073</b>	<b>-</b>

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**29. FINANCIAL INSTRUMENTS AND RISK MANAGEMENT (Cont'd)**

**Liquidity risk**

The Group holds adequate sources to be able to fulfill its current and future liabilities. As of 31 December 2018 and 2017 liquidity risk table are as follows;

<b>31 December 2018</b>					
Maturities due to agreements	Carrying amount	Cash outflows due to agreements	Up to 3 months	3-12 months	1-5 years
<b>Non- derivative financial liabilities</b>	<b>786.850.161</b>	<b>832.784.383</b>	<b>392.438.673</b>	<b>440.288.294</b>	<b>57.416</b>
Financial liabilities	487.836.269	533.770.491	93.482.197	440.288.294	-
Due to related parties	353.107	353.107	353.107	-	-
Other trade payables to third parties	298.660.785	298.660.785	298.603.369	-	57.416

<b>31 December 2017</b>					
Expected maturities	Carrying amount	Cash outflows due to agreements	Up to 3 months	3-12 months	1-5 years
<b>Non- derivative financial liabilities</b>	<b>45.681.647</b>	<b>45.681.647</b>	<b>40.328.468</b>	<b>5.353.179</b>	<b>-</b>
Other short term provisions	6.243.574	6.243.574	890.395	5.353.179	-
Payables related to employee benefits	22.373.870	22.373.870	22.373.870	-	-
Other payables to third parties (*)	17.064.203	17.064.203	17.064.203	-	-

The Group Management considers that fair value of financial instrument reflects with the fair value.

(\*) Social security premiums, income tax and other taxes payable are included in other liabilities.

<b>31 December 2017</b>					
Maturities due to agreements	Carrying amount	Cash outflows due to agreements	Up to 3 months	3-12 months	1-5 years
<b>Non- derivative financial liabilities</b>	<b>708.742.499</b>	<b>733.604.238</b>	<b>388.816.693</b>	<b>316.266.842</b>	<b>28.520.703</b>
Financial liabilities	326.117.840	350.979.579	6.238.391	316.266.842	28.474.346
Due to related parties	1.715.824	1.715.824	1.715.824	-	-
Other trade payables to third parties	380.908.835	380.908.835	380.862.478	-	46.357

<b>31 December 2017</b>					
Expected maturities	Carrying amount	Cash outflows due to agreements	Up to 3 months	3-12 months	1-5 years
<b>Non- derivative financial liabilities</b>	<b>27.899.020</b>	<b>27.899.020</b>	<b>22.775.813</b>	<b>5.123.207</b>	<b>-</b>
Other short term provisions	5.564.618	5.564.618	441.411	5.123.207	-
Payables related to employee benefits	11.623.440	11.623.440	11.623.440	-	-
Other payables to third parties (*)	10.710.962	10.710.962	10.710.962	-	-

The Group Management considers that fair value of financial instrument reflects with the fair value.

(\*) Social security premiums, income tax and other taxes payable are included in other liabilities.

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**29. FINANCIAL INSTRUMENTS AND RISK MANAGEMENT (Cont'd)**

**Liquidity risk (Cont'd)**

**The Reclassification of Fair Value Measurement**

The fair values of financial assets and financial liabilities are determined and grouped as follows:

- Level 1: The fair value of financial assets and financial liabilities with standard terms and conditions and traded on active liquid markets are determined with reference to quoted market prices.
- Level 2: The fair value of other financial assets and financial liabilities (excluding derivative instruments) are determined in accordance with generally accepted pricing models based on discounted cash flow analysis using prices from observable current market transactions; and
- Level 3: The fair value of the financial assets and financial liabilities where there is no observable market data. The fair value of derivative instruments, are calculated using quoted prices.

In accordance with fair value hierarchy; while cash and cash equivalent are categorized as of Level 1, other financial asset and liabilities are categorized as Level 2.

**Interest rate risk**

Interest rate sensitive financial assets are placed in short term financial instruments in order to avoid any possible interest rate fluctuations. The Group has the following interest sensitive liability as of the balance sheet date

	<b>31 December 2018</b>	<b>31 December 2017</b>
<b>Fixed interest rate financial instruments</b>	<b>579.572.078</b>	<b>440.670.781</b>
Financial assets (*)	116.933.685	114.553.052
Financial liabilities	462.638.393	326.117.729
<b>Variable interest rate financial instruments</b>	<b>20.000.000</b>	<b>-</b>
Financial assets	-	-
Financial liabilities	20.000.000	-
<b>Interest-free financial instruments</b>	<b>5.197.876</b>	<b>111</b>
Financial liabilities	5.197.876	111

(\*) As of 31 December 2018 and 2017, includes bank time deposits.

**Foreign currency risk**

The Group's foreign currency risk is mainly associated with change in value of US Dollar against TL and other currencies. In order to avoid possible losses due to fluctuations of foreign exchange rates, the Group places its assets with the same currency for liabilities and bears its contractual expenses in the same currency of contracts if possible.

	<b>31 December 2018</b>	<b>31 December 2017</b>
Export	174.806.726	327.828.681
Import	251.780.174	369.370.820

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**29. FINANCIAL INSTRUMENTS AND RISK MANAGEMENT (Cont'd)**

*Foreign currency risk (Cont'd)*

As of 31 December 2018 and 2017, the Group's foreign currency position table is given below:

31 December 2018	Original Currency					
	TL Equivalent (*)	TL	EUR	GBP	BDT	Other
<b>Current Assets</b>	<b>306.729.385</b>	<b>246.868.769</b>	<b>8.911.889</b>	<b>45.848</b>	<b>2.499.425</b>	<b>158.700.906</b>
Cash and cash equivalents	42.890.888	37.918.156	722.246	4.043	2.499.425	17.364.893
Trade receivables, third parties	208.468.777	155.350.875	7.991.405	-	-	126.832.781
Other receivables, third parties	1.529.617	1.233.203	35.912	-	-	1.815.480
Prepaid expenses	9.818.039	9.249.494	85.717	-	-	2.241.089
Other current assets	44.022.064	43.117.041	76.609	41.805	-	10.446.663
<b>TOTAL ASSETS (A)</b>	<b>306.729.385</b>	<b>246.868.769</b>	<b>8.911.889</b>	<b>45.848</b>	<b>2.499.425</b>	<b>158.700.906</b>
<b>Short Term Liabilities</b>	<b>651.232.186</b>	<b>638.492.901</b>	<b>2.026.212</b>	<b>41.805</b>	<b>-</b>	<b>12.177.645</b>
Financial liabilities	487.836.269	487.836.269	-	-	-	-
Trade payables, third parties	88.954.458	76.253.969	2.026.212	41.805	-	9.370.421
Other payables, third parties	17.210.702	17.171.906	-	-	-	2.807.224
Employee benefit obligations	22.373.870	22.373.870	-	-	-	-
Provision for employee benefit	28.613.313	28.613.313	-	-	-	-
Other short term provisions	6.243.574	6.243.574	-	-	-	-
<b>Long Term Liabilities</b>	<b>29.265.838</b>	<b>29.265.838</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Long term financial liabilities	-	-	-	-	-	-
Provision for employee benefit	29.265.838	29.265.838	-	-	-	-
<b>TOTAL LIABILITIES (B)</b>	<b>680.498.024</b>	<b>667.758.739</b>	<b>2.026.212</b>	<b>41.805</b>	<b>-</b>	<b>12.177.645</b>
<b>Net Foreign Currency Asset / (Liability) Position (A-B)</b>	<b>(373.768.639)</b>	<b>(420.889.970)</b>	<b>6.885.677</b>	<b>4.043</b>	<b>2.499.425</b>	<b>146.523.261</b>

(\*) Since the functional currency of the Group is USD the currencies other than USD are shown in the table. Foreign currencies are denominated in their original currency amount and TL equivalents are calculated by using year end rates.

31 December 2017	Original Currency					
	TL Equivalent (*)	TL	EUR	GBP	BDT	Other
<b>Current Assets</b>	<b>325.425.541</b>	<b>271.834.289</b>	<b>9.295.550</b>	<b>33.441</b>	<b>12.601.173</b>	<b>699.565.437</b>
Cash and cash equivalents	35.754.805	17.233.160	2.216.912	33.441	12.601.173	574.000.091
Trade receivables, third parties	226.455.899	192.238.163	6.925.262	-	-	115.837.736
Other receivables, third parties	1.405.605	1.345.215	-	-	-	1.851.296
Prepaid expenses	7.590.503	6.886.781	153.376	-	-	983.379
Other current assets	54.218.729	54.130.970	-	-	-	6.892.935
<b>TOTAL ASSETS (A)</b>	<b>325.425.541</b>	<b>271.834.289</b>	<b>9.295.550</b>	<b>33.441</b>	<b>12.601.173</b>	<b>699.565.437</b>
<b>Short Term Liabilities</b>	<b>322.118.736</b>	<b>317.450.319</b>	<b>369.833</b>	<b>4.347</b>	<b>450.000</b>	<b>107.929.607</b>
Financial liabilities	207.390.413	207.390.413	-	-	-	-
Trade payables, third parties	67.031.853	62.369.948	369.833	4.347	450.000	105.911.965
Other payables, third parties	10.720.561	10.699.965	-	-	-	1.816.166
Employee benefit obligations	11.561.147	11.575.231	-	-	-	201.476
Provision for employee benefit	19.850.144	19.850.144	-	-	-	-
Other short term provisions	5.564.618	5.564.618	-	-	-	-
<b>Long Term Liabilities</b>	<b>49.018.655</b>	<b>49.018.655</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Long term financial liabilities	24.044.293	24.044.293	-	-	-	-
Provision for employee benefit	24.974.362	24.974.362	-	-	-	-
<b>TOTAL LIABILITIES (B)</b>	<b>371.137.391</b>	<b>366.468.974</b>	<b>369.833</b>	<b>4.347</b>	<b>450.000</b>	<b>107.929.607</b>
<b>Net Foreign Currency Asset / (Liability) Position (A-B)</b>	<b>(45.711.850)</b>	<b>(94.634.685)</b>	<b>8.925.717</b>	<b>29.094</b>	<b>12.151.173</b>	<b>591.635.830</b>

(\*) Since the functional currency of Group is USD, the currencies other than USD are shown in the table. Foreign currencies are denominated in their original currency amount and TL equivalents are calculated by using year end rates.

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**29. FINANCIAL INSTRUMENTS AND RISK MANAGEMENT (Cont'd)**

*Foreign currency risk (Cont'd)*

**Exchange Rate Sensitivity Table**  
**31 December 2018**

	Profit / (Loss)	
	Appreciation	Devaluation
<i>Effect of 10 % appreciation/devaluation in TL -USD exchange rate :</i>		
Net asset / (liability) in TL	(42.088.996)	42.088.996
Not subjected to TL risk (-)	-	-
<b>(1) Net effect of TL</b>	<b>(42.088.996)</b>	<b>42.088.996</b>
<i>Effect of 10 % appreciation/devaluation in EURO – USD exchange rate :</i>		
Net asset / (liability) in EUR	4.150.686	(4.150.686)
Not subjected to EUR risk (-)	-	-
<b>(2) Net effect of EUR</b>	<b>4.150.686</b>	<b>(4.150.686)</b>
<i>Effect of 10 % appreciation/devaluation in exchange rate of other foreign currencies:</i>		
Net asset / (liability) in other currencies	561.446	(561.446)
Not subjected to other currency risk (-)	-	-
<b>(3) Net effect of other currencies</b>	<b>561.446</b>	<b>(561.446)</b>
<b>TOTAL (1+2+3)</b>	<b>(37.376.864)</b>	<b>37.376.864</b>

**31 December 2017**

	Profit / (Loss)	
	Appreciation	Devaluation
<i>Effect of 10 % appreciation/devaluation in TL -USD exchange rate :</i>		
Net asset / (liability) in TL	(9.463.468)	9.463.468
Not subjected to TL risk (-)	-	-
<b>(1) Net effect of TL</b>	<b>(9.463.468)</b>	<b>9.463.468</b>
<i>Effect of 10 % appreciation/devaluation in EURO – USD exchange rate :</i>		
Net asset / (liability) in EUR	4.030.408	(4.030.408)
Not subjected to EUR risk (-)	-	-
<b>(2) Net effect of EUR</b>	<b>4.030.408</b>	<b>(4.030.408)</b>
<i>Effect of 10 % appreciation/devaluation in exchange rate of other foreign currencies:</i>		
Net asset / (liability) in other currencies	861.875	(861.875)
Not subjected to other currency risk (-)	-	-
<b>(3) Net effect of other currencies</b>	<b>861.875</b>	<b>(861.875)</b>
<b>TOTAL (1+2+3)</b>	<b>(4.571.185)</b>	<b>4.571.185</b>

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**30. FAIR VALUE OF FINANCIAL INSTRUMENTS**

	Loans and Receivables (including cash and cash equivalents)	Amortized value of financial liabilities	Note
<b>31 December 2018</b>			
<b>Financial assets</b>			
Cash and cash equivalents	192.787.683	-	5
Trade receivables	970.993.491	-	7
Due from related parties	7.142	-	28
Financial investments	4.733.887	-	
Other current assets	1.728.286	-	8
<b>Financial liabilities</b>			
Borrowings	-	487.836.269	6
Trade payables	-	298.660.785	7
Due to related parties	-	353.107	28
Other liabilities	-	17.064.203	8
Employee Benefit Obligations	-	22.373.870	17

	Loans and Receivables (including cash and cash equivalents)	Amortized value of financial liabilities	Note
<b>31 December 2017</b>			
<b>Financial assets</b>			
Cash and cash equivalents	187.212.070	-	5
Trade receivables	890.130.073	-	7
Financial investments	2.928.818	-	
Other current assets	1.479.485	-	8
<b>Financial liabilities</b>			
Borrowings	-	326.117.840	6
Trade payables	-	380.908.835	7
Due to related parties	-	1.715.824	28
Other liabilities	-	10.710.962	8
Employee Benefit Obligations	-	11.623.440	17

**31. SUBSEQUENT EVENTS**

None.

**32. DISCLOSURE OF OTHER MATTERS THAT MAY AFFECT CONSOLIDATED FINANCIAL STATEMENTS SIGNIFICANTLY OR IS NECESSARY FOR CONSOLIDATED FINANCIAL STATEMENTS TO BE CLEAR, INTERPRETABLE AND COMPREHENSIBLE**

None.

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**33. SUPPLEMENTARY CASH FLOW INFORMATION**

Statements of cash flows are presented within the consolidated financial statements.

Details of "adjustments for provisions" and "adjustments for impairment loss" lines presented in the consolidated statements of cash flows are as follows;

	2018	2017
<b>Adjustments for provision:</b>		
Provision for bonuses and premiums	24.122.480	26.272.933
Provision for vacation pay liability	9.538.465	2.584.814
Provision for employment termination and retirement benefit	5.201.613	4.930.014
Provision for legal claims	1.643.580	2.050.622
Other debt provisions/ (reversals)	251.395	(266.393)
	<b>40.757.533</b>	<b>35.571.990</b>
<b>Adjustments for impairment loss:</b>		
Provision for doubtful receivables	28.189.758	6.389.650
Provision for doubtful receivables	(15.734.980)	-
	<b>12.454.778</b>	<b>6.389.650</b>

**34. STATEMENTS OF CHANGES IN EQUITY DISCLOSURES**

The equity of the Group consist the equity Parent company in amount of TL 813.664.938 as of 31 December 2018 (31 December 2017: TL 644.606.624).

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**Trade Registration Number:** 94955/40304  
**Mersis No:** 0632000106100010

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