PROVEN TECHNOLOGY aselsan

2019 Annual Report

aselsan







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ASELSAN shares are traded in Borsa Istanbul under ticker symbol ASELS.

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VISION

To be a reliable, competitively preferred, environment-friendly and human conscious technology firm which preserves its sustainable growth in the global market via the values created for stakeholders, as well as serving its establishment purposes.

MISSION

By focusing primarily on the needs of the Turkish Armed Forces; to provide high-value-added, innovative and reliable products and solutions to both local and foreign customers in the fields of electronic technologies and system integration; continuing activities in line with global targets as well as increasing brand awareness and contributing to technological independence of Turkey.

ETHICAL AND CORE VALUES

- Togetherness
- Excellence
- Innovation
- Evolution
- Trust

ASELSAN SHAREHOLDING STRUCTURE

OUR SHAREHOLDERS (%)

TURKISH ARMED FORCES FOUNDATION (TAFF) 74.20

25.80% of ASELSAN shares are listed on

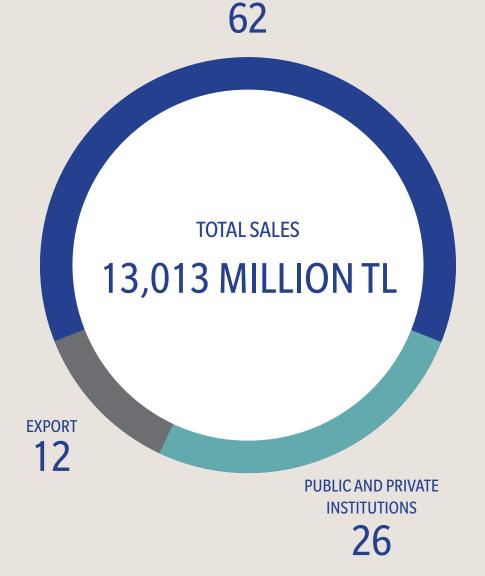
Borsa Istanbul.

BIST 25.80

OUR SHAREHOLDERS	SHARE AMOUNT (TL)	SHARE (%)
TAFF	845,825,624.46	74.20
Quoted on the BIST	294,174,375.54	25.80
Total	1,140,000,0000	100.00

ASELSAN'S FINANCIAL POSITION

ASELSAN AT A GLANCE



SALES (%)

TURKISH ARMED FORCES

ASELSAN REALIZED 62% OF ITS TOTAL SALES OF TL 13 BILLION 13 MILLION TO THE TURKISH ARMED FORCES, 26% OF ITS SALES TO PRIVATE ORGANIZATIONS OR OTHER CORPORATE CUSTOMERS, AND WITH 12% OF ITS EXPORTS. A TOTAL OF USD 3 BILLION 43 MILLION OF NEW CONTRACTS/ORDERS WERE SIGNED IN 2019, WHERE THE BACKLOG OF ASELSAN IS USD 9.7 BILLION.

LOCAL AFFILIATES

MICROELECTRONICS R&D DESIGN AND TRADING LTD. CO

İstanbul

The company was established to design and develop integrated circuits and electronic systems in Istanbul, ASELSAN became a partner in MICROELECTRONICS in 2010 with an 85% stake.

ASELSAN KONYA WEAPON SYSTEMS INC. Konya

"ASELSAN Konya Weapon Systems Inc." was established in order to carry out research, design, development and engineering activities for defence industry products, especially for weapons and weapon systems, to make production, testing, assembly and integration, sales and marketing, importing and exporting of these products. The company also aims to provide training, maintenance and after sales services, and carry out all kinds of commercial and industrial activities related to these issues. 51% of the new company belongs to ASELSAN, while 49% belongs to Konya Weapon Systems Inc. The company is established on November 12, 2018.

ASELSANNET ELECTRONIC AND COMMUNICATION SYSTEMS INDUSTRY, TRADE, CONSTRUCTION AND CONTRACTING LTD. CO. Ankara

The company was established in Ankara in 2004 to meet the electronic and communication device requirements of civilian institutions and organizations. Since 2009, it has also added turn-key and installation work for communication system infrastructure among its activities. ASELSAN is the company's 100% shareholder.

ROKETSAN ROCKET INDUSTRY AND TRADE INC. Ankara

Roketsan was established in Ankara in 1988 to manufacture all kinds of missiles, rockets, rocket launchers and rocket fuel and their engines, warheads and other components, and also to manufacture, market and sell all kinds of military and civilian products and their parts where a high level and sensitive technology is required. ASELSAN holds a 14.897% stake in the company.

TEKNOHAB INC.

Ankara

Teknohab Inc. was established in Ankara in 2018 in order to create investment opportunities in technology intensive areas, to provide job opportunities to researchers and skilled people, to help technology transfers and to facilitate foreign capital to enter our country that will enable high technology. 30% of the new company belongs to ASELSAN A.Ş..

ULAK INC.

Ankara The company was establised in Ankara in 2017 in order to carry out R&D and engineering activities of mobile and broadband communication systems used by commercial network operators, to manufacture, test, install and integrate such systems and spare parts, to sell and to market, to import and export, to provide training, maintenance and support services. ASELSAN owns 51% of the company's capital since 2018.

TÜYAR MICROELECTRONICS INDUSTRY AND TRADE INC.

Gebze

The company was established in Kocaeli, Gebze in 2017 in order to perform activities related to micro and nano dimensional devices that contain semiconductors and similar technological materials. ASELSAN holds a 51% stake in the company.

ASELSAN BİLKENT MICRO NANO TECHNOLOGIES INDUSTRY AND TRADE INC. Ankara

The company was established in Bilkent, Ankara in 2014 to carry out research and development activities for the applications of all types of semiconductors and similar technological materials, and to manufacture and sell micro and nano dimensional devices that contain these materials. ASELSAN owns 50% of the company's capital.

BITES INC.

Ankara

The company was established to operate mainly in the fields of augmented reality, artificial intelligence, simulation software, research, development, design and engineering in Ankara. ASELSAN owns 51% of the company's capital since 2019.

ASELSAN PRECISION OPTICS INDUSTRY AND TRADE INC. Sivas

The company was established in Sivas in 2014 in order to carry out research and development studies for optical, optical set and optical devices for all types of ultraviolet, visible and near infrared bands, and to manufacture and sell such optical elements. ASELSAN holds a 50% stake in the company.

EHSIM INC. Ankara

The company was established to operate mainly in the fields of Electronic Warfare and Tactical Command Control Systems in Ankara. ASELSAN owns 50% of the company's capital since 2019.

TR EDUCATION AND TECHNOLOGY INC. Ankara

The company operates in realizing human resource studies, giving consulting, coaching and accreditation services and operating in education, teaching, culture, art, sport, exhibition organizations and digital marketing activities at all levels. ASELSAN owns 50% of the company's capital since 2019.

ASELSAN GLOBAL INC. Ankara

The company titled "ASELSAN Global Dış Ticaret ve Pazarlama A.Ş." was established in order to carry out import, export and marketing activities of all kinds of civil and military electronic products and systems. 100% of the company belongs to ASELSAN A.Ş.

ASPİLSAN ENERGY INDUSTRY AND TRADE INC.

Kayseri

Aspilsan was originally established in the Kayseri Organized Industrial Zone on 21 May 1981 to meet the basic requirements of the Turkish Armed Forces for rechargeable nickel cadmium batteries. Today, the company produces all kinds of civil and military back-hand radios, combat tools and equipment, turnkey batteries for aircraft and helicopters. ASELSAN holds a 1% stake in the company.

LOCAL SUBSIDIARIES, AFFILIATES AND MARKETABLE SECURITIES		1.1	
LOCAL SUBSIDIARIES	SHAREA	MOUNT	ASELSAN'S SHARE (%)
ASELSANNET LTD. CO.	15,000,000	Turkish Lira	100.00
ASELSAN GLOBAL INC.	50,000	Turkish Lira	100.00
MICROELECTRONICS LTD. CO	1,700,000	Turkish Lira	85.00
TÜYAR MICROELECTRONICS INC.	8,905,875	Turkish Lira	51.00
ASELSAN KONYA WEAPON SYSTEMS INC.	44,472,000	Turkish Lira	51.00
ULAK INC.	11,730,000	Turkish Lira	51.00
BİTES INC.	127,500	Turkish Lira	51.00
ASELSAN Precision Optics Inc.	6,500,000	Turkish Lira	50.00
EHSİM INC.	125,000	Turkish Lira	50.00
TR EDUCATION AND TECHNOLOGY INC.	1,000,000	Turkish Lira	50.00
ASELSAN BILKENT MICRO NANO INC.	9,000,000	Turkish Lira	50.00
TEKNOHAB INC.	3,000,000	Turkish Lira	30.00
ROKETSAN INC.	21,906,223	Turkish Lira	14.897
ASPİLSAN ENERGY INC.	812,400	Turkish Lira	1.00

GLOBAL AFFILIATES

ASELSAN MIDDLE EAST PRIVATE SHAREHOLDING COMPANY LIMITED (AME)

Amman-Jordan

The company was established in 2012 with ASELSAN holding a 49% stake in the company and the KADDB Investment Group (KIG) holding a 51% stake. The company is engaged in the design, production, development and marketing activities of night vision and thermal imaging devices to meet the requirements of the Jordanian Armed Forces.

ASELSAN BAKU COMPANY Baku-Azerbaijan

Established in 1998 to carry out the promotion/marketing and sales activities of military and civil communication devices, the company is a 100% participation of ASELSAN.

GLOBAL SUBSIDIARIES, AFFILIATES, BRANCHES AND OFFICES

GLOBAL SUBSIDIARIES	SHARE AMOUNT	SHARE (%)	
ASELSAN Baku Company	1,601,978 Azerbaycan Manatı	100.00	
ASELSAN Malaysia Sdn. Bhd.	100 Malezya Ringiti	100.00	1
SADEC LLC. (Saudi Defence Electronics Company)	11,250,000 S. Arabistan Riyali	50.00	ſ
ASELSAN Middle East PSC. Ltd.	1,225,000 Ürdün Dinarı	49.00	
IGG ASELSAN Integrated Systems LLC.	9,800,000 BAE Dirhemi	49.00	
Kazakhstan ASELSAN Engineering LLP.	3,464,300,000 Kazakistan Tengesi	49.00	1
BARQ QSTP LLC.	480,000 Katar Riyali	48.00	

ASELSAN EXTERNAL PROFIT COMPANY-ASELSAN SOUTH AFRICA (ASA)

Pretoria-South Africa Republic The company was established in 2011 to design optical systems and to operate in the promotion and marketing of ASELSAN products in South Africa and neighboring countries.

BRANCHES

ASELSAN South Africa (ASA)

ASELSAN Macedonia

OFFICES

ASELSAN Indonesia

ASELSAN Philippines

THE ASELSAN MACEDONIA BRANCH

Skopje-Macedonia

The ASELSAN Macedonia Branch, which was established at the end of 2014, within the scope of the Macedonian Corridor-10 Highway Toll Collection System project, operates to fulfill the local obligations connected to the project.

KAZAKHSTAN ASELSAN ENGINEERING LLP-KAE Astana-Kazakhstan

The company was established in 2011 with ASELSAN holding a 49% stake in the company, the Presidency of Defence Industries (PDI) holding a 1% stake and Kazakhstan Engineering holding a 50% stake. The company is engaged in the production, development and maintenance-repair activities for electronic devices and systems to meet military and civil requirements in Kazakhstan.

BARQ-QATAR

Doha-Qatar

The company was established in 2018, in order to operate with command and control systems, thermal and night vision camera, crypto, remote-controlled warfare systems. 48% of the new company belongs to ASELSAN, while 51% belongs to BARZAN, and 1% belongs to SSTEK.

IGG ASELSAN INTEGRATED SYSTEMS LLC. Abu Dhabi-UAE

The company was established in 2011, with ASELSAN holding a 49% stake in the company and IGG holding a 51% stake. It is engaged in the production, testing and integration of ASELSAN products in the United Arab Emirates (UAE) and their sale in Gulf countries, primarily in the UAE, and to provide technical support after their sale.

> ASELSAN PHILIPPINES OFFICE

SAUDI DEFENCE **ELECTRONICS COMPANY LLC.** (SADEC)

Rivadh-Saudi Arabia SADEC LLC was established in 2016 with a 50%-50% partnership between **ASELSAN** and **TAQNIA** DST to carry out the production, development and maintenance repair, of electronic devices and systems to meet Saudi Arabia's requirements for radar, electronic warfare and electro-optical systems.

ASELSAN **INDONESIA** OFFICE

ASELSAN MALAYSIA SDN. BHD.

Kuala Lumpur-Malaysia The ASELSAN Malaysia Sdn. Bhd. Company, a wholly owned subsidiary of ASELSAN, was established to carry out operations with regard to remote control weapon systems.

OUR FACILITIES



MACUNKÖY FACILITY

The Macunköy Facility was established over a total area of 186,000 m² of which 110,000 m² is closed. ASELSAN Macunköy Facility is home to the CEO, Communications and Information Technologies Business Sector and Defence System Technologies Business Sector and Transportation, Security, Energy, Automation and Healthcare Systems Business Sector.

AKYURT FACILITY

The Akyurt Facility was established on a total area of 231,000 m² of which 54,000 m² is closed. The Microelectronics Guidance and Electro-Optic Business Sector is located in the ASELSAN Akyurt.

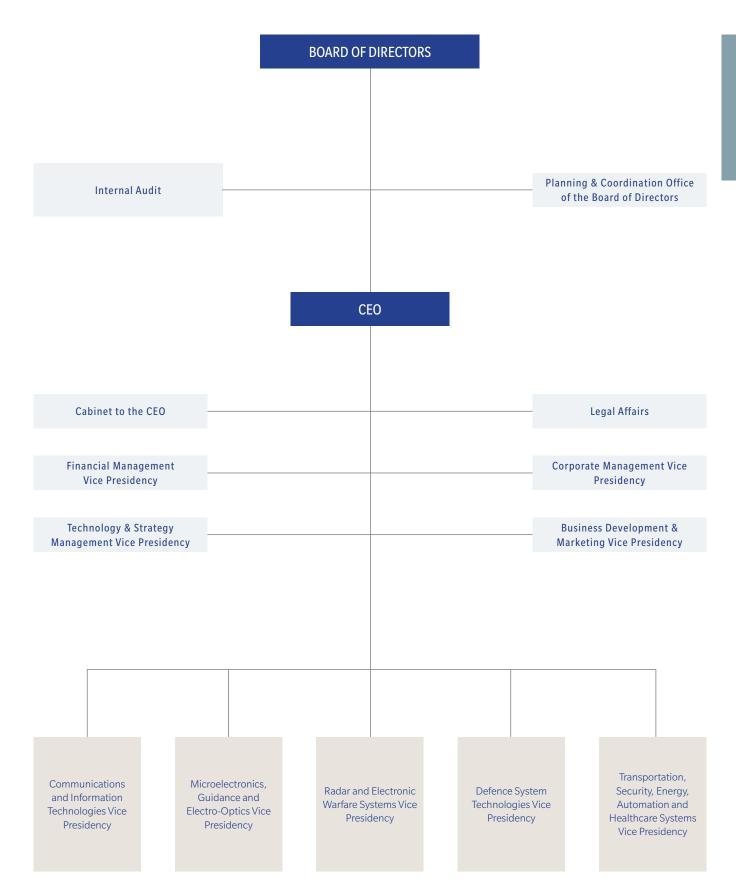




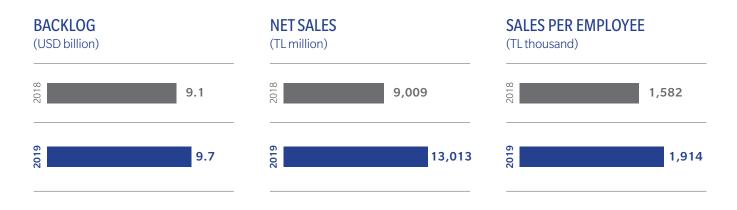
GÖLBAŞI FACILITY

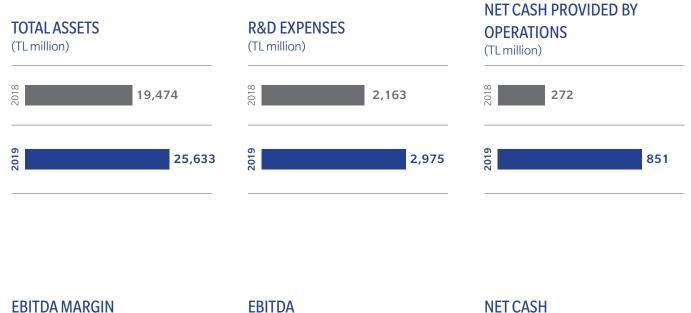
The Facility was established in Gölbaşı district of Ankara, and houses production plants for radar and electronic warfare systems for land, air, sea, space and unmanned platforms. This Facility was established on a total area of 350,000 m² of which 75,000 m² is closed.

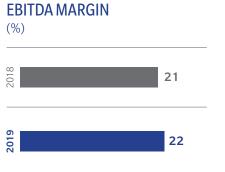
ORGANIZATIONAL STRUCTURE



MAIN FINANCIAL INDICATORS







(TL million)	
~	
1	,896
2019	2,854

NET CASH (TL million)		
2018		2,330
2019	1,281	

IN 2019

BACKLOG GROWTH (On USD basis)

6%

EQUITY/ASSETS

53%

SALES GROWTH

44%

EBITDA GROWTH

51%

SUMMARY BALANCE SHEET (TL million)	2018	2019
Total Assets	19,474	25,633
Tangible Assets	1,336	1,574
Intangible Assets	1,082	1,277
Total Equity	10,177	13,569
SUMMARY INCOME STATEMENT (TL million)	2018	2019
Net Sales	9,009	13,013
EBITDA	1,896	2,854
Net Profit for the Year	2,319	3,353
MAIN INDICATORS	2018	2019
R&D Expenses (TL million)	2,163	2,975
Sales per employee (TL thousand)	1,582	1,914
EDITDA Margin (%)	21	22
Net Cash Provided by Operations (TL million)	272	851
Cash and Cash Equivalents (TL million)	3,116	3,514

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ASELSAN HUMAN RESOURCES

NUMBER OF PERSONNEL

7,610

ASELSAN recruited over 1,500 new employees in order to fulfill its increasing responsibilities in the best way possible, with the awareness of the critical position it has in our country's defence industry. Each of our employees is selected among highly qualified people and experts, and these qualifications are being supported through trainings and development opportunities.

EDUCATIONAL BACKGROUND (%)



R&D ACTIVITIES

Total R&D Expenditure (TL million)

2,975

ASELSAN never compromised from its target of gaining national technology, which is its main strategy since its establishment. The Company constantly upgraded its R&D capabilities and developed unique products under the consciousness of difficulties that depending abroad will bring during periods when national interests are at the forefront. Besides the defence technologies, its main field of activity, ASELSAN continued to grow its R&D activities in the framework of national goals, in other areas such as energy, transportation, Healthcare systems, and next generation cellular communication.

COLLABORATION WITH UNIVERSITIES

NUMBER OF PROJECTS

132

Number of projects conducted with universities in 2019

COLLABORATION

37

ASELSAN collaborated with 31 Turkish universities and 6 global universities in 2019. VALUE OF PROJECTS (USD MILLION)

6.1

Value of projects assigned to the universities reached USD 6.1 million in 2019.

COLLABORATION WITH DOMESTIC SUPPLIERS

PAYMENT (TL BILLION)

5.4

TL 5.4 billion was paid to domestic subcontractors for tasks carried out in 2019.

NUMBER OF DOMESTIC FIRMS

3,100

The number of domestic subcontractors, 2,500 of which are SMEs.

TOTAL BACKLOG (TL billion)

5.3

SMEs and domestic sub-contractors' total backlog

TOTAL OPEN ORDER (TL BILLION)

9.5 Total open order price in domestic firms

MESSAGE FROM CHAIRMAN, PRESIDENT AND CEO

As it has every year in its history, ASELSAN once again notched up significant successes in 2019. However, in addition to these achievements, within the framework of the "Corporate Transformation" theme which we set for 2019, we have striven to create a precious, large family atmosphere by bringing the opinions and suggestions of our employees to the core of our activities, identifying areas where transformation is needed, including and partnering everyone into the transformation process and by joining forces together to achieve the best. In this process, the meaning that our ASELSAN carries for the Turkish nation became our most important common denominator. The ASELSAN brand expressed confidence for also many countries that prefer our products and systems.

ASELSAN'S growth trend in its turnover continued to gain pace in 2019. ASELSAN's turnover grew by 44% compared to the previous year to exceed TL 13 billion. Export deliveries increased by 50% compared to the previous year to reach a record high of USD 330 million.

ASELSAN'S development in profitability indicators also exceeded the growth in turnover in 2019. Earnings before interest, taxes, depreciation, and amortization (EBITDA) increased by 51% compared to the previous year to reach TL 2.9 billion with the EBITDA margin reaching 21.9%, exceeding the 19-21% range which the company had forecasted for the end of the year. The company's net profit also increased by 45% compared to last year to stand at TL 3.4 billion.

Thanks to its effective cash and credit management carried out throughout 2019, ASELSAN closed the year with a net cash position of TL 1.3 billion. The company's year-end cash on hand also broke a historic record to reach TL 3.5 billion. ASELSAN continued to add new products to its product range in 2019 and receive new orders, with USD 3 billion of orders received in 2019 and the total backlog of orders to USD 9.7 billion.

We have left behind a year marked by intensified deliveries and collections in the last months of the year, while we chalked up a number of impressive operational and financial achievements. ASELSAN demonstrated the results of its work both at home and abroad with its record turnover and profitability, while our equity, which reached TL 13.5 billion, accounted for 53% of our balance sheet at the end of 2019, as the clearest indicator of our strong financial structure. ASELSAN's exports also reached new highs in 2019. Having stepped up its activity in international markets, ASELSAN is progressing confidently in its transformation process to become a global defence player with a total of 26 subsidiaries, 11 of which are abroad, as well as branches.

We trust that the growth trend in our country's economy will gather momentum and continue in 2020. In this respect, we anticipate that ASELSAN's turnover will increase by 40-50% next year. We believe that the positive impact of both our organizational work and the efficiency practices we have implemented will be clearly reflected to profitability in 2020. We unwaveringly continue our work with the goal of meeting the needs of our security forces with national resources and becoming a reliable business partner at a global level. ASELSAN's activities are not limited to the defence industry; the Company also continues its domestication work in civilian fields such as transportation, security, energy and health. ASELSAN's most effective strength in its field of activity, which spans such a wide range of areas, is its competent human assets, which we have built up over 45 years, as well its suppliers which number more than 5,000. In 2019, we continued to support all of the subcontractors which we worked with, small and large, and shared our financial means and our R&D capacity with them. I have complete faith in our ability to notch up new achievements with the uninterrupted efforts of our stakeholders in 2020.

Our efforts to keep the "Back to Turkey Project", which we attach great importance to, and which is maintained to regain our country's qualified manpower, continued throughout the year. In this context, I am very pleased to note that last year, many of our talented people who had been working abroad returned home and joined our family. We will continue our work on the Project with the same determination and desire also in 2020.

For 2020, we have added two different themes to the route of the corporate transformation process which we launched last year, with the same motivation and determination and which we are carrying it further. In this context, we have decided to carry out our work in 2020 under the Value Oriented Leadership and Innovation Oriented Efficiency themes. Within the framework of our thinking and evolving organizational structure, all projects planned to be realized during the year, including the "Back to Turkey Project", will be implemented with the theme of Innovation Oriented Efficiency.

With its understanding of Value Oriented Leadership, with the belief that the necessity of being a big family is made possible by sharing the same values, rather than living together, and with a conviction that each ASELSAN employee is a value leader, we will focus on embracing, internalizing, and adhering to our values in all circumstances. We will focus on ensuring that our understanding of Value Oriented Leadership is the most important reference for the decisions we will take.

With its Innovation Oriented Efficiency approach, for sustainable and competitive development, we will focus on simplifying our processes, business models and the systems we establish and making them agile, lean and effective through innovative applications, rather than limiting our resources.

On behalf of myself and the Board of Directors, I would like to thank our stakeholders, managers and employees who have supported in this technology journey, and I extend my sincerest respects. BY VIRTUE OF BEING THE OLDEST AND LARGEST COMPANY IN THE TURKISH DEFENCE INDUSTRY, ASELSAN WILL CONTINUE TO WORK WITH LARGE SCALE ORDERS AND GROW IN THE COMING PERIOD, AND WILL REMAIN TURKEY'S LARGEST R&D COMPANY. ASELSAN FULFILLS ALL OF ITS OBLIGATIONS AS A PUBLIC COMPANY AND CAREFULLY ANNOUNCES ITS CONTRACTED WORK AND ALL OTHER MATERIAL EVENT DILIGENTLY WITHOUT COMPROMISING THE PRINCIPLE OF TRANSPARENCY.

PROF. DR. HALUK GÖRGÜN Chairman, President and CEO

MEMBERS OF THE BOARD OF DIRECTORS



PROF. DR. HALUK GÖRGÜN

Chairman of the Board of Directors (Managing Member) and CEO

Prof. Dr. Haluk Görgün completed his undergraduate and graduate education in Electrical Engineering Department of Yıldız Technical University and his Ph.D. in Rensselaer Polytechnic Institute in New York, USA in 2003. After completing his Ph.D. studies, he engaged in scientific studies at the University of Connecticut between 2004-2005. He became an associate professor in 2008 and became a professor in 2013 at Yıldız Technical University, where he served from 2005-2008 as an assistant professor. Between 2014 and 2018, he served as the Rector at Gebze Technical University where he made significant contributions in establishment phase. He currently is the Chairman of the Board of Trustees and Board of Directors of the Gebze Technical Education and Research Foundation. Prof. Dr. Haluk GÖRGÜN was elected as the Associate Member of Turkey Academy of Sciences in 2013 and also served as a member of the Board of Directors value. Having served in various committees and boards at TÜBİTAK and YÖK, Prof. GÖRGÜN owns many national and international articles / memorandums besides publishing editorship and projects. Additionally he holds a seat at the Board of Tirustees of Ostim technical University and Yıldız Technical University. Prof. Dr. Haluk GÖRGÜN was elected as member of the Goard of Directors of ASELSAN in the General Assembly on 15 March 2017. As per the resolution taken at the Board of Directors meeting dated 17 April 2018, Prof. GÖRGÜN was appointed as ASELSAN General Manager as of 27 April 2018, in addition to his position as Chairman of the Board of Directors.



MUSTAFA MURAT ŞEKER

Vice Chairman of the Board of Directors (Managing Member)

He graduated from Middle East Technical University, Electrical and Electronic Engineering Department in 1992 and began his business life at Undersecretariat for Defence Industries in the same year. In 2011 he was appointed as the Head of Naval Platforms Department, where major and comprehensive projects like New Type Submarine, National Corvette (MILGEM), Landing Platform Dock (LPD) and TF-2000were executed under his supervision. In 2014 he was assigned as the Head of Electronic Warfare and Radar Systems Department and during his duty, he coordinated the management of more than fifty radar and electronic warfare projects including the Early Warning Radar and Stand-off Jammer Projects. Mustafa Murat \$EKER serves as the Deputy Undersecretary since June 2015 and was elected as a Member of Board of Directors with the resolution of Board of Directors on 23 May 2013. He also acted as the Chairman of the Board between March 2015–March 2017. Mr. \$eker has been serving as the Vice Chairman of ASELSAN since 15 March 2017.



PROF. DR. MEHMETARIK

Independent Member of the Board of Directors

He completed his undergraduate education at Istanbul Technical University, Department of Mechanical Engineering (1991). He started his graduate studies at Middle East Technical University, Department of Mechanical Engineering and completed in the Department of Mechanical Engineering at Miami University (Miami, USA). During his PhD studies at the Department of Mechanical Engineering of the University of Minnesota (Minneapolis, USA) in 2011, he worked on heat transfer in electronics, three-dimensional electronic packaging and MEMS technologies. He started to work at General Electric Global Research Center in 2000. In 2011, he resigned from his position at GE and joined Özyeğin University Faculty of Mechanical Engineering. He owns over 120 granted and pending patents as well as more than 200 international scientific journal and conference articles, and presentations. Prof. Dr. Mehmet ARIK serves as Independent Member of Board of Directors since his appointment to the position at the Ordinary General Assembly held on 2 April 2018.



PROF. DR. ERCÜMEND ARVAS

Independent Member of the Board of Directors

He completed his undergraduate and postgraduate programs in Middle East Technical University Electrical Engineering Department and doctoral program at Syracuse University in New York, United States. He continued his academic career in Syracuse University as of 1988 and worked as a professor at the same university in between the years 1994-2014. He served as a consultant at various institutions like Air Force Office of Scientific Research, Digital Equipment Co., Philips Broadband, RIT Research Corp, Syracuse Research Corp, ANAREN Microwaves Inc., General Electric Co and TUBİTAK. Currently working at Medipol University Electrical Engineering Department, Prof. Dr. Ercümend ARVAS was assigned as an Independent Member of Board of Directors at the Ordinary General Assembly Meeting held on 31 March 2016.



MEHMET FATIH KACIR Member of the Board of Directors

He completed his bachelor's degree at Boğaziçi University at Industrial Engineering department with the honors degree in 2008. After graduation, he has been active in companies in simulation software and hardware, virtual reality applications, digital outdoor advertising and food sectors where he was a founder and manager. Mr. KACIR is among the founders of Turkey Team Foundation Technologies (T3 Foundation) where he is still serving as the Chairman at Board of Directors. He was the Pioneer in the establishment of Deneyap Techonology workshops in T3 Foundation, in the Technology Stars Program for gifted students, in science centers and Enterprise Centers and in the Teknofest İstanbul, which is Turkey's first Aviation Space and Technology Festival. In 2018, he was appointed as a member of the Scientific Committee of the Scientific and Technological Research Council of Turkey (TÜBİTAK). KACIR was appointed as the Deputy Minister of Industry and Technology by the President's decision published on the Official Gazette dated 31 July 2018 and numbered 30495 and is responsible from National Technology Thrust and Strategic Transformation activities at the Ministry. He was elected as a member of the Board of Directors at ASELSAN Ordinary General Assembly Meeting held on 26 April 2019.

Member of the Board of Directors

He has Bachelor's degree from Ankara University Faculty of Political Science Department of Business Administration. He continued his education with long term trainigs in different disciplines and countries; language and public administration education in England, disaster management, regional development and re-structuring education in Japan and society development education in Taiwan. He served as district governor and deputy governor in several towns and cities of Turkey. He has worked as Head of Department at the Republic of Turkey, Ministry of Interior and as a Legal Consultant and as Vice President in the Republic of Turkey, Prime Ministry Turkish Emergency Management Department. He completed National Security Academy. He has served as the President of the Republic of Turkey, Prime Ministry Security Affairs. He was elected as a Member of Parliament from Nigde for 24th term Mr. KAVAKLIOĞLU served as Security and Intelligence Committee Chairman, Member of Internal Affairs (spokesman), National Defence Commission Member (spokesman), Turkey, Japan Parliamentary Friendship Group Head, member of Central InterParliamentary Union of Turkish Group. He is still a member of the Board of Directors of Parliamentarians Union. Mr. KAVAKLIOĞLU was appointed as the Deputy Minister of the Republic of Turkey, Ministry of Defence with the decision of the Presidency dated 9 August 2018 and numbered 2018/91 and he was elected as a Member of the Board of Directors at ASELSAN Ordinary General Assembly Meeting held on 26 April 2019.

SALİH KUL

Member of The Board Of Directors

In 1984, he graduated from the Turkish Military Academy - Electrical & Electronic Engineering as a Communications Lieutenant. Following several local and international responsibilities, Mr. KUL worked as commander of Army Regional Combat System Battalion and Commander of TASMUS Battalion, upon the abolition of Army Regional Combat Battalion he organized the activities of establishment of the TASMUS Battalion between 2004 and 2006. He was the head of the Commission of Inspection of the Republic of Turkey, Ministry of National Defence during the procurement of TASMUS Systems. He worked as a Branch Manager at the General Staff Electronic Systems Command, department of senior officers and Electronic Regiment Commandership. After these duties, he was appointed as Inspector in the Inspection Department of the Republic of Turkey, Ministry of National Defence for one year. He was promoted one year earlier than due because uf his professional achievements. He retired from his post in Land Forces Command Communication Electronics Systems Department on 30 August 2015. Salih KUL has been elected as a member of the Board of Directors during the Ordinary General Assembly held on 26 April 2019.

PROF. DR. İBRAHİM ÖZKOL

Independent Member of the Board of Directors

He started his undergraduate studies in Istanbul Technical University Faculty of Aeronautics and Astronautics, Department of Aeronautical Engineering and completed his master's and doctoral studies in the same department. His academic career has been interrupted for 15 months between 1992 and 1993 for the duties given by the Undersecretariat for Defence Industries (UDI) regarding the projects "CASA-3000" and "CN-235" in Spain. He continued his career in the academic world, that he returned in 1996 and received the title "Professor" in 2005. Prof. Dr. İbrahim ÖZKOL has been serving as the Vice Rector of Istanbul Technical University, as well as teaching staff in the Department of Aeronautical Engineering at the Faculty of Aeronautics and Astronautics. Prof. Dr. İbrahim ÖZKOL has served as the Chairman of Board of Directors between March 2017 and April 2018 and was assigned as an Independent Member of the Board of Directors at the ASELSAN Ordinary General Assembly Meeting held on 2 April 2018.

DR. CELAL SAMİ TÜFEKCİ

Member of the Board of Directors

He has Bachelor's degree from Gazi University (Ankara, Turkey); graduate degree from Northeastern University (Boston, Massachusetts, USA) and doctorate degree from Rensselaer Polytechnic Institute (Troy, New York, USA) all in the field of Mechanical Engineering. Dr. TÜFEKCi has started his professional career at Pitney Bowes Inc. (Shelton, Connecticut, USA) as Project Engineer and has signed patented works on high performance motion control. After several local and international responsibilities, he started working at Undersecretariat for Defence Industries (Ankara, Turkey) as the head of the Space Department. Dr. TÜFEKCİ was later appointed as Vice Undersecretary and still continues to serve in this position. Dr. Celal Sami TÜFEKCİ was elected as a Board Member at the ASELSAN Ordinary General Assembly held on 2 April 2018.







CORPORATE GOVERNANCE

OUR SHAREHOLDERS

ASELSAN, which is one of the companies owned by the Turkish Armed Forces Foundation (TAFF), is a joint stock company with 74.20% of its shares belonging to TAFF and 25.80% of the shares listed on Borsa İstanbul (BIST).

OUR SHAREHOLDERS	SHARE AMOUNT (TL)	SHARE (%)
TAFF	845,825,624.46	74.20
Publicy Held (BİST)	294,174,375.54	25.80
Total	1,140,000,000.00	100.00

ASELSAN MAINTAINS THE PRINCIPLES OF FAIRNESS, TRANSPARENCY, RESPONSIBILITY AND ACCOUNTABILITY, WHICH DEFINE THE CORPORATE GOVERNANCE APPROACH, ATTHE CENTER OF ITS ACTIVITIES TO ACCELERATE ITS STEADY GROWTH AND TO TAKE CARE OF THE INTERESTS OF ITS STAKEHOLDERS.

CORPORATE GOVERNANCE

WE ARE EMPOWERED BY THE CORPORATE GOVERNANCE PRINCIPLES

ASELSAN maintains the principles of fairness, transparency, responsibility and accountability, which define the corporate governance approach, at the center of its activities to accelerate its steady growth and to take care of the interests of its stakeholders. Taking firm steps towards its goal of being among the leaders in the international platform, the Company makes the utmost effort to ensure full compliance with corporate governance and legal regulations.

ASELSAN, which is a pioneer in many fields in the sector in which it operates, continues its works with an integrated corporate management system and protects and enhances its ethical values in a way that will contribute to the environment and society.

ASELSAN, which has adopted the concept of corporate governance as a core principle, has been publishing a Compliance Report on the Principles of Corporate Governance every year since 2004. The rights of shareholders, Annual General Meetings, dividend distribution policy, disclosure policy, human resources and ethical principles, relations with stakeholders, corporate social responsibility, the structure, formation, activity essentials and committees of members of board, risk management and internal audit including minority rights which are under the headings of shareholders, informing the public and transparency, interest groups and members of the board within the scope of the Corporate Governance Principles regulated by Capital Markets Board are detailed within the report. The Report on the Compliance of Corporate Governance Principles and its activity reports are published on the Company's website (www.aselsan.com.tr) and in the annual reports.

ASELSAN'S CORPORATE GOVERNANCE RATING ROSE TO 9.29.

ASELSAN was awarded a score 8.77 out of 10 on 13 December 2012 by the SAHA Corporate Governance and Credit Grading (SAHA) in 2012. This mark is the second best preliminary mark among the corporate governance grading marks given in Turkey. Since then, our Company's level of compliance of corporate governance principles is evaluated and updated by an independent rating institution.

ASELSAN's Corporate Governance rating, which was 9.20 out of 10 on 12 December 2018, was increased to 9.29 out of 10 according to the report published by SAHA on 12 December 2019 as a result of the activities conducted to improve the Corporate Governance rating during 2019.

Corporate governance ratings in 2018 and 2019 and their sub topics are presented below.

2018 RATING DISTRIBUTION		2019 RATING DISTRIBUTION	
Shareholders:	83.63/100	Shareholders:	89.57/100
Public Disclosure and	98.70/100	Public Disclosure and	99.01/100
Transparency:	56.70/100	Transparency :	99.01/100
Stakeholders:	95.09/100	Stakeholders:	98.13/100
Board of Directors:	90.70/100	Board of Directors:	88.67/100
Average 9.20/10.00		Average 9.29/	10.00

ASELSAN's Corporate Governance Rating Reports published by SAHA are available on www.aselsan.com.tr.

ASELSAN has been included in Borsa İstanbul Corporate Governance Index since the Company obtained its first corporate governance rating.

ASELSAN HAS BEEN INCLUDED IN BORSA ISTANBUL CORPORATE GOVERNANCE INDEX SINCE THE COMPANY OBTAINED ITS FIRST CORPORATE GOVERNANCE RATING. THREE COMMITTEES HAVE BEEN FORMED IN ACCORDANCE WITH THE PRINCIPLES OF CORPORATE GOVERNANCE SET OUT BY THE CAPITAL MARKETS BOARD. THEY OPERATE TO ENABLE THE BOARD TO FULLY EXECUTE ITS DUTIES AND RESPONSIBILITIES IN ASELSAN.

ASELSAN's Management Structure

ASELSAN BOARD OF DIRECTORS

ASELSAN's management structure consists of only one layer, which is the Members of the Board elected by the General Assembly.

Three members of the Board, which consists of 9 members in total, are independent. All members of the Board are responsible for the economic performance of the Company. The CEO has an execution responsibility in the fields of social responsibility and the environment.

Three committees have been formed in accordance with the Principles of Corporate Governance set out by the Capital Markets Board. They operate to enable the Board to fully execute its duties and responsibilities in ASELSAN.

AUDIT COMMITTEE

The committee consists of three independent members of the board. The main responsibilities of the committee are to inform the public regarding financial issues and monitor ASELSAN's accountancy systems, independent internal and external auditing and internal control systems effectiveness and efficiency. The Internal Auditing Office Head reports directly to the Audit Committee and Members of the Board. The Audit Committee convenes at least four times a year.

CORPORATE GOVERNANCE COMMITTEE

The committee consists of three members of the board. The head of the committee is an independent member of the board. The investor relations manager also is a member of the committee in accordance with the regulations of the Capital Markets Board. The committee proposes suggestions to members of the board for the compliance with corporate governance principles and the realization of improvement activities. It also observes the activities conducted by the Investor Relations Department. The committee convenes at least four times a year.

EARLY DETECTION AND MANAGEMENT OF RISK COMMITTEE

The committee was established to determine the risks arising from the Company's strategic, operational, financial and external factors and to manage the risks identified in line with the Company's corporate risk profile. There are two members of the board in the committee. The chairman of the committee is an independent member of the Board of Directors. The Committee meets at least six times a year and reports to the Board of Directors.

The principles regarding the formation of committees and the manner in which they work, meet and report are determined by the Members of the Board. Detailed information regarding the corporate management structure of ASELSAN, Members of the Board and the committees may be obtained from the <u>www.aselsan.com.tr</u> website.

COMMITTEES AT ASELSAN

Three committees have been formed in accordance with the Capital Markets Board's Principles of Corporate Governance by ASELSAN's Members of Board.

AUDIT COMMITTEE	CORPORATE GOVERNANCE COMMITTEE ^{**}	EARLY DETECTION AND MANAGEMENT OF RISK COMMITTEE
İbrahim ÖZKOL*	Ercümend ARVAS*	Mehmet ARIK [*]
(Committee Chairman)	(Committee Chairman)	(Committee Chairman)
Ercümend ARVAS [*] (Committee Member)	Celal Sami TÜFEKÇİ (Committee Member)	Salih KUL (Committee Member)
Mehmet ARIK [*] (Committee Member)	Salih KUL (Committee Member)	
	Pınar ÇELEBİ (Committee Member)	

*Independent Board Member

**The Nomination Committee and Remuneration Committee were not formed due to the structure of the Members of Board. The duties and responsibilities of these committees are undertaken by the Corporate Governance Committee.

THE PRINCIPLES REGARDING THE FORMATION OF COMMITTEES AND THE MANNER IN WHICH THEY WORK, MEET AND REPORT ARE DETERMINED BY THE MEMBERS OF THE BOARD.

MEMBERS OF THE EXECUTIVE BOARD



PROF. DR. HALUK GÖRGÜN

Chairman of the Board of Directors (Managing Member) and CEO

Prof. Dr. Haluk Görgün completed his undergraduate and graduate education in Electrical Engineering Department of Yıldız Technical University and his Ph.D. in Rensselaer Polytechnic Institute in New York, USA in 2003. After completing his Ph.D. studies, he engaged in scientific studies at the University of Connecticut between 2004-2005. He became an associate professor in 2008 and became a professor in 2013 at Yıldız Technical University, where he served from 2005-2008 as an assistant professor. Between 2014 and 2018, he served as the Rector at Gebze Technical University where he made significant contributions in establishment phase. He currently is the Chairman of the Board of Trustees and Board of Directors of the Gebze Technical Education and Research Foundation. Prof. Dr. Haluk GÖRGÜN was elected as the Associate Member of Turkey Academy of Sciences in 2013 and also served as a member of the Board of Directors in the Informatics Valley. Having served in various committees and boards at TÜBİTAK and YÖK, Prof. GÖRGÜN owns many national and international articles / memorandums besides publishing editorship and projects. Additionally he holds a seat at the Board of Directors of ASELSAN in the General Assembly on 15 March 2017. As per the resolution taken at the Board of Directors of ASELSAN in the General Assembly on 15 March 2017. As per the resolution taken at the Board of Directors for GÖRGÜN was appointed as ASELSAN General Manager as of 27 April 2018, in addition to his position as Chairman of the Board of Directors.





MEHMET FATİH GÜÇLÜ

Vice President, Chief Financial Officer

He completed his undergraduate studies at the Faculty of Economics of Istanbul University in the field of Economics. He started his professional career in 1996 at Eksim Group and held various positions in various sectors. Mehmet Fatih GÜÇLÜ worked in Çalık Holding Group in between 2005-2009 as Reporting Manager to Affiliates and Budgeting Department, Manager of Financial Affairs and Director of Finance. He worked as CFO and Assistant General Manager in Medicalpark Hospitals Group between 2009-2011, in THY Group, as CFO and Assistant General manager at BH Airlines, a partnership of THY in Bosnia-Herzegovina between 2011-2016, and as CFO and Assistant General Manager at SunExpress Airlines in Antalya and Germany between 2012 and 2016. He acted as General Coordinator in Deima Electromechanical Products between 2016-2017. Throughout these years, he also carried out the tasks as the Chairman of the Advisory Board and Strategic Committee of Iran Airtour. Mr. GÜÇLÜ started to work as the Accounting and Financial Affairs Director at ASELSAN in 2017 and as of September 2019, he was appointed as the CFO and Vice President by the resolution of ASELSAN Board of Directors.

ASSOC. PROF. HAKAN KARATAŞ

Vice President, Corporate Management and Human Resources Management

He completed his undergraduate degree at the Istanbul University Faculty of Science and Literature, Department of English Language and Education. He was employed as a Teacher of English at the prestigious Kabataş Boy's High School between 1996-2000, and as a Lecturer in the Foreign Languages Department of Yıldız Technical University in 2000, where he also continued his career as Deputy Head of the Human Resources Development Centre in 2003. He worked as Executive Assistant to the Rector of Yıldız Technical University from 2004 to 2008, while completing his Masters Degree at the Education Sciences Faculty -Department of Education Programs and Teaching at the same time in 2007. He later earned his Doctorate from the same Department in 2011. He was employed as an Assistant Professor at the YTU Faculty of Education in 2012. In 2016, he was awarded with his Associate Professorship in the field of Educational Sciences by the Inter-university Board. Assoc. Prof. KARATAŞ has published many articles, papers and other publications, undertaking a wide range of projects. Having acted as Consultant to ASELSAN A.Ş. Board of Directors between 24 April and 2 July 2018, he was appointed as Vice President for Corporate Management since 2 July 2018.





PROF. DR. MEHMET ÇELİK

Vice President, Technology and Strategy Management

Prof. Dr. Mehmet Celik graduated from the Mechanical Engineering Department of the Middle East Technical University (METU) in 1989. He obtained his master's degree in 1991 and his doctorate degree in 1997 from the same department. He worked as a research associate between 1989 and 1997 in METU's Department of Mechanical Engineering, and between 1995 and 1996, attended Ohio State University in the United States as a visiting researcher. Assigned as Senior Lead Design Engineer and Manager of the Mechanical Analysis and Test Unit at ASELSAN's Vice Presidency of Radar and Electronic Warfare Systems between 1998 and 2010, Prof. Dr. Çelik was awarded the title of associate professor in mechanical engineering in 2003. In 2010, Prof. Dr. Çelik was appointed professor at KTO Karatay University, holding office in this institution as the Head of the Mechatronic and Mechanical Engineering Department, the Chair of the Bologna Coordination Commission, Vice Dean and Deputy Director of the Institute of Science. Between April and June 2015, he was the Vice President of TÜBİTAK, and between 2015 and 2017 he assumed various offices as a Member and Vice Chairman of the Science Board at TÜBİTAK, and as a Member of the Council of Higher Education's (CoHE's) Higher Education Quality Board. Prof. Dr. Çelik continues to serve as a faculty member in KTO Karatay University's Department of Mechanical Engineering and is a Full Member of the Turkish Academy of Sciences (TÜBA). Having served as an Advisor to ASELSAN's Board of Directors between February and April 2017, Prof. Dr. Mehmet Celik has held the office of ASELSAN's Vice President of Technology and Strategy since April 2017, in addition to his duties as Chairman of the Board of ASELSAN Academy and a Member at the Board of TR Education and Technology Inc. He was appointed as a member of Turkey's Council of Higher Education pursuant to a Presidential decree on July 15. Prof. Dr. Mehmet Çelik, Vice President of Technology and Strategy at ASELSAN, has been appointed as a member of the Science, Technology and Innovation Policies Committee of the Presidency on October 8, 2018.

OSMAN DEVRIM FIDANCI

Vice President, Business Development and Marketing

He received his BS degree from Dokuz Eylül University Electrical and Electronics Engineering Dept. in 1999, MS degree from George Washington University (GWU) Electrical and Computer Engineering Dept. in 2002 and MBA degree from İstanbul Bilgi University in 2009. He began his professional career at Nortel Networks/Netaş as the Hardware/VLSI Design Engineer in 1999 and then conducted research studies and made publications in the fields of high performance computing and cyrptanalysis while working as the teaching and research assistant at GWU High Performance Computing Laboratory (HPCL) between 2001-2003. He acted as the Program Manager at Vestel Defence for the G-class Frigate Modernization Program (GENESIS) between 2005-2008, the Business Development and Strategic Planning Manager role at RMK Marine. As the Public and Defence Solutions Director of Türk Telekom/Argela, he took the leadership role at the business development and initiation phases of National Base-station Development Program (ULAK) between 2012-2014. Mr. FIDANCI worked as the Business Development Director at Honeywell between 2014-2017. Following his role at BMC as the International Business Development Director, Mr. FIDANCI joined ASELSAN in July 2018 and as per the Board Resolution dated 29 January 2019, he is appointed as the Vice President of Business Development and Marketing.

BAYRAM GENÇCAN

Vice President, Communication and Information Technologies

In 1985 he graduated from the Department of Electronics Engineering of the Military Academy as a Communication Lieutenant. In 2008, Bayram GENÇCAN, who was retired as a Senior Colonel from the Armed Forces, started to provide consultancy services on communication systems in the Republic of Turkey, Ministry of Health since 2009. In particular, he worked on 112 radio communication infrastructure improvement and integration project with JEMUS. Bayram GENÇCAN, who has completed two master's degree programs on Public Administration and Organization Management, also graduated from Ankara University Faculty of Law. Bayram GENÇCAN was elected as a Member of Board of Directors at the ASELSAN Ordinary General Assembly Meeting held on 15 March 2017 and continued to serve until 5 April 2019. Bayram GENÇCAN was appointed as ASELSAN Vice President of Communication and Information Technologies as of 5 February 2019.



PROF. DR. SEZAİ ELAGÖZ

Vice President, Microelectronics, Guidance and Electro-Optics

He completed his undergraduate studies at the Department of Physics of Ankara University Faculty of Science and his M.Sc. and Ph.D. at the Racham Graduate School of Condensed Matter Physics at the University of Michigan with the scholarship the Republic of Turkey, Ministry of National Education, Youth and Sports in 1993. He served as assistant professor, associate professor and professor in Faculty of Sciences and continued his career at the Nanotechnology Engineering Department of Cumhuriyet University Engineering Faculty, which he was the founder of between 1993-2011. He has served as a consultant in ERMAKSAN between 2013-2018, where he has been responsible of the establishment and commissioning of the optoelectronic infrastructure, and for the national production of high power laser diodes. Professor Dr. Sezai ELAGÖZ was appointed as the Microelectronics, Guidance and Electro-Optics (MGEO) Business Sector President and the Vice President, board meeting held on 13 of June 2018.

OĞUZ ŞENER

Vice President, Radar&Electronic Warfare Systems

He graduated from Middle East Technical University Electrical and Electronics Engineering Department in 1987. He received his master's degree also from Middle East Technical University Electrical and Electronics Engineering Department in 1990. Oğuz ŞENER, who began his professional life in 1986 as a co-op Engineer in ASELSAN, afterwards worked as an Engineer, a Chief and a Technical Leader. He served as the Electronic Hardware Manager in Microwave Systems Technologies Division in 2000-2007, and Radar Electronic Warfare Systems Design Technologies Director in 2008-2014. Additionally, he served as the President of ASELSAN Technology Supreme Board in 2013- 2014. He served as referee for TÜBİTAK Projects and for investments to universities in State Planning Organization; and served as expert for workshops organized by several ministries and TÜBİTAK. He was assigned as the Vice President responsible of Radar & Electronic Warfare Systems in the Board of Directors meeting dated 24 July 2014, to be effective as of 1 September 2014.

MUSTAFA KAVAL

Vice President, Defence Systems Technologies

He graduated from Middle East Technical University Mechanical Engineering Department in 1986. He received his master's degree also from Middle East Technical University Mechanical Engineering Department in 1989. Mustafa KAVAL, who began his professional career in ASELSAN as an Engineer in 1986, served as Technical Leader between 1997-2000 and as Project Leader between 2000-2004. He was assigned as the Manager of Air Defence Gun Systems Program Department in Defence Systems Technologies Division in 2004 and has carried out that duty until 2012. Afterwards he served as the Director of Air Defence Systems Program Directorate in Defence Systems Technologies Division in 2012-2014. He was assigned as the Vice President responsible of Defence Systems Technologies in the Board of Directors meeting dated 24 July 2014, to be effective as of 1 September 2014.



DR. İBRAHİM BEKAR

Vice President, Transportation, Security, Energy, Automation and Healthcare Systems

After receiving a B.S. degree in Mechanical Engineering from Istanbul Technical University in 1995, he completed his M.S. and Ph.D. studies at The University of Akron, in 1999 and 2003 respectively. Dr. BEKAR started his professional career in 2003 at Intel Corporation as a Technology Development Engineer after a short postdoctoral study. During his tenure at Intel, Dr. BEKAR assumed several positions such as Technology Development Manager, Process Development Manager, Area Manager, and Technologist and Staff Engineer. He was appointed as the Deputy Director in 2014 for TÜBİTAK Marmara Research Center (MRC) after returning to Turkey as Asistant Manager at TÜBİTAK Material Institute. He has also been serving as Turkish delegate to NMBP (Nanotechnologies, Advanced Materials, Biotechnology and Advanced Manufacturing and Processing) program committee Horizon 2020. It has been resolved in the Board of Directors meeting dated 30 January 2018 that Ibrahim BEKAR shall be the Transportation, Security, Energy, Automation and Healthcare Systems CEO and the Vice President of ASELSAN.





HIGHLIGHTS OF 2019

DELIVERY OF TASMUS II

THE IP BASED NEW GENERATION TACTICAL FIELD COMMUNICATION SYSTEM (TASMUS) II WAS DESIGNED AND PRODUCED TO MEET THE COMMUNICATION NEEDS OF OUR ARMY IN THE TACTICAL FIELD. THE SYSTEM LEFT ASELSAN FOR FIELD TESTS AHEAD OF THE FIRST DELIVERY OF THE PROTOTYPE SYSTEM, WHICH CONSISTS OF 10 VEHICLES AND SIX PORTABLE SUBSYSTEMS, TO THE LAND FORCES COMMAND, THE ELECTRONIC AND INFORMATION SYSTEMS (MEBS) SCHOOL AND TRAINING CENTER COMMAND.



Today, tactical battlefields need a comprehensive, numerical data transfer system which is suitable for use on land. Sensors, weapons and command centers on the battlefield require high-speed data transfer to perform effectively and harmoniously. In addition, new military doctrines based on flexibility and mobility require tactical units to be able to transfer data on the move. On the battlefield, the rapid and reliable transfer of information is needed for the simultaneous use of basic command control functions such as air defence, fire support, maneuver control, intelligence, electronic warfare and logistical support. TASMUS provides the necessary communication support for all these applications.

THE TECHNO ADVENTURE BEGINS

The Techno Adventure platform, aimed at children between the ages of 6 and 12 in Turkey, was introduced by ASELSAN to help children become productive in technology. The project, under the patronage of the Defence Industry Presidency, was presented at the launching ceremony held at the Bilkent Hotel and Congress Center. An animated film, featuring the Techno Adventure characters of Asel, Eda and Mete, was also shown at the launch ceremony. Children formed long queues to have their pictures taken with the Techno Adventure mascot, Asel.

The Techno Adventure Project was realized within the scope of the ASIL Platform. The Project was implemented for our little friends within the 6-12 age range, who were born and are growing up in a rapidly developing technological age, to more easily keep pace with the age which they were born into. In order to instill our domestic and national values in children at a young age in the field of the Defence Industry and to help them grow up as individuals who are technologically aware, the project is planned to continue in the long term, both over the internet and through live activities. WITH THE TECHNO ADVENTURE PROJECT, ASELSAN WILL ORGANIZE ACTIVITIES THAT ARE AIMED AT CHILDREN AGED BETWEEN THE AGES OF 6 AND 12, SO THEY WILL BE PRODUCTIVE IN TECHNOLOGY.



ASELSAN ALSO VALUES THE ENVIRONMENT

P	CDP TÜRKİYE 2018 İKLİM LİDERİ CDP TURKEY 2018 CLIMATE LEADER	₿Ga
CDP	Aselsan Elektonik Sanayi ve Ticaret A.Ş.	Del
P HCDP		
P		

ASELSAN WAS AWARDED AT THE WORLD'S MOST PRESTIGIOUS ENVIRONMENTAL PROJECT, THE CDP (CARBON DISCLOSURE PROJECT). ASELSAN'S DEPUTY GENERAL MANAGER, ASSOC. PROF. HAKAN KARATAŞ, PARTICIPATED IN THE LEADERS PANEL WITH THE TOPIC OF "THE SECRET OF SUCCESS: THE ROLE OF BOARDS OF DIRECTORS AND MANAGERS IN DETERMINING CLIMATE CHANGE STRATEGIES" AS A SPEAKER AT THE CDP CLIMATE CONFERENCE HELD ON THE SAME DAY.

ASELSAN increased its score from "B" to "A-" in 2018, with a performance which exceeded the global and national average. With this score, ASELSAN was among the top two highest ranking companies in our country. In the world, its score ranked alongside major defence industry leaders.

Considered one of the most prestigious environmental projects in the world, the CDP provides companies with an opportunity to carry out performance improvements by enabling their climate strategies to be disclosed to the public. Companies listed on the BIST-100 and other companies from Turkey voluntarily participate in the CDP report, which is important for brand value, investor relations studies and sustainability all over the world.

FIRST DELIVERY OF KORKUT SERIAL PRODUCTION PROJECT REALIZED



ITS FIRST DELIVERY ACCEPTANCE PROCEDURES STARTING ON 26 FEBRUARY 2019, THE KORKUT SERIAL PRODUCTION PROJECT WAS SUCCESSFULLY COMPLETED ON 25 MARCH 2019 WITH THE ACCEPTANCE OF THREE WEAPON SYSTEMS VEHICLES AND ONE COMMAND CONTROL VEHICLE. The effectiveness demonstration test for the air-to-surface missiles, which is the most challenging stages of the acceptance activities, was completed with the successful downing of the target aircraft with a speed of approximately 200 m/sec. During the tests, KORKUT won wide acclaim from the acceptance committee with its high performance. After the acceptance tests were successfully completed, the Korkut Systems were delivered to the Air Defence School and Training Center Command on 29 March, 2019.

ASELSAN SYSTEMS TO SERVE IN THE ALTAY TANK

THE ALTAY SERIAL PRODUCTION PROJECT SUBSYSTEMS CONTRACT WAS SIGNED BETWEEN BMC AND ASELSAN TO PROVIDE THE SYSTEMS TO BE INSTALLED IN THE ALTAY TANKS BY ASELSAN AT THE IDEF 2019 DEFENCE INDUSTRY FAIR. The President of The Defence Industry, Prof. Dr. İsmail Demir, the Chairman of the Board of Directors of BMC, Ethem Sancak, the Chairman, President and CEO of ASELSAN, Prof. Dr. Haluk Görgün, and the executives of other main subcontractor companies attended the ceremony held at the BMC Stand. With the gains acquired in the ALTAY Project, ASELSAN has become the only company in the world to develop all of the task equipment and software for main combat tanks domestically and nationally with its own resources and integrate them into the tanks.

ASELSAN, which successfully took part in the development and modernization programs of different tank platforms in recent years, developed all of the critical task equipment and software of the Turkish Main Combat Tank, the ALTAY, with its considerable experience in the field of tanks. The integration and verification of the ASELSAN systems on the ALTAY Tank prototypes were carried out within the scope of the ALTAY Project Period-I. In the process, the ASELSAN systems were successfully verified with more than 2000 shots on the ALTAY Tank prototypes and more than 10,000 km of land driving tests in all terrain conditions, to simulate the conditions a tank would be exposed to over its lifespan.





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HIGHLIGHTS OF 2019

AIMING FOR THE TOP 50

ASELSAN RANKED IN 52ND PLACE ON THE LIST OF THE WORLD'S 100 TOP DEFENCE INDUSTRY COMPANIES (DEFENSE NEWS TOP 100), GAINING THREE PLACES. DefenseNexts Top 100 2019 55. 57. 55. aselsan

ASELSAN, which is an organization of the Turkish Armed Forces Foundation, continued its rise on the list published by the Defence News magazine, a US-based military publishing company. ASELSAN, which entered the list of the world's top 100 defence industry companies (Defense News Top 100) in 2006, was ranked in 55th place last year. ASELSAN increased its success with the new projects it undertook this year, and it ranked at the 52nd rank, rising three places, with a turnover approaching USD 1.8 billion.

SECOND PARTY DELIVERY OF ADOP-2000 COMPLETED

ACCEPTANCE ACTIVITIES WHICH BEGAN IN THE 54TH MECHANIZED INFANTRY BRIGADE ÇORLU COMMAND CONTINUED AT THE MACUNKÖY FACILITIES AND THE KAYSERİ 2ND MAIN MAINTENANCE FACTORY DIRECTORATE. THE ACCEPTANCE ACTIVITIES WERE COMPLETED WITH THE DELIVERIES ON 7 AUGUST 2019.

The Firtina Howitzers Task Computers, portable system sets, Application Classroom, the armored personnel carriers, which are equipped with the systems that enable fire support elements to perform command control and surveillance functions on the battlefield, and the systems consisting of tactical wheeled platforms were accepted.



ASELSAN IS A STAR ATTRACTION AT THE TECHNOFEST.

ASELSAN TOOK PART IN THE TECHNOFEST 2019 FAIR AND EXHIBITED A SERIES OF THE LATEST TECHNOLOGY PRODUCTS, IN PARTICULAR UNMANNED SYSTEMS.



During the festival, ASELSAN promoted the General Purpose Helicopter Cockpit, bomb destruction robot Ertuğrul and Kaplan, the Kaplan autonomous Unmanned Ground Vehicle, the UKAP Remote Control Shooting Platform, the anti-UAV, multirotor unmanned system Serçe 2, the Mini Unmanned Aerial System Nano-UAV, the Karagöz Balloon Surveillance System and the Akustika autonomous underwater vehicle. Guests visiting the ASELSAN stand also had the opportunity to examine the products produced with domestic and national technology.

ASELSAN HIGH SCHOOL STUDENTS



At the beginning of 2019, the first vocational and technical Anatolian high school was established in the field of defence within the scope of the protocol signed between the Republic of Turkey, Ministry of National Education and ASELSAN to train qualified personnel in the defence industry. The ASELSAN Vocational and Technical Anatolian High School took students from the uppermost 0.46 percentile in the field of electrical and electronic technology. This was the first time a vocational and technical Anatolian high school took students from the top 1% segment.

The "Defence Electronic Systems" and the "Defence Mechanical Systems" branch programs were opened at the ASELSAN Vocational and Technical Anatolian High School. The teaching programs of these branches were developed with a work team created by ASELSAN and MTEGM the Republic of Turkey, Ministry of National Education, the General Directorate of Vocational and Technical Education) to meet the needs of the defence industry.

STUDENTS WHO ATTENDING THE ASELSAN VOCATIONAL AND TECHNICAL ANATOLIAN HIGH SCHOOL JOINED THEIR FAMILIES, EXECUTIVES FROM THE REPUBLIC OF TURKEY, MINISTRY OF NATIONAL EDUCATION AND ASELSAN, AS WELL AS ASELSAN EMPLOYEES, WHO UNDERTOOK MENTORING OF THE STUDENTS IN THE ORIENTATION PROGRAM WHICH WAS HELD.



HIGHLIGHTS OF 2019

ASELSAN HAS MAINTAINED ITS PLACE ON THE BORSA İSTANBUL SUSTAINABILITY INDEX.



ASELSAN has maintained its place on the Borsa İstanbul Sustainability Index since 2014.

ASELSAN has consistently achieved significant success with its inclusion in the Sustainability Index, now for a sixth time. The Sustainability Index was set up by Borsa İstanbul, so companies which adopt the principles of sustainability and corporate social responsibility, and which make a difference in these fields, can be distinguished by investors.

Within the scope of the index, an independent Londonbased survey organization cooperating with Borsa İstanbul examines and evaluates the sustainable activities carried out by companies in key areas such as corporate governance, environmental awareness, social responsibility, ethical principles, human rights, employment practices, occupational health and safety and the supply chain. In this manner, a tool is created which will facilitate investment in those companies which are successful in the field of sustainability, an area which has become increasingly important and has even become the most important investment criterion for some institutional investors, and various indicators are offered so that companies can improve themselves in this regard.

ASELSAN, which was one of the 15 companies in Turkey which qualified to be included in the index in 2014 when the index was first launched, has maintained its place on the index every year since then. This year (2019), it took its place among the 56 companies included in the index as a result of its work that it carried out and its continued improvement in the areas which constituted a benchmark for the index throughout 2018.

ASELSAN IS 44 YEARS OLD



ASELSAN, the largest company in the Turkish Defence Industry, visited the Anıtkabir on the 44th anniversary of its foundation.

The Chairman, President and CEO, Prof. Dr. Haluk Görgün, together with executives and employee representatives, stood in silence to pay their respects at the Anıtkabir, where they arrived by walking along the Aslanlı road. Prof. Dr. Haluk Görgün laid a wreath at the mausoleum and signed the Anıtkabir private book after paying their respects.

PROF. DR. GÖRGÜN WROTE THE FOLLOWING IN THE BOOK:

"The Great Leader Atatürk, we are proudly in your presence on this day, where we celebrate the 44th anniversary of the foundation of ASELSAN.

Since the day it of its foundation, ASELSAN has continued to advance its place in the global market with its depth in technology, its strength in research and development activities and by developing its design and production competencies. It is taking firm steps forward in its efforts with the desire for our country to reach its 2023 goals.

In order to become the ASELSAN of our Great Turkish Nation and our army, we will continue to maintain our leadership in developing domestic and national solutions by developing our technologies in the fields where we operate, by increasing our competitive clout with innovative, environmentally sensitive, energy-efficient systems and products.

In this journey of technology which we take, your adage, "The truest mentor in life is science" has been our guiding principle.

May your soul be blessed.

ZERO WASTE PROJECT LAUNCHED

AS AN ENVIRONMENTALLY SENSITIVE TECHNOLOGY COMPANY, THE ZERO WASTE PROJECT, AIMED AT PREVENTING WASTE, USING RESOURCES MORE EFFICIENTLY, MINIMIZING WASTE CREATION AND ENSURING RECOVERY, WAS IMPLEMENTED ON 21 OCTOBER 2019 WITH THE APPLICATION OF THE "WE ARE DECOMPOSING OUR FOOD WASTE" WITH THE SUPPORT OF OUR ASIL SOCIAL RESPONSIBILITY TEAM. The project was expanded with the applications such as waste separation points, glass/porcelain cup usage and collection of pharmaceutical waste, and it was rolled out to cover all ASELSAN campuses.

Implemented under the slogan of "Zero Waste, We Have Added Value to the Future", the Zero Waste Project launch ceremony, which detailed the applications of the project, was held at the Macunköy campus with the participation of Mrs. Emine Erdoğan and the President of The Defence Industry, Prof. Dr. İsmail Demir, and the senior management of ASELSAN. At the ceremony, a painting prepared by using waste materials by students of ASELSAN Nursery was presented to Mrs. Emine Erdoğan.



LEARNING AND ORGANIZATIONAL DEVELOPMENT

The Directorate of Learning and Organizational Development aims to ensure the development of individuals and teams in an integrated manner organizationally with the activities it implemented. For this purpose, activities are carried out primarily to ensure individual and organizational learning and development, increase the level of competency of employees and the organization, and generate information sharing environments aimed at creating organizational memory. The Directorate of Learning and Organizational Development has provided ASELSAN employees with continuous competency by supporting ASELSAN's corporate goals and strategies, thus placing the provision of organizational development as a focal point. In this context, the Company systematically carries out learning and development activities as measured and improved activities aligned with ASELSAN's strategies and business plans.

THE ASELSAN COMPETENCY MODEL

Competency definition work continues as part of the planning of the learning and development activities, as based on competency and in alignment with ASELSAN's strategies and business plans. For this purpose, first of all teams were established with our specialized and experienced employees in order to determine technical competencies. In the first phase, a total of 14 main competency headings, 46 competency elements and 281 behavioral indicators were defined at four different levels for these competencies for the product life cycle and system engineering, along with 71 knowledge area and 272 skills.

In addition to competency modeling efforts, work was also initiated to support our employees in areas where they are deemed to have room for improvement by matching behavioral competencies with the training programs which are included in our training plan. A total of 36 competencies identified in the behavioral competency model were matched with 29 training programs by taking into account learning purposes. The results of the 2019 behavioral competency assessment will be used as an input for training plans by using these matches. By determining technical and behavioral competencies and the training which needs to be taken in order to achieve these competencies, it Company aims to provide proactive training planning for the training for employees as required in their duties.

LEARNING AND DEVELOPMENTAL ACTIVITIES

The performance of the design and development activities carried out at ASELSAN is closely related to the qualified and sustainable intellectual capital. Investment undertaken in the learning and development of our employees will contribute to increasing the intellectual capital of our company, as well as increasing efficiency, innovation and employee satisfaction at ASELSAN. It will create a highly motivated employee profile which is committed to the company and who have adopted the ASELSAN culture. In this context, 18,317 man hours of training were given by internal trainers from the Directorate of Learning and Organizational Development in 2018. In addition, 24,905 man hours of training were provided under 57 different headings for ASELSAN employees by the Directorate of Learning and Organizational Development, and 47,907 man hours of compulsory occupational health and safety training was provided. Of the training provided under 57 different headings, 7,132 man hours consisted of Technical Training, 2,937 man hours were Management Training, 7,322 man hours were Specialization Training, 7,410 man hours were Personal Development Training and 104 man hours were General Information Training. Initiatives for the establishment of necessary information infrastructures were also initiated in 2018 for the purpose of achieving a more widespread use of methods which will support in-class training such as distance learning.

THE DIRECTORATE OF LEARNING AND ORGANIZATIONAL DEVELOPMENT HAS ENSURED ASELSAN EMPLOYEES POSSESS CONTINUOUS COMPETENCE BY SUPPORTING ASELSAN'S CORPORATE GOALS AND STRATEGIES, PLACING THE SPOTLIGHT ON ORGANIZATIONAL DEVELOPMENT.



INFORMATION SHARING AND WORKSHOPS

In order to preserve corporate memory and to spread the information obtained and the lessons learned, organizing activities for information sharing and workshops continued throughout 2018. In March, the Joint Mind Workshop was held with the participation of employees from the Information Management Directorate and specialists involved in the relevant processes. New processes defined with the Information Technologies Demand Management Monitoring, which came into effect in 2017, were evaluated. The third Materials Workshops were held in May with the participation of researchers from universities and relevant personnel from ASELSAN.

With the slogan of "You Are Our Future", the first of the Employee's Voice Workshops was held in October with the participation of approximately 1500 engineers in order to create an environment in which our employees could share their ideas and opinions with our company's top management. The opinions and suggestions recorded in the workshop were combined with the post-event survey and made into a report and shared with all our employees.

Information days, organized with the aim of sharing the work of those who received ASELSAN scholarships with our employees continued.

LONG-TERM MAN POWER TRAINING PROGRAM

Scholarship and internship programs, serving the goal of raising long-term manpower, are carried out under the coordination of the Directorate of Learning and Organizational Development. In this context, 1,000 university students were provided with internships and 299 high school, junior technical college and technology faculty students were given vocational training opportunities. In 2018, a total of 13 people, including three ASELSAN staff, continued to receive scholarship support for doctorate and post-doctorate research in Turkey and abroad.

A four-week training program was implemented in July for 15 high school students with special abilities (from the Istanbul Research Development Education and Application Center High School), who had been selected by the Republic of Turkey, Ministry of National Education to provide specially talented students of secondary education level with an understanding of developments in the defence sector as well as an insight into engineering and other fields, while encouraging motivation to work in such fields, and potentially to increase the contribution they would able to provide to our country in the future.

VOCATIONAL AND TECHNICAL ANATOLIAN HIGH SCHOOL

The vocational training cooperation protocol was signed between the Republic of Turkey, Ministry of National Education, the General Directorate of Vocational and Technical Education (MTEGM) and ASELSAN at a ceremony held at the ASELSAN Macunköy facilities. The ceremony was attended by the Minister of National Education Prof. Dr. Ziya Selçuk, The President of The Defence Industry Prof. Dr. İsmail Demir, the Chairman, President and CEO of ASELSAN Prof. Dr. Haluk Görgün, and many distinguished guests. The protocol set out the vocational and technical training activities to be carried out in cooperation with the MTEGM and ASELSAN to train qualified manpower for the defence industry. Within the scope of the protocol, Turkey's first Vocational and Technical Anatolian High School for defence industry systems at the secondary education level will be established, bearing the name of ASELSAN.



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HUMAN RESOURCES MANAGEMENT AT ASELSAN



WE ARE AWARE THAT OUR MOST IMPORTANT SOURCE OF VALUE WHICH WILL CARRY ASELSAN'S COMPETITIVE CLOUT INTO THE FUTURE IS OUR COMPETENT HUMAN RESOURCES. WITH THIS AWARENESS, 2019 WAS A YEAR IN WHICH WE DETERMINED THE ROADMAP FOR THE HUMAN RESOURCES PRACTICES THAT WILL GUIDE THE FUTURE.

ASELSAN IS STRENGTHENED BY YOUNG TALENT

In 2019, when we celebrated ASELSAN's 44th anniversary of foundation, we aimed to meet the need for qualified employees from all over the world with HR policies which have updated in line with the value we attach to people and evolving needs. In this respect, we have brought in more than 1,500 talented individuals into the ASELSAN family.

We have not limited our talent acquisition strategy to domestic resources, and have also made it a mission to restore our country's trained manpower to our country. The importance we attach to the "Back to Turkey" project is an indication of this mission. We sincerely believe in the contribution which the fifteen valuable talented individuals joining our family having returned to our country within the scope of the project, will provide to ASELSAN, the leading organization of our country's defence industry, with their international experience and knowledge.

ASELSAN ranked as the 1st choice to work in for Y and Z generation representatives in the Engineering / IT in the Universum Ideal Employers Survey also in 2019 as in the past 6 years. In addition to the category of Engineering / IT, ASELSAN consolidated its place in the top 10 in this field in 2019, having climbed 5 places among students in the field of Economic Administrative Sciences and rising one place for young professionals.

In 2019, we moved our domestic employer brand activities - which we had carried out in Turkey – abroad. Within the scope of the international fairs organized under the Presidency of the Turkish Republic Presidential Human Resources Office, we met young people looking for a career in the field of defence industry, in the UK, Germany, Uzbekistan and South Africa.

In addition, in 2019, we designed the A Talent program for young talented individual to develop themselves in terms of professional qualification and competencies before starting working life, to step into the working life by getting to know the ASELSAN culture, and to establish one-to-one contact with young talented students and lead their career developments through mentoring efforts. In addition to the Engineering Candidates, students from administrative branches began to work at ASELSAN as Candidate Specialists under the program.

WE EVALUATE EVERY OPPORTUNITY TO MEET ASELSAN PERSONNEL

We make sure each member of our family has the opportunity to come together from the first moment they start their career at ASELSAN and we strengthen the bond between the members of ASELSAN's personnel.

Within the scope of our program of the "Our Future is With You" program, which we implemented in 2019, we bring our new recruits together with our senior management every month. The newest ASELSAN personnel get to know our culture through a daily program enriched by team games, where they acquire basic information about the company through informative presentations and have the opportunity to meet and mingle with other colleagues who are have also newly joined ASELSAN.





WE HAVE TAKEN OUR FIRST STEP WITH THE PROJECT OF CULTURAL TRANSFORMATION AND VALUES IN THE PROCESS WE HAVE EMBARKED ON WITH THE VISION OF BRINGING HUMAN RESOURCES PRACTICES TO ASELSAN WHICH MEET INTERNATIONAL STANDARDS. WE BELIEVE OUR VALUES WHICH SHAPE THE ASELSAN CULTURE WILL ENLIGHTEN US ON THE PATH WE TAKE FORWARD WITH THE GOAL OF BEING THE BEST. We came together with our new employees as well as our existing employees in 2019. Every Monday and Friday, we listened to the opinions and suggestions of our employees at breakfast organizations, which our managers also attended, which proved a pleasant interlude to chat and share information with them. We will continue this event, which has attracted positive feedback, in 2020.

During 2019, we sent thank you letters to the families of our employees who graduated from the university and who had joined the ASELSAN Family, having progressed from being candidate engineers to specialist engineers. We thanked the families for bringing a new star to ASELSAN, for sharing those who are most valuable to them with us every day, for being the secret heroes in their children's success and for including us in their achievements.

We started the mentoring program, which we launched with the Compass brand, so employees just joining our family could more quickly adapt to the ASELSAN culture and their duties.

We continued the Employee's Voice Workshops in 2019, which we had started in 2018 in order to create an environment in which our employees would be able to share their ideas and opinions with our company's top management until we had met all of our employees.

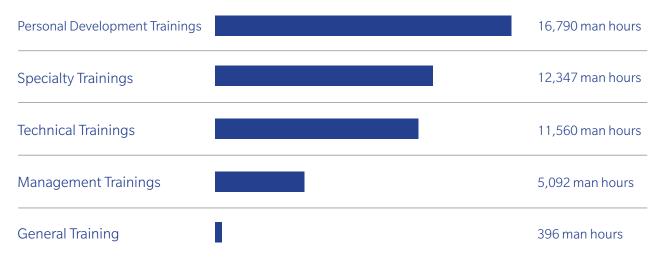
WE CARE ABOUT THE DEVELOPMENT OF OUR EMPLOYEES

We believe that our investment in the learning and development of our employees will contribute to increasing the intellectual capital of our company, as well as increasing efficiency, innovation and employee satisfaction at ASELSAN. It will create a highly



HUMAN RESOURCES MANAGEMENT AT ASELSAN





motivated employee profile which is committed to the company and who have adopted the culture of ASELSAN. With this belief, also in 2019, we took steps which will ensure access to learning opportunities at any time, by continuing to invest in the development of our family.

Designed to facilitate management, documentation, monitoring, measurement and reporting of learning and development activities holistically through a single system, to provide the training needed by ASELSAN's employees to be offered with distance learning support and for employees to easily access learning and development information, we opened the new Learning and Development Platform, "a BIL-GE", for use in 2019. We launched the project with the participation of approximately 250 people, including our top management.

WE ARE RAISING THE MANPOWER ASELSAN NEEDS IN THE LONG TERM

Within the scope of scholarship and internship programs which serve the goal of training long-term manpower, we provided internship opportunities to 920 university students and vocational training opportunities to 280 high school, junior technical college and technology faculty students. In 2019, we continued to support 9 researchers with scholarships for doctorate and post-doctorate research in Turkey.

We implemented a 3-week summer training program in August and September for 20 special talented students who were selected by the Republic of Turkey, Ministry of National Education in order to improve the quality of education, to ensure that applications in the defence sector are seen by the specially talented students at the secondary education level and that the students gain insight and motivation about work in engineering and other fields, and increase the contributions that they can make to our country in the future.









THE ASELSAN VOCATIONAL AND TECHNICAL ANATOLIAN HIGH SCHOOL WAS OPENED.

In order to educate qualified manpower for the defence industry, we opened the first Vocational and Technical Anatolian High School for defence industry systems in the secondary education field of Turkey to bear the name of ASELSAN within the scope of the vocational training cooperation protocol signed between the Republic of Turkey, Ministry of National Education, the General Directorate of Vocational and Technical Education (MTEGM) and ASELSAN.

Within the scope of curriculum work to be followed at the ASELSAN Vocational and Technical Anatolian High School, we devised four new courses to be taught in the 11th and 12th grades for the Defence Electronic Systems branch, and 7 new courses to be taught in the 11th and 12th grades for the Defence Mechanical Systems branch.

As a result of our work which we have carried out meticulously, The ASELSAN Vocational and Technical Anatolian High School accepted the students from the uppermost 0.46 percentile in the field of electrical and electronic technology. A total of 120 students enrolled in our school, having chosen the ASELSAN Vocational and Technical Anatolian High School and achieved success in the High School Entrance Exam, thus qualifying to enroll in Turkey's long-established Anatolian high schools. The youngest and most excited members of the ASELSAN family began their education on 16 September 2019.

WE ARE STRENGTHENING ASELSAN'S EMPLOYEE EXPERIENCE.

With our ASELSAN Human Resources Roadmap, we aim to create a management system which will be closer to the employee in 2020. In line with this goal, we established the HR Business Partnership structure in 2019 and will implement it in 2020. We will re-define performance with a focus on continuous improvement and feedback. By reviewing our talent and career management system, we will support our high-potential employees, who will carry ASELSAN to the future, through development centers.

TECHNOLOGY AND STRATEGIC MANAGEMENT

THE ASELSAN RESEARCH CENTER

INTELLECTUAL RIGHTS SUPREME BOARD

TECHNOLOGY ROADMAP

STRATEGIC MANAGEMENT



THE ASELSAN ACADEMY

NATIONAL AND LOCAL PRODUCT DEVELOPMENT BOARD

R&D PROJECTS WITH INTERNAL RESOURCES

CENTRAL PROJECT MANAGEMENT OFFICE (PMO)

With its high capability and agility in transforming R&D into innovation-based products, ASELSAN is the largest R&D base in our country with to its technological depth and density. Since its foundation in 1975, ASELSAN has brought some of the world's most advanced defence technologies, all home grown, into the Turkish Armed Forces. ASELSAN, which contributes to Turkey's technological independence by producing high-tech solutions which are fully suited to customer demands, carries out effective Technological and Strategic Management which takes into account the technological developments in the world as well as Turkey's changing needs.

The studies of advanced core technology, which will ensure the products we develop at ASELSAN's Sector Directorates are innovative, home-grown, exportable and competitive, are managed through the internally funded R&D Projects Process. Technology Roadmaps and the installation and development plans of related infrastructures are created and monitored in harmony with the Strategic Goals and Targets. All steps are taken to ensure that the ASELSAN Sector Directorates produce rapid and efficient solutions working together with boards such as the National and Domestic Product Development Supreme Board, the Intellectual Rights and Publications Supreme Board. The feasibilities of ASELSAN's strategic/technological subsidiaries and investments are prepared in line with future strategies.

Pioneering research activities aimed at increasing technological capabilities are carried out at the ASELSAN Research Center in cooperation with universities. With the ASELSAN Academy, all post graduate education studies are carried out in accordance with the ASELSAN Technology Roadmap and the projects carried out in the departments where our personnel work.

STRATEGIC MANAGEMENT

With the ASELSAN Strategic Management System, the strategies are based on ASELSAN's vision, mission, core values and superiorities and they are developed, planned (relevant goals/targets are determined), implemented in line with the strategies of other critical stakeholders, particularly the Turkish Armed Forces Foundation (TSKGV). Progress toward the targets are monitored in an electronic environment.

STRATEGIC PLANNING

ASELSAN's strategies are determined by considering growth, globalization, value generation for its customers, conducting R&D activities, being competitive and efficient, strengthening human value and the financial structure and which are detailed in the ASELSAN Strategic Plan covering the following five-year period. Reviews, strategic analysis and reporting activities are carried out to support strategic decisions during the preparation period of the ASELSAN Strategic Plan.

Activities are planned to achieve the goals and targets in the ASELSAN Strategic Plan. With the ASELSAN Strategic Plan Monitoring System, data collection, monitoring and measurement are carried out in electronic environment in relation to these activities and realizations are reported during/end of the year. Reporting mechanisms are put in place to support these activities and to make the technological investments within the ASELSAN Technology Roadmap and evaluate their results. The evaluation of the report results contributes to the development of new strategies.

CORPORATE PERFORMANCE

The ASELSAN Corporate Scorecards located on online system are updated every year in accordance with the ASELSAN Strategic Plan. Scorecards, which contain indicators that are important at the corporate level, are monitored electronically by authorized managers and realizations are monitored during the year. At the end of the year, the Corporate Performance Measurement is carried out and the results contribute to the development of new strategies and influence the individual performance evaluation of employees.



IN ORDER TO IMPROVE ASELSAN'S PROJECT MANAGEMENT PROCESSES AND APPLICATIONS, WORK IS CARRIED OUT WITHIN THE CENTRAL PROJECT MANAGEMENT OFFICE (PMO).

STRATEGIC PRACTICES

Work is carried out for the investigation, evaluation and development of recommendations for the rollout of successful applications within ASELSAN and pilot applications are developed.

THE CENTRAL PROJECT MANAGEMENT OFICE (PMO)

In order to improve ASELSAN's Project Management processes and applications, work is carried out within the Central Project Management Office (PMO). In this context, the Central Project Management Office was established under the Technology and Strategy Management Deputy General Manager (TSMDGM) and Sector Project Management Offices were established within the Sector Directorates. In the field of Project Management, partnering of applications in the Sector Directorates, procurement of project management software and integration of the software into the existing Enterprise Resource Planning System (ERP) has been carried out.

Within the scope of the activities carried out under the coordination of the Central Project Management Office (PMO), common project management principles and the Project Performance Measurement and Evaluation Methodologies, under the Project Prioritization Methodology, are being determined in accordance with the ASELSAN Strategic Plan in all Sector Directorates. This work is expected to be completed by the end of 2020.

TECHNOLOGY MANAGEMENT

TECHNOLOGY ROADMAP

Since 2018, the Technology Roadmap has been designed by taking into account many issues such as R&D projects funded by internal resources, the technological investment plan, the technology development status, thesis subjects, technologies that are vital at a national level, technologies containing innovation and compliance with the strategic plan. With a comprehensive perspective, the Technology Roadmap is prepared digitally under the name of the "Technology Roadmap and Investment Plan" (TRIP). As of 2019, the TRIP had been fully integrated into ASELSAN's investment budget, facilitating effectiveness of planning and the traceability of realizations.

The quantitative measurement of the development of the technologies aimed for under the TRIP is performed through the "Technological Development Year-End Target Achievement Status" indicator created through the realizations of the "Technology Readiness Levels". These results of the measurement are reflected to performance evaluation results of ASELSAN and the Sector Directorates within ASELSAN.

INNOVATION

Innovation activities at ASELSAN are planned and implemented within the scope of the Strategic Plan and Technology Roadmap at the highest level. At ASELSAN, as a mission company, "innovation" is tightly woven into the company's DNA, the most important component of the company's sustainable growth. ASELSAN carries out innovative activities in the entire fields of the business model, processes, products, services and the organization. For example, the Technology Roadmap, which includes the planning and methodology of innovation at ASELSAN, has been systematically implemented as a new business model since 2018. The relevant plan is used as the highest level innovation strategy document which reflects this business model.

New processes, new business models and, when necessary, new organizations, which are addressed by this high-level innovative business model are managed in an integrated manner. The ASELSAN ACADEMY, which is the new business model innovation in itself with the management process of internally funded projects and an example of open innovation, is the integrated element of this main business model. In addition, work on many mechanisms such as R&D collaborations with universities and suppliers, the "Intellectual Rights and Publications Supreme Board", which was established to ensure the results and continuity of innovation, has been stepped up thanks to the driving force of innovation.

ASELSAN participated in the "InovaLİG" competition, touted as the Innovation league of Turkey. In the competition, which was organized by the Turkish Exporters Assembly in 2019, ASELSAN reached the finals in the "Innovation Strategy" category among 1,236 competitors in five categories.

THE FULL INTEGRATION OF THE TECHNOLOGY ROADMAP AND INVESTMENT PLAN (TRIP) AND THE ASELSAN INVESTMENT BUDGET WAS ACHIEVED, THUS INCREASING THE EFFECTIVENESS OF THE TRIP.

INNOVATION ACTIVITIES PLANNED AT THE HIGHEST LEVEL WITHIN THE SCOPE OF THE STRATEGIC PLAN AND TECHNOLOGY ROADMAP ARE CARRIED OUT AND IMPLEMENTED IN TERMS OF PRODUCT, SERVICE, PROCESS, BUSINESS MODEL AND ORGANIZATIONAL INNOVATION.

TECHNOLOGY AND STRATEGY MANAGEMENT

NATIONAL/DOMESTIC PRODUCT DEVELOPMENT ACTIVITIES

Activities aimed for the development of national and domestic products, which are currently being or planned to be procured from abroad, continued in 2019.

Our activities towards national and domestic development of the products we utilize in ASELSAN products, which are being or planned to be procured from abroad, continued in 2019. For this purpose, the National Domestic Product Development Board (NDPDB), which was founded in 2018 with the representatives of the relevant units of ASELSAN under the coordination of the Technology and Strategy Management Deputy General Manager, and the Sector Subcommittees formed in 2019; investigate, examine and analyze all materials and systems, which are needed in our projects and are purchased from abroad. The Board and the Subcommittees identify the products that can be developed nationally and domestically, prioritizes these products, determines what systems, subsystems and components and similar products could be potentially developed by the SMEs, the quantity of the projected requirements as well. Subcommittees were formed from the representatives of the quality, production planning, design and project management departments in such a way to relate to every point from the identification of the need to the acceptance stage.

In addition, in order for all of this work to be defined in 2019, management processes and workflows were defined. A Web based Infrastructure development work was initiated so the National and Domestic Product Development process could be followed digitally within ASELSAN.

National and Domestic product development activities has been stepped up to this end, the technical specifications of the products purchased from abroad and which can be developed by SMEs in our country are defined in brochures. These brochures were shared in events being participated such as the IDEF and the Efficiency and Technology Fair. In addition, in 2019, meetings were held with various clusters in Turkey within the scope of National and Domestic Product Development with visits to Chambers of Commerce and Industry. Employing this method, it was made possible to reach many sub-contractors and SMEs, and to start the domestication work for many products.

INTERNALLY FUNDED R&D PROJECT MANAGEMENT AND MONITORING

Innovation is the key to increasing ASELSAN's competitive clout. Apart from the work carried in contracted projects, ASELSAN implements Research and Development Projects with its own resources in line with its strategic goals. To fund the internally funded R&D project expenditures, each year, an amount equal to 7% of the previous year turnover is allocated to domestication and innovation targeted efforts in accordance with the Technology Roadmap and Investment Plan (TRIP), seeking to carry existing systems further and acquire new technologies.

All of the planned R&D Projects funded with internal resources are evaluated by the Selffunded R&D Projects Evaluation Committee, which consists of senior managers, by taking into account the views selected ASELSAN personnel referees, who have served as technical and system engineering managers or project managers in the projects related to the subjects in TRIP and/or who hold a PhD in related fields.

Projects given the green light to begin following the evaluation are submitted to the approval of the senior management and work got underway. All of the self-funded R&D projects are monitored by the referee and the Committee at certain intervals with evaluations on whether the project has progressed in accordance with planned technical and financial terms.

The decision was taken in 2019 to digitalize this method, which was initiated as a newly defined process in 2018, due to the increase in the number of projects. For this purpose, definitions and evaluations were made for the operation of every stage of the self-funded R&D process digitally starting from the application stage to the referee evaluations and on to the interim period evaluations and the closure. The digital structure is expected to be activated by 2020.

Cooperation is done with many universities, SMEs and subcontractors in the self-funded R&D projects. A ceremony to mark self-funded R&D projects and cooperation between

ACTIVITIES AIMED FOR THE DEVELOPMENT OF NATIONAL and DOMESTIC PRODUCTS, WHICH ARE CURRENTLY BEING OR PLANNED TO BE PROCURED FROM ABROAD, CONTINUED IN 2019.

ASELSAN CONDUCTS ITS SELF-FUNDED RESEARCH AND DEVELOPMENT ACTIVITIES UNDER THE COORDINATION OF THE DEPUTY GENERAL MANAGER OF THE TECHNOLOGY AND STRATEGY DEPARTMENT WITH A REFEREED PRODUCT INNOVATION INFRASTRUCTURE.

AS OF 2019, 150 PROJECTS WERE BEING CARRIED OUT AS SELF-FUNDED R&D PROJECTS WITHIN ASELSAN.

industry and academia was held on 16 April 2019, to meet with cooperating universities and SMEs, evaluate the work done and to strengthen the relations. At the ceremony, a commemorative plaque was presented to representatives from the universities and the SMEs for their selfless and value-added work.

As of 2019, 150 projects were being carried out as self-funded R&D projects within ASELSAN.







ASELSAN KONYA SİLAH SİSTEMLERİ A.Ş. FOUNDED

ASELSAN Konya Silah Sistemleri A.Ş. was established in partnership with Konya Savunma Sanayi A.Ş., which emerged as the clustering of Defence Industry with ASELSAN. ASELSAN Konya Silah Sistemleri A.Ş. is planned to start its activities as a subsidiary that will carry out the production of existing weapons systems designed by ASELSAN.

The groundbreaking ceremony of the first stage of ASELSAN Konya Silah Sistemleri A.Ş., which represents an important milestone in Turkey's goal of developing and domestication of its own weapons systems in the defence industry and eliminating its dependence on the foreign resources, was held on 22 March 2019.

The construction of the facility, which has an enclosed area of 56,000 m2 is planned to be completed at the end of 2020. ASELSAN Konya Silah Sistemleri aims to become a company which will bring ASELSAN's R&D Culture together with the Konya region's weapon production capability, with the aim of capturing a significant market share not only in the domestic market, but also in foreign markets.

TECHNOLOGY AND STRATEGY MANAGEMENT



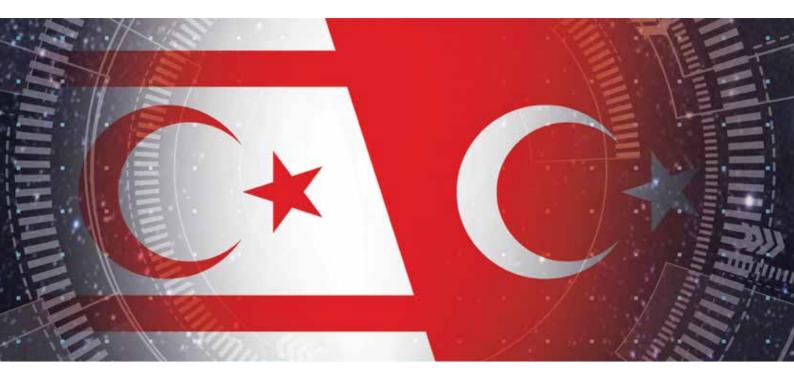
THE ASELSAN CYPRUS ADVANCED TECHNOLOGIES RESEARCH CENTER HAS OPENED

The ASELSAN Cyprus Advanced Technologies Research Center, which will carry out its activities at the Middle East Technical University's Kalkanlı Technology Valley (METU-KALTEV) in its North Cyprus Campus, has opened with a ceremony attended by the Vice President of the Republic of Turkey, Fuat OKTAY, on 20 July 2019.

The Cyprus Advanced Technologies Research Center will carry out pioneering research studies and academic activities to increase ASELSAN's competitive edge in order to gain an advantage in the generation of national and critical technologies. It will carry out its work particularly on renewable energies, antennas, RFs (radio frequency) and materials technologies.

ASELSAN will develop advanced technology research projects in the 500 square meter office area allocated to it, and the communication tests area, which it established within the region, with academics, who specialize in various research and development fields, in Cyprus. In addition, it will develop technologies, which will enable the use of solar and wind energy for the island's power network.

THE ASELSAN CYPRUS ADVANCED TECHNOLOGIES RESEARCH CENTER, WHICH WILL CARRY OUT ITS ACTIVITIES IN KALKANLI TECHNOLOGY VALLEY OF THE NORTH CYPRUS CAMPUS AT THE MIDDLE EAST TECHNICAL UNIVERSITY (METU-KALTEV), WAS OPENED AT A CEREMONY ATTENDED BY THE VICE PRESIDENT OF THE REPUBLIC OF TURKEY, FUAT OKTAY ON 20 JULY 2019.



FEASIBILITY STUDIES WERE CARRIED OUT ON ANTENNAE AND INTEGRATED LOGISTICS SUPPORT ACTIVITIES TO SUPPORT DECISION PROCESSES DURING 2019.



FEASIBILITY STUDIES REALIZED IN VARIOUS SUBJECTS

Feasibility studies were carried out on antennae and integrated logistics support activities to support decision processes during 2019.

Within the scope of the feasibility work onantennae, studies were carried out into whether or not the antennae, which ASELSAN is currently procuring or will procure from abroad in the coming periods, or which it plants to purchase in Turkey by creating a capability, can be domestically and nationally designed and produced cost effectively.

The Integrated Logistics Support (ILD) Feasibility study was aimed at determining the situation for drawing up the policies which need to be followed in this regard by analyzing the integrated logistics support (ELD) activities which ASELSAN must fulfill over the next 6 year (2020-2025) period and which can be outsourced.

A feasibility study was carried out into the partnership of the TechnoHAB Technology Development Center established within the Ankara Space and Aviation Specialized Organized Industrial Zone (HAB), and its cost to ASELSAN was analyzed with respect to the benefits which it may provide to ASELSAN, and considering the possible alternatives within the framework of the existing plans.

INTELLECTUAL PROPERTY RIGHTS SUPREME BOARD BECOMES ACTIVE

The Intellectual Property Rights Supreme Board was established to guide ASELSAN's strategies and work related to Intellectual Property Rights and Publications and to control all publications and presentations made outside ASELSAN, and started its activities. The new board conducts planning for the studies which will guide the commercialization strategies of the ASELSAN Intellectual Property Rights, evaluations of the applications to be made to the Turk Patent in accordance with the suggestions presented by the existing patent boards within the research centers and the international patent applications and their approval and the establishment and coordination of the control mechanisms which will control the sharing of items such as articles, publications, theses and presentations prepared by ASELSAN personnel outside the company, in terms of invention and confidentiality.

KNOW-HOW

ARAȘTIRMA

PATENT

THE ASELSAN RESEARCH CENTER



THE NANO UNMANNED AERIAL VEHICLE DEVELOPMENT PROJECT

Within the scope of the project, preliminary research was carried out on visual and visual/ inertial interior navigation technologies. By determining visual navigation algorithms suitable for the nano uav hardware, which is a closely followed subject in sector literature, the operating performance of these algorithms in the data sets created is evaluated.

AUTONOMOUS JOINT TASK FORCE APPLICATIONS PROJECT

The project was launched on 1 November 2019 in order to bring team-level task planning, situational awareness and task management capabilities to the team which was created within the scope of a task consisting of different types of unmanned elements. In the first phase of the project, work begun on establishing project infrastructure, preliminary research and identification of the requirements.



THE STUDIES CARRIED OUT ARE AIMED AT DEVELOPING THE TECHNOLOGIES WHICH WILL ENABLE NANO UAV TO PERFORM IN ENVIRONMENTS OUTSIDE GNSS SIGNAL RANGE.

WITH THE AUTONOMOUS JOINT TASK FORCE APPLICATIONS PROJECT, OUR LEVEL OF TECHNOLOGY IS PLANNED TO BE RAISED IN TERMS OF POSITIONING, NETWORK AND TASK MANAGEMENT IN HETEROGENEOUS TEAMS. IN THE FIRST PHASE OF THE PROJECT, WORK ON ESTABLISHING THE PROJECT INFRASTRUCTURE, PRELIMINARY RESEARCH AND IDENTIFYING THE REQUIREMENTS GOT UNDERWAY.



TECHNOLOGY DEMONSTRATION PROTOTYPE DEVELOPMENT STUDIES GOT UNDERWAY AND HARDWARE IMPLEMENTATION OF THE DEVELOPED ALGORITHMS HAS BEEN INITIATED.

COMPRESSED SENSING RADAR TECHNIQUES

Algorithms were developed to reduce the number of T/R modules and antenna elements of phased array radars without compromising performance with the Compressed Sensing, Machine Learning and Advanced Optimization techniques. Technology demonstration prototype development studies have got underway and hardware implementation of the developed algorithms has been initiated.





Compressed Sensing Radar FPGA Prototype Development



Compressed Sensing Radar RF Subsytem Development

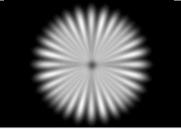
INFRARED COMPUTATIONAL IMAGING TECHNIQUES

Using computational imaging techniques, super-resolution single pixel camera and microscanning camera studies were carried out. A high resolution image can be obtained from low resolution sensors with the developed techniques. This technology will be integrated into the cameras developed by ASELSAN in the medium term.

COMPUTATIONAL IMAGING TECHNIQUES WERE DEVELOPED FOR SUPER RESOLUTION SINGLE PIXELAND MICRO-SCANNING CAMERAS.

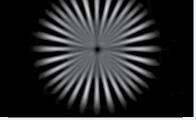
Original

Low Resolution





Literature





With computational imaging techniques, high resolution can be obtained from a low resolution sensors.

MAGNETIC PARTICLE IMAGING TECHNIQUES

Algorithms for high-quality real-time imaging and fast calibration methods were developed for magnetic particle imaging (MPI), which is a new medical imaging modality. A novel open MPI scanner prototype was developed, and coronary vessel phantoms were successfully imaged. The developed scanner configuration was patented in the USA.



ASELSAN MPI Prototype System

FOR MAGNETIC PARTICLE IMAGING, AN **OPEN-SIDED LINE SCANNER PROTOTYPE** SYSTEM WAS DEVELOPED FOR THE FIRST TIME IN THE WORLD.

SUBMARINE CLOAKING TECHNOLOGIES

Active and passive methods have been investigated to reduce the acoustic visibility of submarines. Metamaterials that provide acoustic absorption under water were investigated. Metamaterial types suitable for the submarine platform were selected and analyzed using simulations. Preliminary design activities were carried out on smart surface technologies for active invisibility.





FACE RECOGNITION TECHNOLOGIES

Many new features, especially visual face sensing and recognition studies and identification, have been brought to ASELSAN products. All of the algorithms designed within the scope of the studies are developed to work in mobile platforms which lack high processing power. These capabilities are aimed to be easily adaptable to all ASELSAN products, especially unmanned systems.

TEXT ANALYSIS

New language processing methods specific to ASELSAN have been developed within the scope of learning-based text analysis studies. The collection of valuable data from the texts will pave the way for both automatic information processing and effective communication of the machines with people. These technologies are expected to play an important role in the majority of ASELSAN's systems in the near future.

THE ASELSAN RESEARCH CENTER



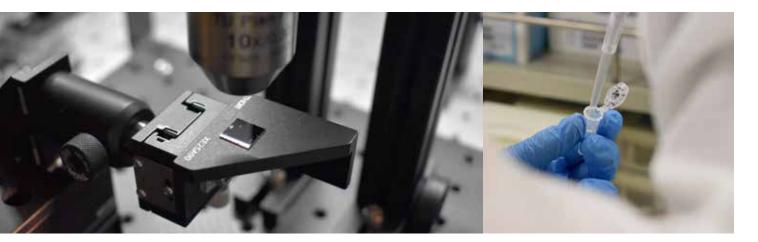
DEEP LEARNING BASED ALGORITHMS WITH THE ABILITY TO DEVELOP COURSE OF ACTION FOR WARGAMING STARTED TO BE DEVELOPED IN THE ASELSAN RESEARCH CENTER.

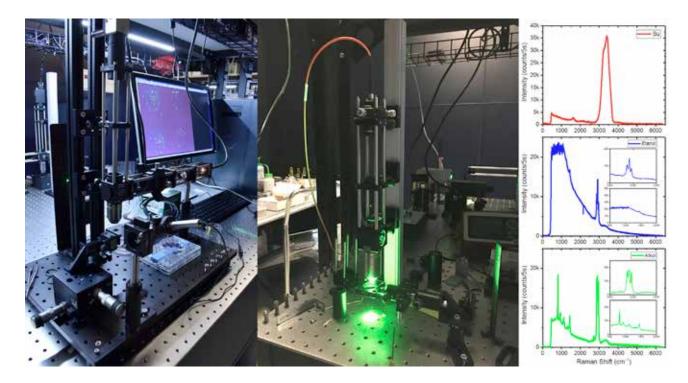
REINFORCEMENT LEARNING

Recently, artificial intelligence assistants have been developed for decision support in military processes by taking inspiration from the successes of deep reinforcement learning techniques in chess and in the game of Go (a Chinese strategy game). In the ASELSAN Research Center, deep learning based algorithms with the ability to develop course of action for warfare games have been started to be developed. These are aimed to ensure the developing technology becomes available in the field of warfare in a short time.

OPTICS BASED SENSOR TECHNOLOGIES FOR BIOSECURITY

The development of domestic and national optics based diagnostic methods and microfluid cartridges is continuing rapidly as part of the "Detection of Bioterrorist Agents" project being carried out in the Biodefence Research Program Unit. The production of antibodies to be used in the diagnostic systems developed in the project continues in cooperation with the Gebze Technical University. A product prototype will be created to detect the agents identified at the end of the project.





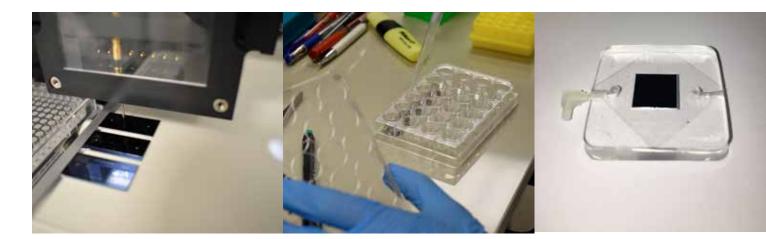
ASELSAN AIMS TO CARRY OUT INNOVATIVE SENSOR STUDIES WHICH WILL RAMP UP CAPABILITY IN THE CBR (CHEMICAL, BIOLOGICAL, RADIOLOGICAL)-E DEFENCE FIELD, IN THE BIODEFENCE LABORATORY.

INNOVATIVE CBR-E AGENTS SENSING SYSTEMS DEVELOPMENTAL STUDIES

ASELSAN aims to carry out innovative sensor studies which will increase capability in the CBR (chemical, biological, radiological)-E defence field at its Biodefence Laboratory. Studies are ongoing to develop an immunofluorescence system, Raman spectroscopy, impidimetric based electrochemical measurement system, microscope with artificial intelligence and magnetic particle spectroscopy, which will have applications in liquid, solid and gas samples.

ADVANCE MATERIALS

The Advanced Materials Research Program Unit was established under a pioneering and original R&D organization to advance ASELSAN's technological dominance in its fields of activity. The unit aims to carry out the synthesis and prototype production of Nanomaterials such as Graphene and 2D Structures, Wearable and Cloaking Materials, Ceramics and Metal Powders, which direct new generation technologies in a way which will increase the competitiveness of our products.



THE ASELSAN ACADEMY

THE ASELSAN ACADEMY OPENS FOR THE 2019-2020 FALL SEMESTER

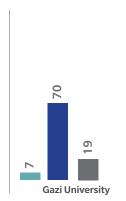
The ASELSAN Academy has carried on its growth with number of enrolled students approaching 600; 66 faculty teaching a total number of 71 courses on Electric and Electrical and Electronics, Mechanical, Computer and Metallurgical and Materials Engineering. 187 people applied for the 2019/2020 Spring semester.

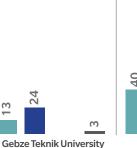
The ASELSAN Academy program supports ASELSAN's goal of developing innovative products and technologies with diversifying thesis topics through giving them the opportunity to pursue postgraduate studies directly related to the projects, which they are working on.

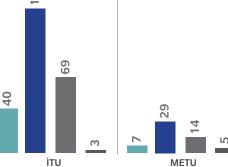
The distribution of students according to each department and university in the 2019-2020 Fall semester is given in the graph below.

2019-2020 Fall Semester Student Distribution as per Departments









Computer Engineering Electrical and Electronics Engineering Mechanical Engineering Metallurgical and Materials Engineering



THE ASELSAN ACADEMY DAYS EVENT - METU (THE MIDDLE EAST TECHNICAL UNIVERSITY)

The ASELSAN Academy Days Event was held at the Kemal Kurdaş Convention Center on 27th June, 2019 with more than 300 participants, hosted by the Middle East Technical University and with the participation of Prof. Dr. Haluk Görgün, the Chairman, President and CEO of ASELSAN, and rectors of from the Program Partner Universities. At the event, our current ASELSAN ACADEMY graduate students were informed in various topics to help development in their academic studies.

One of our speakers from the Middle East Technical University, Assoc. Dr. Eren Kalay, a Metallurgical and Materials Engineering Department faculty member, gave a presentation on "Doctorate and Research Experiences". Another speaker from the Middle East Technical University, Dr. Gökçe Gökalp, a faculty member of the Department of Educational Sciences Department made a presentation on "Thesis Writing Processes, and Dr. Fatih Say, Military Computer Design Manager of ASELSAN, gave a presentation on "Doctoral Process of the Employee from Course to Thesis".



2ND ASELSAN ACADEMY WORKSHOP AT ITU

The second workshop of the ASELSAN Academy, which has brought a brand new dimension to cooperation between industry and academia in our country, was held at the Ayazağa campus of the İstanbul Technical University (ITU) between 12-15 October, 2019.

The ASELSAN Academy, which has brought a brand new dimension to the academiaindustry cooperation, held its 2nd Workshop in the Ayazağa Campus of Istanbul Technical University (ITU) at 12-15 October, 2019.

During the 2nd ASELSAN Academy Workshop, thesis and dissertation topics that are and will be carried out within the scope ASELSAN's novel and advanced technologies are discussed, involving the academics from the program-included research universities (ITU, METU, the Gazi University and the Gebze Technical University).

With the aim of further advancing the cooperation between ASELSAN and the universities, the academics were given up-to-date information on the R&D projects which are carried out at ASELSAN, the ASELSAN Research Center and the ASELSAN Academy by ASELSAN's engineering directors.

In addition, academics from Gazi University, the Gebze Technical University, Istanbul Technical University and the Middle East Technical University shared information on the research activities carried out at their universities in the engineering fields within the program and laboratory facilities at their universities.

The workshop continued with a number of sessions, which addressed the ASELSAN Academy operations, state-of-the-art technologies and the research activities carried out in related fields at the universities.

On the final day of the workshop, laboratories, Research Centers in ITU Ayazağa Campus and the ITU-ARI Technopark are visited, while the academics shared information on their work with the attendees.



THE SECOND WORKSHOP OF THE ASELSAN ACADEMY, WHICH HAS BROUGHT A BRAND NEW DIMENSION TO COOPERATION BETWEEN INDUSTRY AND ACADEMIA IN OUR COUNTRY, WAS HELD AT THE AYAZAĞA CAMPUS OF THE ISTANBUL TECHNICAL UNIVERSITY (ITU) BETWEEN 12-15 OCTOBER, 2019.

BUSINESS DEVELOPMENT AND MARKETING ACTIVITIES

"TECHNOLOGY SERVING PEOPLE & PLANET" ASELSAN FOCUSES ON INTERNATIONAL GROWTH

With her advanced technology dedicated to welfare of societies and people, wide-ranging product line from defence to civilian systems; ASELSAN is now a global technology leader serving the requirements of 65 countries in 5 continents in a sustainable manner.

ASELSAN utilizes technological know-how, skills and expertise accumulated from a heritage relying on ethical values in line with her conviction to the motto, "Technology serving People and Planet."

In order to have a better understanding of the requirements and expectations of her clients, ASELSAN structurally re-organized her International Business Development and Marketing Department as a Vice Presidency in 2019 where her export figure is increased by nearly 50% compared to previous years.

ASELSAN CONTINUED HER RISING PACE IN TOP DEFENSE CONTRACTORS LIST AMONG THE TOP 100 BIGGEST DEFENSE COMPANIES IN THE WORLD. BEING INITIALLY RANKED IN 2006, ASELSAN IMPROVED ROBUST, SUSTAINABLE CORPORATE GROWTH AND HIGH PERFORMANCE ALSO WITHIN 2019 AND STEPPED UP TO THE 52ND RANK IN THE LIST.







LOCAL PRODUCTION FACILITY OPENING, UKRAINE, 2019

Apart from these, ASELSAN continued her rising pace in top defense contractors list among the top 100 biggest defense companies in the world. Being initially ranked in 2006, ASELSAN improved robust, sustainable corporate growth and high performance also within 2019 and stepped up to the 52nd rank in the list.

In order to comply with her "local to global" business philosophy, ASELSAN continues to establish Joint Ventures, local production facilities, branch offices abroad.

ASELSAN IS SHARING HER "KNOW-HOW" ACCUMULATED THROUGH DECADES IN DIFFERENT ACTIVITY FIELDS WITH THE PARTNER COUNTRIES' CAPABLE INSTITUTIONS AND COMPANIES.

ASELSAN is sharing her "know-how" accumulated through decades in different activity fields with the partner countries' capable institutions and companies. With more than 20 subsidiaries, and the recently established ASELSAN GLOBAL Company, ASELSAN's footprint continues to expand in the international arena. In the complex and fast-changing environment, ASELSAN's global workforce supports her industrial cooperation and responds to geopolitical changes. ASELSAN pays attention to provide employees from varied nations, different educational and cultural backgrounds within her Business Development and Marketing Vice Presidency in order to meet her international clients' current and future requirements.



To achieve sustainable exports, ASELSAN continued her activities with strategic international collaborations. In 2019, ASELSAN participated in 14 international exhibitions (including IDEF that was held in İstanbul) in Asia - Pacific, Middle East, Africa, Europe and Americas and represent the Turkish defense industries to promote brand awareness at a global scale.



The dynamics of global competition significantly differs from the dynamics of domestic competition. ASELSAN will support her core parameters such as price and quality by establishing local partners, enabling technology transfer, developing financial instruments, managing her brand and reputation, building effective communication at both corporate and individual levels, offering after-sales support and promoting business ethics. ASELSAN will take firm steps towards her goals and achieve great projects with the same determination in 2020.

FILEDS OF ACTIVITY

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ASELSAN CONTINUES TO SERVE AS A GLOBAL COMPANY WHICH DEVELOPS, MANUFACTURES, INSTALLS AND MARKETS MODERN ELECTRONIC DEVICES AND SYSTEMS WITH ORIGINAL DESIGN AND CARRIES OUT AFTER-SALES SERVICES.

COMMUNICATIONS AND INFORMATION TECHNOLOGIES BUSINESS SECTOR







COMMUNICATIONS AND INFORMATION TECHNOLOGIES BUSINESS SECTOR



MILITARY COMMUNICATION SYSTEMS

MILITARY RADIO

Software Based VHF / UHF Radio Family

The delivery and installation of the Land Platform V / UHF Vehicle / Fixed Center Radios, whose mass production is ongoing, continued. Deliveries of the internal communication system which is included in the same contract as the V / UHF Radios were completed.

The design work for the Electronic Warfare Protected Handheld Radio was completed. The first product verifications were carried out and mass productions got underway.

Deliveries of the Naval Platform / Fixed Center V / UHF radios for use by the Air Force Command continued.

Local production activities under the Software Based V / UHF Radio contract are ongoing in Pakistan. Production activities are continuing within the scope of local production activities with license transfer in Saudi Arabia. Deliveries under the contract signed on the supply of digital internal speech systems to be used in tactical vehicles, and the V/UHF Back, Vehicle and Electronic Warfare Protected Handheld Radio for the armed forces of friendly and allied countries were carried out later in the year.



DELIVERIES WITHIN THE SCOPE OF THE CONTRACT SIGNED ON THE SUPPLY OF HF RADIOS FOR THE AZERBAIJANI ARMED FORCES WERE CARRIED OUT THIS YEAR.

The deliveries under contracts signed on the supply of digital domestic internal systems to be used in the V/UHF radio and tactical vehicles for the Ukrainian Armed Forces were carried out later in the year.

The Software Based HF Radio Family

Delivery and installations for the contracts under the spread of the Land platform HF radios continued. The deliveries were carried out under the 5kW and 10kW HF Transmitter System Contract for the use by the Naval Forces Command.

Installation and integration activities of the Naval Platform HF Radios in various forces (150W, 400W, 1000W) on the Naval Forces and Coast Guard Command platforms continued.

Our activities under contract with Saudi Arabia for the supply of Software Based HF Radios continued with user training and the installation of delivered radios.

Deliveries under contract signed on the supply of the HF Radio for the Armed Forces of Azerbaijan were carried out this year.

Air Communication Systems

The delivery of air communication devices for Atak (EGEMEN), ANKA-S, Original Helicopter (GÖKBEY), HÜRKUŞ-B, General Purpose Helicopter (GMH), DOĞAN and Multi-Band Digital Joint Radio (MBDJR) Air and Tower Installation and Integration continued within the scope of international projects, as well as the integration activities of these devices.

Installation and integration of the ASELSAN product Voice Communication and Control System (VCCS) to the air traffic control towers belonging to the Land Aviation Command were carried out in accordance with the program. With the changes to the contract for the MBDJR Project, the relevant VCCS and other communication systems of the Cengiz Topel Air Traffic Control Tower and Administrative Building, which belong to the Naval Air Command, together with the turnkey project were included in the contract. The modernization of air traffic control towers continued within the scope of international projects.





COMMUNICATIONS AND INFORMATION TECHNOLOGIES BUSINESS SECTOR

System design and production activities were carried out within the scope of Airport Traffic Radar-Communication Infrastructure Project. Within the scope of the TB-2 (UAV) program, the integration and verification of the prototype product, which will act as a radio repeater, were successfully carried out on the platform.

The Researcher Training Program for the Defence Industry (RTPDI/SAYP) Project entitled "Installation of VHF/ UHF Communication Antennae to Complex Platforms" which was launched with the Eskişehir Technical University in recent years, reached the completion stage.

The national air antenna development activities working in the V/UHF and HF band were completed and integration and verification activities for rotary wing and fixed wing platforms were carried out.

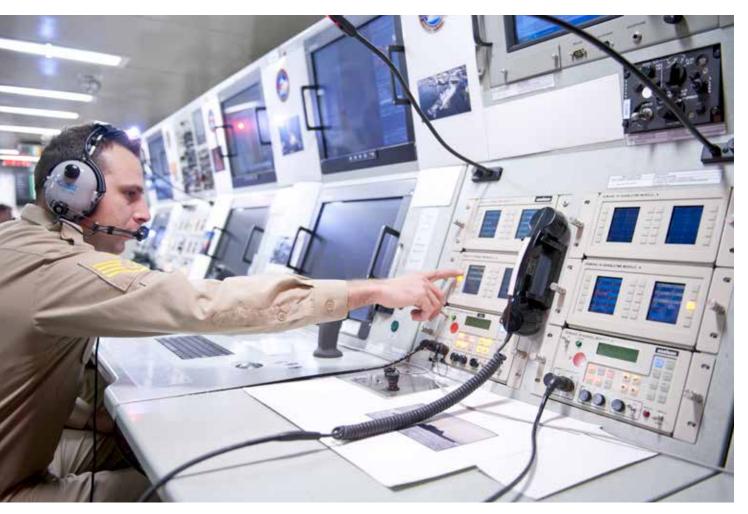
Marine Communication Systems

Our Integrated Communication System provides unique solutions to meet the internal and external communication needs of the platforms of various sizes that will be newly added to our navy or currently serving.

Factory acceptance tests for Milgem (4. Ship), Landing Helicopter Docks (LHD), Testing and Training Ship (TTS/TVEG), New Type Submarine (NTS) (1st Ship) and new SAT Boats (NSAT) were successfully completed and our work on the platforms continues.

The LHD has the most comprehensive communication configuration to date in terms of platform size. It was the first project where the subsystems of critical importance such as the IP Communication Control System, HF and V/UHF Broadband Radio Systems were designed and produced with national resources. A communication system solution for an underwater platform was provided with the NTS project for the first time.









Tactical Field Communication System

The TASMUS System is an integrated solution that responds to all of the requirements needed in the tactical field with its compliance with network based communication concept, strong IP (Internet Protocol) infrastructure, compatibility with other communication systems, its increased bandwidth and its architecture which is open to development. Within the scope of the contract signed with the Turkish Armed Forces (TAF), the process was completed with the deliveries of the modernized TASMUS-G+ in two different regions in 2019. The TASMUS systems, which were delivered between 2001 and 2010, were updated to run as TASMUS-G+ systems.

The delivery of the TASMUS-II prototype system, which will be the next generation TASMUS system, was completed in 2019. The TASMUS II prototype system was brought into use as two separate units. The decision to mass produce the TASMUS II is expected to be taken after receiving feedback and development suggestions.

A similar communication system consisting of the TASMUS elements was exported in 2019. The system, which was delivered, will be commissioned in 2020.

Secure VoIP (E-VoIP) Terminal

The new E-VoIP terminal, with the 2122 model number, was developed in 2018 and brought into use with the TASMUS II prototype system. The secure VoIP terminal will provide encrypted audio and data communication between tactical and strategic communication systems.

Broadband Waveform

Within the scope of ULAK project signed with the Defence Industry Presidency, broadband waveform development studies and field trials for the Software Based V/UHF Radio Family were completed in 2019 and work on the 3rd version is ongoing.

COMMUNICATIONS AND INFORMATION TECHNOLOGIES BUSINESS SECTOR

Identification Systems

Mass production and integration work continued on the NATO STANAG 4193 compliant IFF Mod 5/S Transponder, IFF Short/Medium Range and Long Range Mod 5/S Interrogator systems. With regard to the other airborne, naval and land platform needs of the TAF (Turkish Armed Forces), efforts continued to develop IFF Combined Interrogator/ Transponder, IFF Portable Interrogator and Reverse IFF.

The contract was signed for the use of the Battlefield Target Identification System (BTID), which was developed in accordance with the requirements of NATO STANAG 4579, in the ALTAY Tank. Our mass production proposals for the widespread use of the system on other related land platforms of the TAF were sent to the relevant companies.

Data Link Systems

Mass production deliveries of the UMTAS RF Data Link are continuing.

Medium Altitude Air Defence Missile System (HİSAR-O) Data Link Sub-System design verification activities were completed. During the course of the firing tests, it was found that communication with the missile through the data link was achieved throughout the missile's flight.

In addition, the data link prototype was developed to meet the communication needs in intelligence, reconnaissance, surveillance and targeting operations, and system level integration and verification activities are ongoing.

Within the scope of the National Long Range Air Defence System contract signed between the ASELSAN-ROKETSAN-TÜBİTAK SAGE Joint Venture and the Defence Industry Presidency, data link system development work is continuing and the requirement definition phase was completed, with the prototype development phase continuing.

SATELLITE TECHNOLOGIES

SATELLITE GROUND SYSTEMS

ASELSAN Satellite Communication Terminal Solutions ASELSAN offers unique Satellite Communication Terminal solutions which serve in different frequency bands for various platforms in line with customer requirements. MASS PRODUCTION AND INTEGRATION WORK OF THE NATO STANAG 4193 COMPLIANT IFF MOD 5/S TRANSPONDER, SHORT/MEDIUM RANGE INTERROGATOR AND LONG RANGE INTERROGATOR SYSTEMS CONTINUED.



IFF Mod 5/S Short/Medium Range Interrogator



IFF Mod 5/S Long Range Interrogator



IFF Mod 5/S Transponder

WITH THE MANPACK, FLY-AWAY, SATCOM ON THE PAUSE AND SATCOM ON THE MOVE SATELLITE COMMUNICATION TERMINALS WITHIN THE ASELSAN PRODUCT FAMILY, SOLUTIONS ARE OFFERED TO MEET THE COMMUNICATION REQUIREMENT OF LAND PLATFORMS.



Stabilized Satellite Communication Terminals, which provide reliable and uninterrupted communications on the move on airborne, naval and land platforms, are designed and manufactured to be light and compact and in accordance with military standards. With the Manpack, Flyaway, SATCOM On The Pause and SATCOM On The Move Satellite Communication Terminals within the ASELSAN product family, solutions are offered which meet the communications needs of land platforms.

Critical sub-products and software such as Modem, LNB, Antenna and RF units that make up the terminals are developed nationally.

System control stations, which were set up to provide services in areas such as the access of the satellite terminals to the communication network within the land, naval and airborne satellite communication systems of ASELSAN and the channel requirement management, as well the remote management of these terminals, also offer switching infrastructure for the communication configurations of satellite terminals.

TUMSIS X-Band Satellite Communication System Project

The X-Band Satellite Communication System (TUMSIS) Project includes the design, production, integration, infrastructure activities, installation on related platforms, verification, testing and acceptance activities for X-Band Satellite Communication Main and Backup Control Stations, Shipborne, Manpack, Portable, SATCOM On The Pause and SATCOM On the Move (SOTM) Vehicular Satellite Communication Terminals, which will work together with the X-Band Satellite Communication System Payload. The critical design phase of the project was completed and development, production and material supply activities for sub-systems continue.

With the change to the contract, capability development in-house has been increased for satcom on-the-move terminal.

Ku Band Satellite Communication System Project

Within the scope of the Ku Band Satellite Communication System Project, Satellite Communication Control Stations and Satellite Terminals will provide voice, fax, data and image services to the Turkish Armed Forces. Within the scope of the project, the installation, integration, testing and acceptance activities of the Main and Backup Control Stations, Flyaway Satellite Communication Terminals, and Manpack Satellite Communication Terminals and Shipborne Satellite Communication Terminals were realized, and the project was completed.

Project to Supply Military Satellite Communication System for the Kılıç Type Patrol Boat (KASUMSIS)

Within the scope of the KASUMSIS Project, a wide array of domestic and national units, the stabilized antenna system in particular, were designed and produced and the satellite communication system is being integrated into the Kilic Type patrol boats. The satellite communication units, which will serve as the equivalent of related satellite communication systems, are also integrated into satellite communication and control stations.

NAVAL SATELLITE COMMUNICATION TERMINALS PRODUCT FAMILY



The satellite communication system was integrated on patrol boats and temporary acceptance tests of some of the systems were successfully completed. Temporary acceptance tests of other systems are planned to be completed later this year.

1.5/1.8 meter X-Band Stabilized Shipborne Antenna Development Project

The project carried out with ASELSAN's own resources is aimed at creating a solution for the X-Band Satellite Communication Antenna System with a 1.5m or 1.8m reflector needed for frigate and large tonnage vessels. Pedestal, reflector and RF subcomponents were designed and produced for both antennas. The project achieved its objectives and was completed and converted into the contracted projects. The 1.5m reflector antenna system will be used in the TUMSIS and MILGEM-5 projects, while the 1.8m reflector antenna system will be used in the Test and Training Ship (TVEG), the LHD and Sea Combat Support Ship (DIMDEG) projects.

Other Shipborne Platform Satellite Communication Projects

Harbor acceptance and sea acceptance activities of the satellite communication systems on the MILGEM-3 and MILGEM-4 ships were carried out. TVEG Factory Acceptance Tests were completed and factory acceptance tests were completed in the LHD Project.

Submarine Platform Satellite Communication Projects

Factory acceptance tests of the satellite communication terminal that is used in the first submarine belonging to the New Type Submarine Project (NTSP) were completed. Within the scope of the Preveze Type Submarine Half-Life Modernization Project, work continued for the design of the submarine stabilized antenna system.

Ku Band Air Satellite Communication System Project

Using its own resources, ASELSAN carried out the design work on the airborne satellite communication system and equipment which will present a solution to Unmanned Aerial Vehicles (UAV) and other air platforms within the scope of the Ku-Band Airborne Satellite Communication System Development Project. The airborne satellite modem, antenna system and the antenna control units which make up the system were produced. The bidirectional data communication was carried out by stabilizing the moving simulation platform and the UAV.



AIRBORNE SATELLITE COMMUNICATION TERMINAL

ASELSAN IS RESPONSIBLE FOR WERE INSTALLED IN THE FIELD AND PRESENTED TO THE USERS. WORK ON MAINTENANCE ACTIVITIES IS CONTINUING.



Airborne SOJ Satellite Communication System Project

Design work was carried out for the airborne satellite communication system and equipment, which will provide solutions within the scope of the airborne SOJ Satellite Communication System Project.

GÖKTÜRK-1 Reconnaissance and Surveillance Satellite System Project

Within the scope of GÖKTÜRK-1 Reconnaissance and Surveillance Satellite System Project, ASELSAN is responsible for providing the S/X band antenna system, shelter and Auxiliary Services Subsystem, Image Exploitation Services and User Interface Services software and Meteo Forecast Services connected with fixed and mobile ground stations. The systems which ASELSAN is responsible for were installed in the field and presented to the users. Work on maintenance activities is continuing.

The AZRA Satellite Communication System Project

Work on the satellite communication systems' procurement, assembly, installation, testing and acceptance activities continued within the scope of the AZRA Satellite Communication System Project.

SATELLITE PAYLOAD

Türksat-6A National Communication Satellite

In 2019, ASELSAN continued system and equipment level design activities within the scope of developing the Ku Band Satellite Communication Payload in the Türksat-6A National Communication Satellite, using national resources wherever possible. Engineering model integration and tests related to the Ku Band Satellite Communication Payload, developed Turkey Coverage Antenna are still being conducted, were completed successfully at the ASELSAN Macunköy facilities in 2019. The Payload Engineering Model was shipped to TUSAŞ-USET (Space Systems Integration and Testing Center) to be integrated into the satellite. Qualification models for the Ku Band Receiver, Payload Interface Unit (FYAB), INET and ONET equipment, developed nationally and indigenously, were produced and qualification tests were completed. Qualification testing activities for the Turkish Antenna are continuing.

TUMSIS X-Band Payload

In 2019, the production and testing of the qualification model of the DOCON-L equipment, which consists of Frequency Down-Converter (DOCON), Channel Amplifier (CAMP) and Harmonic Filter units and was originally developed by ASELSAN within the scope of the X-Band Payload Project, were completed. Production and testing of flight models have got underway and production and testing of flight models have commenced. The X-Band Payload, which is under development, will be integrated into Turkey's first national Communication Satellite, TÜRKSAT 6A, and will be sent into orbit.



TÜRKSAT-6A CONTROL PANEL

COMMUNICATIONS AND INFORMATION TECHNOLOGIES BUSINESS SECTOR

In addition, within the scope of the project's technology acquisition obligation, low noise amplifier development activities carried out with METEKSAN A.Ş. were completed.

ASELSAT CubeSat Development

Within the scope of the project, the Department of Aerospace Engineering at Istanbul Technical University (ITU), and the Department of Mechatronics Engineering at Atılım University serve as subcontractors for ASELSAN.

ASELSAN continued to carry out system engineering and project management activities. In this process, the design activities for the development of X-Band Antenna and digital cards, for which space history will be brought in, were concluded and production of the flight model continues.

Engineering model acceptance activities for the cube satellite platform developed by the ITU Aerospace Engineering team were completed in 2019 and flight model studies will begin in early 2020. The acceptance of the domestic reaction wheel developed by the Atılım University was cleared by ASELSAN and this part of the project was completed successfully.

Development of Space Qualified Ku Band Receiver Equipment for TÜRKSAT 5B

Within the scope of the domestic contribution for the Turksat 5B Project, the project was launched to bring space heritage to the Ku Band receiver equipment developed by ASELSAN. The Critical design review phase was completed in 2019. In addition, the production of the engineering qualification model of the equipment was completed and the qualification tests of this model are being conducted.

Development of Space Qualified Ku Band Low Noise Amplifier (LNA) Equipment for TÜRKSAT-5B

Within the scope of the domestic contribution for the Turksat 5B Project, the project was launched to bring space heritage to the Ku Band Low Noise Amplifier (LNA) Equipment developed by ASELSAN. The critical design review phase was completed in 2019. In addition, the production of the engineering qualification model of the equipment and the hybrid module developed for the flight model were completed, and the tests of these modules are being conducted.

Development of the UHF-Band Digital Channeling Equipment Engineering Model

ASELSAN develops UHF band digital channeling equipment in accordance with the flexible payload structure to be used in the UHF band payloads of forward-looking communication satellites. As of 2019, a functional model was produced to verify the main functions of the equipment and the tests of this model were completed. Radiation card production designed for the testing of memory elements, which are critical in terms of radiation, were completed.



ASELSAN CUBESAT





JEMUS INSTALLATIONS REACHED 68 PROVINCES. THE JEMUS SYSTEM REACHED 83% COVERAGE OF TURKEY'S LANDSCAPE AREA.

PUBLIC SAFETY COMMUNICATION SYSTEMS

GENDARMERIE GENERAL COMMAND GENDARMERIE INTEGRATED COMMUNICATION AND INFORMATION SYSTEM (IEMUS)

As of the end of 2019, customer acceptance had been realized in 5 new provinces in the JEMUS Project, and customer acceptances were realized in all provinces under the Gendarmerie Regional Commands of Erzurum, Giresun and Tokat. With the completion of the installation of the system in Erzurum, the 68th province system was commissioned.

Through JEMUS, which is the largest public safety communication system established in Turkey, inquiries can be made for criminal investigations, lost material, driver's licenses, vehicle licenses, license plates and weapon licenses from central databases. With the 156 Gendarmerie Help line, messaging, patrol tracking, the geographical information system, radio call and follow-up software used in the operations centers in the provincial gendarmerie commands, along with fast and effective security-intervention services can be provided to citizens.

GENERAL DIRECTORATE OF POLICE (GDP)

NATIONAL ENCRYPTED DMR DIGITAL MOBILE RADIO SYSTEM

The National Encrypted DMR (Digital Mobile Radio) System is a digital communication system that provides encrypted communication of GDP (General Directorate of Police). In addition to short messaging and criminal inquiry practices, the DMR communication technology developed by ASELSAN offers important advantages of a software switchboard, vehicle tracking and communication recording.

Deliveries were made in May 2019 under the contract for additional material purchase signed with the GDP in August 2018. The delivered materials will be used for updating work on the East and Southeast Provincial DMR systems. Update delivery work in the Şanlıurfa and Batman provinces had been completed as of December 2019.

With the contract added to the project, In December 2019, the Conventional Wide Area DMR System in the Van Province was converted into a DMR Trunk Wide Area Coverage System in the city center.

THE TURKISH ARMED FORCES (TAF)

SECURE CELLULAR COMMUNICATION SYSTEM (SCCS) EXPANSION PROJECT

The delivery of the Secure Cellular Communication System (SCCS), which is based in the Ankara, Istanbul and Izmir provinces and serves the personnel of the General Staff and its affiliates that are the Land, Air and Navy Commands, has been largely completed and work on the increases made in the contract is continuing.

The 3700 Series Vehicle Radio Development Project

The 3700 series vehicle radio, which is in the verification stage, can be configured to operate in the APCO25 Phase-1 or DMR systems as a trunk or conventional radio, in addition to being robust, reliable, stylish and easy to use with a colour display. Designed in accordance with the needs of public safety users, the device, which operates as encrypted or unencrypted, includes many options of hardware for features such as GPS, Bluetooth and Wi-Fi.



The 3700 Series Handheld Radio Project

In October 2019, APCO 3700 Handheld radios were produced and delivered to the user for the Presidential Protection Department. A large number of DMR 3700 Handheld radios were produced in December 2019 and delivered to the user in June 2019 based on the contract made with the GDS Communications Department. Sales were carried out to municipalities through ASELSANNet.

Digital Communication Network (DCN)

Within the scope of the contract with the Defence Industry Presidency (DIP), the UHF DMR Trunk Digital Radio System - which is urgently needed by the General Directorate of Security - is being installed in the Ankara and Istanbul provinces. The system is planned to be commissioned in Ankara in the middle of 2020 and in Istanbul at the end of 2020.

The system, which will provide uninterrupted and reliable communication on a 24/7 basis in all difficult conditions, including natural disasters, will be the most important assistant for law enforcement units in successfully fulfilling their duties by integrating audio and data applications. The digital communication network, which will be installed as multibase station and multi-channel, will also be one of the few DMR systems in the world of such a size.

Coastguard Digital Reliable Communication System (SAHMUS)

Within the scope of the Fifth Phase of the SAHMUS Project, repeater centers were established in the Coastguard Black Sea Regional Command responsibility area (the Eastern Black Sea Region). The hardware-based switching system, which is available in all regional commands, was updated with a new generation software-based IP system. One repeater center was added to the Zonguldak, Edirne and Çanakkale provinces in order to expand its coverage area. The final acceptance of the system was completed and the warranty process got underway.

In order to improve the coverage area, feasibility studies are ongoing to eliminate blind areas by conducting coverage testing with floating elements connected to four regions with user units.

The Digital Encrypted (SK2) Radio Deliveries

In 2019, SK2 radios were delivered to the TAF Land Forces, Air Forces and Special Forces, and the Gendermarie General Command. At the same time, digital encrypted radio deliveries were made to various units together with leading defence industry companies.

ASELSAN IS THE GUARANTEE OF PUBLIC SAFETY WITH ITS PUBLIC SAFETY COMMUNICATION SYSTEM SOLUTIONS.





INTEGRATION OF THE REPUBLIC OF TURKEY, MINISTRY OF HEALTH RELAYS ON JEMUS SITES ENSURES SEAMLESS COMMUNICATION BETWEEN THE 112 EMERGENCY COMMAND CENTER AND THE 112 EMERGENCY HEALTH SERVICES STATIONS AND AMBULANCES.

The Republic of Turkey, Ministry of Internal Affairs, Disaster and Emergency Management Directorate Warning and Alarm System

Within the scope of the Warning and Alarm Siren System contract signed on 19 February, 2019 with the Directorate of Disaster and Emergency Management, siren systems will be installed at many locations in the Gaziantep, Hatay and Kilis provinces. Communication between the siren units in the field and the centers will be carried out by using the JEMUS infrastructure. Within the scope of the project, which is planned to be completed in 2020, the installations of Gaziantep and Kilis province were completed and work on the installations is continuing.

Expansion and Revision of the Istanbul Metropolitan Municipality Wide Area Coverage Radio System

Within the scope of the project, the radio communication of the Istanbul Metropolitan Municipality within the provincial borders of Istanbul has been converted into a digital system. The wide radio coverage to be provided within the borders of the province will provide a great deal of comfort in the communication of municipal units, paving the way for more efficient service and ensuring uninterrupted communication.

The Republic of Turkey, Ministry of Health 112 Emergency Health Services Communication System

Within the framework of the protocol signed between the Republic of Turkey, Ministry of Health and the Gendarmerie General Command, communications between the command center and the 112 emergency health services stations and ambulances have been seamlessly provided since 2013 by placing the Republic of Turkey, Ministry of Health relays at JEMUS sites. In 2019, additional terminal supplies were provided for use in the infrastructure and were operated successfully the Republic of Turkey, Ministry of Health.

Export Sales of APCO and Digital Encrypted (SK2) Radios

abroad. First export delivery has been realized to Spain.

The deliveries under the technology transfer contract signed with the Pakistan National Radio Telecommunications (NRTC) Company continued with an increasing volume in 2019.

Encrypted APCO radios were delivered to the Pakistan Armed Forces.

Deliveries within the scope of the technology transfer contract signed between ASELSAN and the Kazakhstan ASELSAN Engineering (KAE) Company for the production of APCO radio devices within the KAE also continued in 2019.

Within the scope of the military financial cooperation agreement signed between the Government of the Republic of Turkey and the Government of the Republic of Northern Macedonia and the Government of the Republic of Somalia, the Contract on the Supply of ASELSAN Telecommunications Materials was signed.

Digital Tachograph Device (DTD) - Smart Tachograph Device (STD) Development Projects ASELSAN sells the STC-8250A Digital Tachograph Device (STCv1.1) with the EAL4+ security certificate obtained from the testing and approval authorities in Europe in Turkey and

In accordance with the European Union's regulation no. 165/EU/2014, activities as part of the Smart Tachograph Device Development Project, which was launched to meet the needs for Smart Tachograph Device (STD) that will arise in the EU and in countries party to the AETR (European Agreement concerning the Work of Crews of Vehicles engaged in International Road Transport), including Turkey, are continuing.

The new smart tachograph devices to be developed include a GNSS (Global Navigation Satellite System) module for automatic recording of driving start / end coordinates and location information at certain intervals, a DSRC (Dedicated Short Range Communication) module to detect violations early as well as an optional Bluetooth communication module for the ITS (Intelligent Transport Systems) features. In addition, stronger crypto algorithms will be used in the smart tachographs to be developed.



COMMUNICATIONS AND INFORMATION TECHNOLOGIES BUSINESS SECTOR





MOBILE COMMUNICATION SYSTEMS

Fourth Generation (4.5G/LTE-A) Communication System Development (ULAK) Project

Within the scope of the Commercial and Public Safety LTE-Advanced Macrocell Base Station development activities, by taking into consideration technological developments and operator needs, design and development activities were carried out for new releases including new features. After successful results were obtained in the live network tests performed on the operator sites, installation work was carried out in different provinces in the Eastern Black Sea and Eastern Anatolia regions and were put into use. ULAK base stations delivered within the scope of the Universal Service Projects operate from 649 sites throughout Turkey. The ULAK Base Stations delivered under the contract signed with Vodafone operate on 250 commercial sites. Business development and production activities for new orders to be used in operator networks are continuing.

The delivery of the second version of the LTE-Based Military Communication System (Broadband Waveform) was completed. The development, integration and testing activities for the final version of the LTE-Based Military Communication System continued.

CRYPTO AND INFORMATION TECHNOLOGIES

TAYAS (Tactical Local Area Network System)

TAYAS is a system which has been developed in order to meet the wired and wireless local area network communication needs of the Turkish Land Forces Command in the tactical field. The system consists of software and hardware installed in local area network, which will provide communication of the command control and information systems used in battlefield with TAFICS (Integrated Communication System) at a strategic level, the TASMUS (Tactical Area Communication System) at a tactical level and with satellite systems in space. Wireless communication will be secured with a "National Secret" encryption algorithm. For this purpose, an encrypted wireless network access device (KKAC), an encrypted terminal network connection device (TKABC) and dedicated wireless network management software have been developed by ASELSAN specifically for the project.

The installation and acceptance of cable systems, which make up the first two phases of the project, belonging to certain units, were completed and delivered. The design and production work of the KKAC and TKABC devices, which will be delivered in the third phase, were completed and factory acceptance processes are ongoing.

IN 2019, 316 ULAK BASE STATIONS STARTED ACTIVE SERVICE ON COMMERCIAL SITES OF GSM OPERATORS.





WITHIN THE SCOPE OF THE GOAL OF PRODUCING COMMUNICATION NETWORK COMPONENTS FROM NATIONAL RESOURCES, ASELSAN DEVELOPED A NATIONAL ROUTER WHICH ALSO MEETS MILITARY STANDARDS.

THE SPATIAL ADDRESS RECORDING SYSTEM (SARS) DATA GENERATION AND DEPLOYMENT SYSTEM PROJECT

In 2019, the system was commissioned in all authorized administrations (Municipalities, Provincial Special Administrations, Organized Industrial Zones, Free Zones) in 29 provinces where the work was completed. This took the number of provinces where the system was commissioned to 39 since the beginning of the project. Transactions related to address data in the provinces where the system was commissioned are carried out on the SARS interfaces. Work is underway in 35 provinces.

The 112 PROJECT

Within the scope of the New Generation 112 Emergency Call Center Second Phase Project, acceptance procedures belonging to the two provinces were carried out.

THE ETHERNET SWITCH FAMILY

ASELSAN, which produces communication network components with national resources, developed an ETHERNET Switch Family under the relevant project. The ETHERNET Switch Family has uses for both military applications and commercial and industrial applications, and executes switching functions at Layer 2 and the task of switching and collection/ distribution for IP packets in the IP-based communication systems. The design and testing activities of the ETHERNET family products were completed and prototype production was realized.

The deliveries of the 8 port Industrial Ethernet Switch were successfully completed within the scope of the Urban Security Management System (USMS) and the Plate Recognition System (PRS) Project in order to meet the needs of the General Directorate of Security. At the same time, within the scope of the Azra Project, the Digital Communication Network Project and the Istanbul Metropolitan Municipality Radio System Project, the devices were positioned for project needs.

NATIONAL ROUTER

Within the scope of the goal of producing communication network components with national resources, ASELSAN developed a national router compliant with military standards. Within the scope of the National Router Project, models which would work at the Core and Distribution/End points were introduced. The National Router is both IPv4 and IPv6 compliant and offers a wide array of complementary protocol supports. The Core National Router has a switching speed of up to 48 Gbit/s; the Distribution/End National Router has a switching speed of up to 32 Gbit/s.

The Core and Distribution/End point National Routers were delivered to the customer as part of the TASMUS Project and added to the TAF inventory. National Routers were produced for the AZRA project and were exported to Azerbaijan.







IN THE FIELD OF DEFENSE SYSTEMS TECHNOLOGIES, ASELSAN CARRIES OUT WORK FOR HIGH-TECH PRODUCT SOLUTIONS IN THE FIELDS OF LAND SYSTEMS, WEAPON AND WEAPON FIRE CONTROL SYSTEMS, COMMAND CONTROL, COMMUNICATION AND COMPUTER SYSTEMS, MAIN BATTLE TANK SYSTEMS, SMART MUNITIONS AND ACTIVE PROTECTION SYSTEMS, AIR AND MISSILE DEFENCE SYSTEMS, AIR DEFENCE GUN SYSTEMS, AIR DEFENCE COMMAND CONTROL SYSTEMS, BALLISTIC MISSILE DEFENCE SYSTEMS, ANTI-DRONE SYSTEMS, NAVAL COMBAT SYSTEMS, TORPEDO AND UNDERWATER SYSTEMS.

DEFENCE SYSTEM TECHNOLOGIES BUSINESS SECTOR









ASELSAN, in 90's having limited existence on naval platforms, has reached to platform diversity including surface, sub-surface and naval air platforms and extend such a magnitude and entirety, by widening its existence from single product to entire combat system provider. ASELSAN provides effective and reliable products to mariners for their long and tough naval missions.

NAVAL SYSTEMS

ASELSAN, as a combat systems provider for naval platforms of Turkish Naval Forces and many friendly countries, while providing present needs for the naval operational domain also carrying on Research and Development activities for shaping future naval combat area.

COMBATANTS

In the MILGEM Combat Systems Project, the fourth ship TCG KINALIADA (F514), which was equipped with more advanced systems, was commissioned in September 2019. Within the scope of the MILGEM Combat System Supply Project, ATMACA, surface to surface anti-ship missile for naval surface platforms were integrated onto the TCG KINALIADA for the first time.

ASELSAN shall supply Combat Systems for four Corvettes to be constructed for Pakistan Navy. In this scope, a contract was signed between ASFAT A.Ş. and ASELSAN on 14th November, 2019.

AMPHIBIOUS VESSELS

The combat system design, sub-system development/supply and integration activities for the Multipurpose Landing Helicopter Dock (LHD) Project is carried on by the Business Partnership, established by ASELSAN and HAVELSAN. In this context, Factory Acceptance Tests (FAT) of systems have been successfully completed as of December 2019.

ASELSAN, IN 90'S HAVING LIMITED EXISTENCE ON NAVAL PLATFORMS, HAS REACHED TO PLATFORM DIVERSITY INCLUDING SURFACE, SUB-SURFACE AND NAVAL AIR PLATFORMS AND EXTEND SUCH A MAGNITUDE AND ENTIRETY, BY WIDENING ITS EXISTENCE FROM SINGLE PRODUCT TO ENTIRE COMBAT SYSTEM PROVIDER. ASELSAN PROVIDES EFFECTIVE AND RELIABLE PRODUCTS TO MARINERS FOR THEIR LONG AND TOUGH NAVAL MISSIONS.

AUXILIARY SHIPS

In the scope of "Replenishment at Sea and Combat Support Ship (DIMDEG)" contract, under the responsibility of ASELSAN-HAVELSAN Business Partnership as combat system main integrator, Detailed Design Phase activities are carried on.

Test and Training Ship (TTS) Mission and Marine Systems Factory Acceptance Tests (FAT) activities started in 2019.

SURFACE NAVAL PLATFORMS MODERNIZATION PROJECTS

System Requirement and Critical Design Review phases completed in 2019 in scope of the Barbaros Class Mid-Life Modernization Contract which was signed between Presidency of Defense Industries and ASELSAN-HAVELSAN Business Partnership.

Within the Identification Friend or Foe (IFF) Naval Platforms Integration Project, Mod 5/S capability long range indigenious IFF Interrogator and Transponder devices will be integrated to 23 different naval Platforms (87 ships) of the Turkish Naval Forces. The Integration will start in April 2020 simultaneously with NATO countries. Project Critical Design Phase, including platform specific integration solutions, is completed in November 2019. The software/hardware production of IFF Mod 5 Control and Management System is continuing.

WEAPON/FIRE CONTROL SYSTEMS

Within the scope of domestic and international projects, 40 mm and 76 mm Naval Gun Fire Control Systems production and delivery activities have been conducted and development activities for 5/54 Naval Gun Fire Control System have been carried on.

The ATMACA Block-1 Stage 2 Project, where a surface to surface anti-ship missile for I-Class Frigates are developed and produced, has been carried out since October 2018. In the scope of the project, ASELSAN is responsible for the Fire Control System and also for RF Seeker, Missile Mission Computer and Power Distribution Unit of the ATMACA G/M. On November 3, 2019, the ATMACA G/M system successfully fired from KINALIADA, namely the first indigenous naval guided missile has been fired from the indigenously designed corvette. With this proud development, an important step has been taken within the scope of ATMACA system qualification.

Within the scope of the Anti-Submarine Rocket Launching System (ASRLS) Supply contract signed with ROKETSAN in the last quarter of 2018, 12 ASRLS will be produced and integrated onto patrol boats of Turkish Navy. In this context, necessary supply and production activities have been performed in 2019.



ASELSAN, AS A COMBAT SYSTEMS PROVIDER FOR NAVAL PLATFORMS OF TURKISH NAVAL FORCES AND MANY FRIENDLY COUNTRIES, WHILE PROVIDING PRESENT NEEDS FOR THE NAVAL OPERATIONAL DOMAIN ALSO CARRYING ON RESEARCH AND DEVELOPMENT ACTIVITIES FOR SHAPING FUTURE NAVAL COMBAT AREA.



TORPEDO AND UNDER WATER SYSTEMS

ASELSAN, with knowledge creation, making necessary investment and by having eligible personnel, has become one of the key players in the global sonar league.

ASELSAN, within the scope of Torpedo Counter-Defense Systems, provides o complete platform protection solution including detection, soft and hard kill measures and having firm steps to have a remarkable position in the global market by satisfying global requirements as well as the domestic ones.

SUBMARINE AND SONAR SYSTEMS

Within the scope of New Type Submarine Project (NTSP) for the 1st Submarine, Factory Acceptance Tests of Ship's Announcing System (SAS), Electronic Support Measures (ESM) System, Sound-Powered Telephone System & Telephone System and Integrated Communication System (Communication Equipment, Internal Communication System and SHF SATCOM) was completed successfully in 2019.

In addition to the new contracted shipbuilding projects in 2019, 14 KULAÇ Echo Sounder Systems contract has been signed within the scope of a modernization project. Both shipbuilding and modernization projects, totally 20 KULAÇ Echo sounder Systems, including 4 KULAÇ Echo sounder Systems export for Pakistan MİLGEM, will be produced and integrated into platforms.

In the scope of BARBAROS Class Frigate Mid-Life Upgrade, following the successful completion of design phase, a prototype Hull Mounted Sonar System has been made ready to carry out system verification tests.

In the scope of MİLGEM Project, for TCG KINALIADA, Sea Acceptance Tests of KULAÇ Echo sounder System, Hull Mounted Sonar and Underwater Telephone System was completed successfully in 2019.

Preveze Class Submarine Mid-Life Modernization Contract was signed between Presidency of Defense Industries and ASELSAN-STM-HAVELSAN-ASFAT Business Partnership on 8 February 2019. Activited are performed regarding the System Requirement Review phase.

ASELBUOY Passive Sonobuoy development efforts has continued and launch trials from sea and air platforms were conducted in 2019.

In 2019, Turkish Navy Forces got involved as the End-User to the Low Frequency Active Sonar System Development Project which had started at the end of 2018. The development studies are being carried out in accordance with the needs of Turkish Navy Forces.

Initiated with internal R&D funding and supported by TUBITAK 1501 Industrial R&D Projects Grant Programme, Underwater Acoustic Surveillance Network Project covers

ASELSAN, WITH KNOWLEDGE CREATION, MAKING NECESSARY INVESTMENT AND BY HAVING ELIGIBLE PERSONNEL, HAS BECOME ONE OF THE KEY PLAYERS IN THE GLOBAL SONAR LEAGUE.



ASELSAN, WHILE WORKING ON THE CURRENT NEEDS OF NAVIGATION AND PLATFORM MANAGEMENT SYSTEMS FOR THE NAVAL PLATFORMS, ON THE OTHER HAND HAVING ACTIVITIES ON CREATING KNOWLEDGE AND SUB COMPONENTS FOR AUTONOMOUS NAVAL PLATFORMS WHICH WILL BE A FUTURE FACT IN THE NAVAL DOMAIN.



ongoing development efforts on communication frequency optimization for underwater acoustic modems, acoustic signal processing algorithms and mobile underwater vehicle developments.

TORPEDO AND TORPEDO COUNTERMEASURE SYSTEMS

Harbor and Sea Acceptance Tests of the HIZIR Torpedo Countermeasure System for TCG KINALIADA were completed within the scope of the MILGEM Project. Factory Acceptance Tests (FAT) was also successfully completed for LHD Project. HIZIR System will also be exported for the first time as part of the Pakistan MILGEM Corvette Project contract signed in 2019.

ASELSAN is supplying its ZARGANA range of acoustic torpedo countermeasure jammers and decoys for the Indonesian Navy's (Indonesian National Armed Forces) submarines. Regarding the orders of Indonesian Navy on January 2019, Factory Acceptance Tests completed successfully and the decoys delivered on July 2019.

ASELSAN will provide its ZARGANA torpedo countermeasure system for the Pakistan Navy's as part of the project "Modernization of class Agosta 90B submarines" under contract of STM. With this delivery, Pakistan will be the second country to acquire the torpedo countermeasures systems after Indonesia.

NAVIGATION AND PLATFORM MANAGEMENT SYSTEMS

ASELSAN, while working on the current needs of navigation and platform management systems for the naval platforms, on the other hand having activities on creating knowledge and sub components for autonomous naval platforms which will be a future fact in the naval domain.

NAVIGATION SYSTEMS

Research and development activities are completed for the ASELSAN MİTOS™ Electronic Chart Display System product family with Portable WECDIS system and 10 set delivered to Turkish Navy. Platform integration and test activities are ongoing as planned. ASELSAN MİTOS™ WECDIS Factory Acceptance Tests are completed for LHD and Test and Training Ship. ASELSAN MİTOS™ WECDIS activities are ongoing as planned for Replenishment at Sea and Combat Support Ship (DIMDEG).

The production of DEMES Marine Meteorology System which is designed with modular and configurable software architecture, has been completed for TTS and LHD Projects. Beyond this, System for TTS Project FAT has been successfully completed and ready for delivery.

PLATFORM MANAGEMENT SYSTEMS

Concept development of the ASELSAN Smart Platform Management Systems activities are carried on. ASELSAN Integrated Bridge System activities are ongoing for DIMDEG as planned.





PROPULSION AND DRIVE SYSTEMS

DİKONS Dynamic Positioning System, software and hardware design activities has been carried on. Besides, studies on propulsion system configuration definition and algorithm development activities performed.

AIR AND MISSILE DEFENCE SYSTEMS

With more than thirty years of experience of air defence and having produced Turkey's first air defence system, ASELSAN develops unique air and missile defence systems. ASELSAN's ability to single-handedly develop and produce the sensor, command control, firing control and communication devices of critical importance represent an important advantage in the field of air defence. With its experience in systems engineering, system level analysis and modeling and system development, ASELSAN is also ready to undertake important tasks in Turkey's ballistic missile defence system solution.

SHORT AND MEDIUM RANGE AIR DEFENCE MISSILE SYSTEMS (HISAR-A AND HISAR-O)

The Short and Medium Range Air Defence Missile Systems will fulfill its duty to neutralise low- and medium- altitude threats within the scope of point and regional air defence. Within the scope of the HISAR-A Project, the Self Propelled Autonomous Short Range Air Defence Missile System (SPASRADMS) and Missile Launching System, and the Short Range Air Defence Missile which can be launched from these two configurations will be developed and produced. The product and production line qualification tests will be also performed. The HISAR-O project includes the development, production and the product/ production line qualifications of the Battalion Fire Control Center, the Battery Fire Control Center, Medium Range Air Defence Radar, Air Defence Early Warning Systems with Tactical Data Link Interface (Link-16), the Electro-Optical System, the Missile Launching System, the Missile Transportation and Loading System and the Medium Range Air Defence Missile. At the same time, the Missile Transportation Loading System and Education Center are also developed as supportive equipment in the HISAR projects.

System Operation Tests were carried out in the HİSAR-A Project. The HİSAR-A Firing Test, conducted on 8 March 2019, was successfully performed by using the Fire Control Equipment (FCE) and Missile Launching System. To test the system's maximum range and altitude performance to its maximum capacity, two high speed target aircraft were used in attack scenarios approaching from different ranges and altitudes.





IN JANUARY 2018, TWO SEPARATE CONTRACTS WERE SIGNED WITHIN THE SCOPE OF LONG RANGE REGIONAL AIR AND MISSILE DEFENCE SYSTEM PROJECTS IN ORDER TO MEET THE NEEDS OF THE TURKISH ARMED FORCES.



On 3 October 2019, a vertical test firing was successfully carried out through the HİSAR-A SPASRADMS. Meanwhile, the WarHead Firing Test was conducted through the HİSAR-A SPASRADMS on 12 October 2019. The effectiveness of the system at maximum range and altitude was tested with the successful destruction of the high speed target aircraft. The company is now ready for the Mass Production Stage within the scope of the HİSAR-A Project.

In the HİSAR-O Project, Fireless System Operation Tests were completed and the qualification will be completed with the Fire System Operation Tests to be carried out. In the fire test campaign in May 2019, the HİSAR-O System Level Closed Loop fire test activity was carried out through the Missile Launching System.

LONG RANGE REGION AIR AND MISSILE DEFENCE SYSTEM PROJECTS

In January 2018, within the scope of Long Range Region Air and Missile Defence System Projects, two separate contracts were signed in order to meet the requirements of the Turkish Armed Forces.

Under the "Concept Definition Project" contract, which extends for 18 months and has been undertaken by the ASELSAN-ROKETSAN-EUROSAM Business Partnership, system concept definition work is carried out. Within the scope of the SİPER Project, which has been undertaken by the ASELSAN-ROKETSAN-TÜBİTAK-SAGE joint venture, the design, development, prototype production, integration, testing and acceptance of the system will be carried out. The activities that are carried out in both projects continue in accordance with project implementation schedules.

FIRE CONTROL DEVICE (FCD) SET AND 35 MM MODERNIZED TOWED GUNS (MTG)

The Fire Control Device (FCD) Set offers a state-of-the-art, low-altitude air defence solution for performing effective air defence of critical facilities and fixed military units against modern air threats such as air-to-surface missiles, cruise missiles and unmanned aerial vehicles. The typical FCD Set consists of a Fire Control Device (FCD), two 35 mm Modernized Towed Guns (MTG) and a Low Altitude Air Defence Missile Launch System. The FCD Set can work with the Air Defence Early Warning and Command Control System (HERİKKS) in an integrated manner. It can also carry out the functions of target detection, chase and prevention autonomously as a set.

35 MM AIR DEFENCE SYSTEM MODERNIZATION (ADSM) AND AIRBURST AMMUNITION SUPPLY (ABAS) PROJECT CONTRACT

In order to meet the requirements of the Land Forces Command and Air Force Command, a mass production contract covering the production of Modernized Towed Guns (MTG), Fire Control Device (FCD) and airburst ammunition was signed at the end of 2017. Under the contract, mass production of the Battery Command and Control Center to be developed for the Land Forces Command and the Battery Command and Control Operations Center to be developed for the Air Forces Command will be realized. The project's implementation schedule began in June 2018 and work on mass production continued extensively throughout 2019. The "1st Option Package", which includes additional purchases, was included in the contract in 2019.

GÖKDENİZ CLOSE-IN AIR DEFENCE SYSTEM

Together with the 35 mm Airburst Ammunition (ATOM) developed by ASELSAN, the GÖKDENIZ Close-In Air Defence System is a point air defence system that provides activity against anti-ship missiles targeting the ship the system is stationed on. The work to be carried out for the productization of the GÖKDENIZ Close-In Air Defence System in accordance with the needs of the Naval Forces Command was added to the 35 mm Air Defence System Modernization and Airburst Ammunition Supply contract as the Technology Acquisition Obligation.

GÖKDENİZ CLOSE-IN AIR DEFENCE SYSTEM EXPORT CONTRACT

The contract for the first sale and export of the GÖKDENIZ Close-In Air Defence System to an Asian country was signed in July 2019. Under the contract, one GÖKDENIZ Close-In Air Defence System will be delivered.

THE KORKUT LOW ALTITUDE AIR DEFENCE WEAPON SYSTEM WITH SELF PROPELLED GUN

The KORKUT System will serve as teams consisting of three Weapon System Vehicles (WSV) and a Command and Control Vehicle (CCV). Each KORKUT team can operate in integration with the Air Defence Early Warning and Command Control System (HERİKKS), as well as autonomously perform the functions of target detection, chase and prevention as a team. The KORKUT System offers an effective air defence solution against current air threats such as cruise missiles, air-to-surface missiles and unmanned aerial vehicles when used together with airburst ammunition.

MASS PRODUCTION OF THE KORKUT SYSTEMS

Within the scope of the contract including the supply of KORKUT Systems, which was signed in 2016 in order to meet the needs of the Land Forces Command, 13 Weapon System Vehicles and 4 Command and Control Vehicles were successfully produced and delivered in 2019. Deliveries of the systems will continue between 2020 and 2022.

ELECTROMAGNETIC LAUNCH SYSTEM DEVELOPMENT STUDIES

The Electromagnetic Launch (EML) technology is a groundbreaking technological area which presents an alternative to propulsion systems using rocket motors and weapon systems based on firing ammunition from the barrel by using proppelant. Thanks to the use of the EML in weapon system design, much higher barrel exit velocities can be achieved than weapons fired from a conventional barrel, and the ammunition can be fired over much longer ranges. In order to increase its gains in this field, ASELSAN continues studies on this system and subsystem development with its own resources and with support from TÜBİTAK TEYDEB. The ASELSAN Electromagnetic Launch System Development laboratory, equipped with advanced development and testing infrastructures to advance these studies further, was opened on 22 November 2019. In the firing tests carried out within the scope of the opening, a record was broken by achieving the highest level of barrel exit energy and efficiency in this field in Turkey.

NSPA STİNGER LAUNCHER SYSTEM PROJECT

The Stinger Launcher System Mid-Life Extension and Service Support Contract was signed between the NATO Procurement and Supply Agency (NSPA) and ASELSAN in May 2019. Within the scope of the project, the acceptance firings for the Stinger Launch System delivery were successfully conducted on the Greek Island of Crete, with the NATO Missile Firing Installation (NAMFI) was successfully conducted between 25 August and 4 September 2019.

IHTAR ANTI-DRONE SYSTEM

Three separate contracts were signed on 30 May 2019, 28 June 2019 and 9 October 2019 under the Mini UAV Detection and Prevention System (İHTAR). The Temporary Acceptance Tests of the second project for the urgent needs of the Turkish Armed Forces began in September 2019 and were successfully completed in early October. The systems are actively used in the field. Intensive work is underway for the delivery of the first and third contracts and deliveries will be carried out in the first quarter of 2020.



THE CONTRACT FOR THE FIRST SALE AND EXPORT OF THE GÖKDENIZ CLOSE-IN WEAPON SYSTEM (CIWS) FOR AIR DEFENCE TO AN ASIAN COUNTRY WAS SIGNED IN JULY 2019. WITHIN THE SCOPE OF THE CONTRACT, ONE GÖKDENIZ CIWS WILL BE DELIVERED.





LAND SYSTEMS

ASELSAN continued work on the design, development, modernization, production and logistic support activities for Land Systems. Our extensive range of unique products, which have been proven in the field, along with our more than thirty years of experience in Land Systems allows us to rapidly offer solutions tailored to the needs of the Turkish Armed Forces, the Gendarmerie General Command, the General Directorate of Security and the armed forces of friendly/allied foreign countries.

ARTILLERY, HOWITZERS, MORTARS AND ROCKET LAUNCHER FIRE DIRECTION SYSTEMS

The design, production and delivery activities of the Fire Direction Systems, which enable the artillery, howitzer, mortar and rocket launcher troops to perform their missions in a faster and more precise manner by providing the automation of the technical fire direction process, were carried out.

ARMORED VEHICLE EQUIPMENT AND MODERNIZATION

The Special Purpose Tactical Wheeled Armored Vehicle Mission Equipment Supply Contract was signed with FNSS Savunma Sistemleri A.Ş. on 25 December 2019. Under the contract, 5 different Mission Equipment configurations including Command Control, Communication, the SARP and NEFER Weapon Turrets, Navigation, Electro Optics, and Radar systems will be produced by ASELSAN to be integrated to 100 of the 6x6 and 8x8 vehicles that are included in the project. With the related Mission Equipment, the command control and communication needs of the combat troops will be met. An effective reconnaissance activity will be carried out through the Remote Controlled Weapon Turrets, Navigation, Electro Optics and Radar systems.

On 30 December 2019, the Armored Combat Vehicle Modernization Project Contract was signed with the Defence Industry Presidency. Within the scope of the project, 133 armored combat vehicles will be modernized and the NEFER Turret and additional task equipment will be integrated. With additional task equipment, the Laser Warning System, Close Range Surveillance System, Driver Vision System, Direction Finding and Navigation System, Air Conditioning System, Heating System, Fire Extinguishing and Explosion Suppression System will be integrated, while the Armor Protection and Mine Protection levels will be increased.

COMBAT SUPPORT SYSTEMS

Thanks to the capabilities brought into modern military vehicles and all kinds of platforms with domestic and national products developed by ASELSAN, our security forces have been able to adapt to the more challenging and variable warfare conditions of the current era.

In this context, work was conducted on subjects such as situational awareness, artificial intelligence, augmented reality, real-time vehicle tracking, target tracking / analysis and safe driving techniques. For land platforms, efforts continued to develop the system architecture.

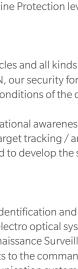
RECONNAISSANCE SURVEILLANCE SYSTEMS

The ASELSAN Reconnaissance Surveillance Systems closer identification and recognition of elements detected from a long range by radar, through the electro optical systems. Thanks to the integration of Command Control Systems, the Reconnaissance Surveillance Systems can transfer the location information pertaining to the targets to the command center over computers and radios. With the support of high-tech communication systems, the systems have the ability to transfer a high quality image of the target to the command center.

International demonstrations and field testing activities of the ASELSAN Reconnaissance Surveillance Systems were carried out.

AMMUNITION TRANSFER SYSTEMS

Production activities of the Ammunition Transfer System developed by ASELSAN and which was integrated into the POYRAZ Ammunition Resupply Vehicle were completed. It was delivered to the Land Forces Command troops having been integrated into the POYRAZ vehicle and remains under warranty.



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MILITARY WEARABLE EXOSKELETON SYSTEM

The Military Wearable Exoskeleton System, which has been under development within ASELSAN since 2017, aims to improve the performance of infantry by actively supporting the infantry's body during the operation and helping them carry their kit. In 2019, studies were carried out to improve system effectiveness and its adaptation to the person, and manned testing and verification activities were carried out.

COMMAND CONTROL, COMMUNICATION AND COMPUTER SYSTEMS

ASELSAN offers Fire Support, Reconnaissance/Surveillance and Intelligence, Integrated Battlefield Management, Electronic Warfare, Strategic Operational and Tactical Level Command Control Information Systems and Tactical Communication Systems in its wide product range with the use of modern technologies for the service of its users. ASELSAN provides the command and control hardware, software and communication systems which allow vehicles in the inventory of the Land Forces Command, the Gendarmerie General Command and the General Directorate of Services, or the vehicles that are newly added to the inventory, to function in an integrated manner into the top command control system.

FIRE SUPPORT COMMAND AND CONTROL SYSTEMS

The Fire Support Automation System (AFSAS) enables firing support to be executed in the battlefield in full compliance with other battlefield functional areas with the automation of the command, control and communication functions of the firing support.

Efforts to equip troops under the Land Forces Command with Fire Support Automation Systems are ongoing.

ELECTRONIC WARFARE COMMAND CONTROL AND COORDINATION SYSTEM

In the functional area of Electronic Warfare/Intelligence, development activities continued for the Electronic Warfare Command Control and Coordination System (EWC3S), which includes state of the art technological infrastructure and integrates all the EW elements and command posts in the battlefield. With the EWC3S, the use of all electronic warfare systems, which are either in the inventory of our Land Forces Command or which will be enter the inventory, will be more effective in a coordinated manner. The need to more quickly and more accurately evaluate, make decisions and command will be met in electronic warfare and intelligence in the rapidly accelerating and changing face of the battlefield as a result of evolving technology.

BATTALION TASK FORCE BATTLE MANAGEMENT SYSTEM (BATUR)

The development of the Battle Management System (BATUR), which provides solutions to the command and control system requirements of all combat elements under the battalion in the battlefield, continued.

The deliveries of the Command Control and Communication Systems for the anti-tank weapon carrier vehicles, which will be brought into the Land Forces Command inventory, was realized.

Efforts to develop the Under-Battalion Command Control System, which is part of the Network Assisted Capability Project of the Land Forces Command, have been started.

SOLDIER COMMAND CONTROL INFORMATION SYSTEM (CENKER)

CENKER is an integrated information system which is designed to increase the commandcontrol, situational awareness, communication, reconnaissance and surveillance capabilities of the dismounted land force at the company, team and squad levels. The location, situation, emergency messaging, tactical situation, command-control and intelligence information sharing activities of the land task force are carried out under automation with the wearable sensors, microprocessors, communication and display units that are in the system. Site inspections of the CENKER system were carried out in 2019.



ASELSAN PROVIDES COMMAND CONTROL EQUIPMENT, SOFTWARE AND COMMUNICATION SYSTEMS, WHICH ALLOW VEHICLES IN THE INVENTORY OF THE LAND FORCES COMMAND, GENDARMERIE GENERAL COMMAND AND THE GENERAL DIRECTORATE OF SECURITY, OR WHICH HAVE JUST ENTERED THE INVENTORY, TO OPERATE IN INTEGRATION WITH THE HIGH COMMAND CONTROL SYSTEM.





NETWORK ASSISTED BATTLEFIELD COMMAND AND CONTROL SYSTEMS

Work continued on the integration of a number of systems and components under a common command control architecture including systems developed by ASELSAN and are in the inventory which was offered to the use of the Land Forces Command along with the maneuver, intelligence, electronic warfare, fire support and air defence functional area command control information systems, aerial reconnaissance systems, tactical communication systems, the command post elements and the mobile elements serving in the tactical field.

MILITARY TASK COMPUTER SYSTEMS

The military task computers, military panel computers, military handheld computers, monitors and keyboards and respective cards, which can be used by integrating them into the platforms in military systems, or can be handheld, and which are suitable for the extreme conditions of the battlefield while offering high performance, were developed and produced.

The deliveries of the Friendly Force Tracking System (BTS) terminals, which will perform location tracking and which will be integrated into the TTA-2 vehicles that will enter into the inventory of the Land Forces Command, were completed.

AIR DEFENCE EARLY WARNING AND COMMAND AND CONTROL SYSTEMS (HERİKKS)

With the aim of bringing in new capabilities to the HERİKKS system and for the system to be put into use for all air defence troops within the Land Forces Command, the HERİKKS-VI contract was signed in December 2016. In addition to the existing tactical data link capabilities of the system, by bringing in the Link-16 and the JREAP capabilities, the workability of HERİKKS-VI together with Air Forces Command systems will be maximized. HERİKKS is designed to execute the command control of new generation air defence systems such as KORKUT, AİC, HİSAR-A and HİSAR-O, which are being developed and planned to be brought into the inventory in the coming period.

Within the scope of the project, one Air Defence Control and Coordination Center, nine Air Defence Operation Centers, two Early Warning Centers Interface Units, 34 items of Section Commander Interface Equipment ad 97 items of Stinger / Portable Missile Team Commander Interface Equipment are planned to be delivered in 2020.

WEAPONS AND WEAPONS FIRE CONTROL SYSTEMS

ASELSAN develops and manufactures weapons and weapons fire control systems of different caliber and types, which can be used on different platforms for land, air and sea communications. These systems are offered for service in the world's armed forces.

REMOTE CONTROLLED WEAPON SYSTEMS (RCWS)

The ASELSAN Remote Controlled Weapon Systems (RCWS) are in service in Turkey and in 19 allied countries.

The production and deliveries of the remote controlled weapon systems which consist of the Stabilized Machine Gun System (STAMP), the 25 mm Stabilized Gun System (STOP) and the 30 mm Stabilized Gun System (MUHAFIZ), which have been developed for marine platforms, continued within the scope of orders received from Turkey and abroad.

The first mass production of the new generation STAMP-2 and STOP systems with features such as Advanced User Interface, Integrated Training Simulator and Precision Stabilized Electro-Optical suit were realized with the deliveries successfully completed, and the systems entered the inventory of the Naval Forces Command.

Contracts were signed with the Sultanate of Oman and Qatar for the export of the STAMP-2 system.

In order to meet the needs of the Philippines Naval Forces Command, the first export of the 30 mm Remote Command Stabilized Gun System (SMASH) to Philippines was realized.

Work to render the STAMP-2 system lightweight and to develop a version suitable for Russian made weapons has got underway.



Mass production and deliveries continued for the SARP Remote Controlled Weapons System, which has been developed for use as a close defence weapon to neutralise land based and airborne threats against land vehicles or fixed facilities and which will meet the needs of the Land Forces Command, the Gendarmerie General Command and the General Directorate of Security. As of the end of 2019, a total of 2,700 SARP Systems had been delivered.

Work is continuing for the signing of contracts to export the SARP System to Hungary.

Within the scope of the requirements of the General Directorate of Security, the Qatar Armed Forces and the Kuwait Armed Forces, qualification activities were completed for the SARP-ZAFER system with under-armor ammunition reloading capability, in which the 7.62 mm and 12.7 mm machine gun can be integrated. The SARP-ZAFER weapons system is expected to enter the inventory in 2020.

Developmental work for the SARP-KPVT System, designed to provide deterrence and protection against threats with the use of Russian made 14.5 mm machine guns, was completed. The product can be integrated into the different vehicle types of different platform manufacturers. The system is assessed to be given to various security units, especially the Gendarmerie General Command, in Turkey. The system is aimed to be an important export item in the foreign markets.

The testing activities for the SARP-L Weapons System, to which the 7.62 mm and 5.56 mm machine guns can be integrated, were conducted within the scope of the needs of the General Directorate of Security, the Land Forces Command and the Armed Forces of Bahrain. The SARP-L Weapons System is expected to enter into the inventory in 2020.

Prototype production of the new generation NEFER Unmanned Turret System, which can be fitted with the 25/30 mm automatic guns and anti-tank missiles of Western or Eastern origin, on which a 12.7 mm or 7.62 mm co-axial weapon can be mounted, was realized. The NEFER System, which has an independent electro-optical system, is expected to be in inventory by 2020.

The developmental work of the NEFER-L Remote Controlled Weapon System, designed for use against armored land targets in armored combat vehicles, other tactical land platforms and fixed facilities, was completed. The first demonstration of the system was realized at the IDEF 2019. The Nefer-L System, which was made to be lightweight and can be fitted on 4x4 land vehicles, is appropriate for use of the 25/30 mm guns both of NATO origin and Russian origin.

155 MM FIRTINA SELF-PROPELLED HOWITZER FIRE CONTROL SYSTEM

In 2018, the contract was signed for supply of 140 of the new generation FIRTINA Howitzer Fire Control Systems.

The effectiveness of the new generation FIRTINA Howitzer, which will be equipped with the systems developed by ASELSAN, was increased in the battlefield.

With its new turret and additional equipment, the new generation FIRTINA howitzers have gained a range of additional capabilities which will surpass their counterparts.

In this context, the gun and turret drive systems were rendered fully electrical with servo-controlled subsystem. The Fire Control System has been designed and developed according to up-to-date technologies. The Projectile Loading System was made fully automatic from the magazine to the gun barrel. The SARP remote controlled weapon system was integrated to meet the FIRTINA howitzer's need for close protection.

Verification tests for Prototype Approval started in March 2019. Factory, environmental condition and INS performance tests were carried out and the remaining firing tests for the approval of the prototype system are planned to be carried out in the first quarter of 2020. Serial production will begin after the tests.

AIR TRANSPORTABLE LIGHT TOWED HOWITZER FIRE CONTROL SYSTEM

Developed in order to meet the demand for artillery weapons with a high strike accuracy and tactical flexibility as required by constantly changing and ever more challenging combat conditions, the BORAN Howitzer with modern equipment is a lightweight











solution which can be transported by helicopter. The Fire Control System of the BORAN Howitzer was developed by ASELSAN as part of the Air Transportable Light Towed Howitzer Development project. With the fire control system, the fire readiness, management and control missions are executed through a computer and digital integration to other fire support elements is provided. Design activities and prototype production activities were completed and the system is ready for serial production.

TRUCK MOUNTED 155 MM HOWITZER SYSTEMS

Work continues to provide the 155 mm Towed PANTER Howitzers, which are currently included in the inventory, with new capabilities by modernizing the equipment and increasing their effectiveness, reliability and the speed the PANTER Howitzers can execute missions by integrating them on tactical wheeled vehicles.

Contract work was carried out with Askeri Fabrika ve Tersane İşletme A.Ş., which was assigned by the General Directorate of Military Factories and the Republic of Turkey, Ministry of Health of National Defence.

MULTI-BARREL ROCKET LAUNCHER WEAPON MANAGEMENT SYSTEMS

The Multi-Barrel Rocket Launcher Weapon Management Systems provide transition, deployment, firing preparation and firing control operations of multi-barrel rocket launchers.

Business development activities were carried out to sell the Multi-Barrel Rocket Launcher Weapon Management Systems both in Turkey and abroad.

ALKAR 81/120 MM MORTAR SYSTEM

The ALKAR 81/120 mm Mortar Weapon System is a modern weapon system integrated on the turret, fully equipped with Automatic Barrel Laying System, Ammunition Loading System (120 mm), Recoil Mechanism and Fire Control Systems, and is designed entirely by ASELSAN. Domestic/ foreign rifled or smoothbore mortar barrels can be integrated into the ALKAR 81/120 mm Mortar Weapon System.

Business development activities were carried out for the ALKAR Mortar Weapon Systems in Turkey and abroad.

81/120 MM MORTAR FIRE DIRECTING AND ALIGNING SYSTEM

Work continued for the more effective, faster and more reliable use of the 81 mm and 120 mm mortars, the system that allows the mortar to be directed precisely within a shorter space of time while simultaneously allowing the calculation of fire commands and laying of the barrel with the help of a screen display with the system computer.

60 MM DIRECT FIRE CONTROL SYSTEM

Developmental work continued on the system, designed to enable the more effective and reliable use of 60 mm mortars.

MAIN BATTLE TANK SYSTEMS

ASELSAN offers unique solutions that meet all existing needs for light, medium and heavyclass main battle tanks and improve the performance of tanks to exceed the performance of existing tanks. These solutions are built on the system solutions which constitute the infrastructure of ALTAY, our national Main Battle Tank, and are developed domestically by ASELSAN. Adaptations were made in accordance with platform requirements and the tactical needs of the users.

ALTAY TANK FIRE CONTROL AND ELECTRONIC SYSTEMS

The contract was signed with the main contractor company for the ALTAY Serial Production Project on 1 May 2019. For the tanks to be produced within the scope of the project, ASELSAN will provide the Fire Control System, Electrical Gun and Turret Drive System, Command Control Communication and Information System, Driver Vision System, Laser Warning System, Remote Controlled Weapon System, Battlefield Target Identification System, 360° Situational Awareness System, AKKOR Active Protection System and Embedded Training Simulator, and training tools for providing user/maintenance trainings for these products.



MODERNIZATION OF MAIN BATTLE TANKS

ASELSAN replaces existing systems in tanks with newly developed state-of-the-art systems in tank modernization projects. ASELSAN brings tanks an incomparable advantage in performance with capabilities (such as sight and pointing/stabilization accuracy, comprehensive improvements in first round hit probability and pointing/ ballistic computation speeds and automatic target tracking capability) and life cycle costs when compared to other main battle tanks around the world. While changing regional and global conditions have highlighted the indispensability of the main battle tanks on the battlefield, with its experience and state-of-the-art tank modernization solutions, ASELSAN takes on the role of a leading company in heavy-class tank modernizations (Leopard 1, Leopard 2, M60) and light-class tank modernizations (T-72).

Within the scope of the FIRAT-M60T Project, which is being carried out to more effectively protect the main battle tanks against anti-tank threats and terrorist elements and to bring additional capabilities to existing systems, the modernization of many M60T tanks was completed in less than a year. The project was immediately implemented, while operations were continuing, and our modernized tanks were made available for the use by our army. The M60T tanks modernized by ASELSAN formed the backbone of the Zeytin Dalı (Olive Branch), Fırat Kalkanı (Euphrates Shield) and Barış Pınarı (Peace Spring) operations, and were highly successful at all levels of the operations. After this modernization project, one of the most modern M60 tanks in the world has been acquired and the capabilities for both close-to-mid range firing capability, near-to-far range survivability and defensive features, as well as the capabilities for the maintainability of tanks and personnel were increased to higher levels.

SMART MUNITIONS AND ACTIVE PROTECTION SYSTEMS

ASELSAN provides solutions for smart munitions of naval, air, land platforms and active protection systems. With having valuable experience on military electronic design, ASELSAN continues to design and manufacture medium and large caliber smart munitions to provide high hit probability by integrating electronic units into munitions.

Active protection systems detect and destroy threats before impact on military land vehicles. ASELSAN designs and manufactures active protection systems to provide effective solutions for protection of military land vehicles in battle area against threats.



ATOM 40 MM HIGH VELOCITY AIRBURST GRENADE

Effectiveness of ATOM 40 mm High Velocity Airburst Grenade, which will be qualified in first half of 2020, against mini/micro UAVs has been proved with a demonstration coordinated by Presidency of Defense Industries on 11th of September 2019. Mini UAV targets were successfully destroyed by the ATOM 40 mm fired by ASELSAN's remote weapon system SARP which is integrated with ASELSAN's anti-drone system İHTAR. ATOM 40 mm is programmed to the exact time of detonation while leaving the barrel. Using a pre-fragmented shell that is optimized for the target set, high hit probability is ensured. ATOM 40 mm will be delivered with 40 mm Hard-kill System that is expected to be within the scope of İHTAR contract signed with the Presidency of Defense Industries





ATOM 35 MM AIRBURST AMMUNITON

Serial production contract between Presidency of Defense Industries and ASELSAN Inc. for the production 35 mm Air Burst Ammunition was signed on 27th December 2017. Regarding this, first batch of contract that is 5250 units of Airburst Ammunition is delivered in July 2019 and the second batch of 9000 units of Airburst Ammunition was successfully delivered in December 2019.

On 7th of November 2019, Presidency of Defence Industries officially informed that first optional part of contract has been activated. Together with Option 1 regarding the contract, 167.970 units of ammunition will be manufactured. Electromechanical fuze of Airburst Ammunition is produced at ASELSAN Macunköy Plant within the automated fuze production line and approximately 45.000 units of fuze have been produced during 2019.

ATOM 35 mm Airburst Ammunition, together with ability of precise time counting and the capability of being programmed during firing by taking muzzle velocity into consideration; ATOM 35 mm Air Burst Ammunition provides high hit probability against various types of air and land targets.

COURSE CORRECTION SOLUTIONS FOR MORTAR AND HOWITZER MUNITIONS

ASELSAN makes efforts to increase the effectiveness of mortar and howitzer munitions by providing course correction solutions. The recent studied solution is based on the idea of correcting the muzzle velocity deviations by integrating newly developed electromechanical fuze into the conventional 105/155 mm artillery ammunition. According the deviation of the muzzle velocity from nominal values, the opening time of air brakes located in the fuze is determined. The air brakes are opened at the intended point programmed after the ammunition leaves the barrel. Course Correction Fuze shall be used with all types of 105/155 mm artillery munitions.

ACTIVE PROTECTION SYSTEMS

Regarding the contract that was signed between Presidency of Defence Industry and ASELSAN, AKKOR system is being developed for ALTAY tank. AKKOR is a system that detects the approaching threat (e.g anti tank missiles) and causes the threat to be triggered or to be neutralized before it reaches the tank. Besides ASELSAN's expertise on gun/sensor systems, acquired experience and assets that is possessed on smart munitions are being aimed to develop hard kill ammunition which is one of the main components of the system.

Active Protection Systems are sophisticated systems that needs to be developed considering the properties of defended platform, types of threats and residual effects of the ammunition itself. ASELSAN will continue to study developing new Active Protection Systems in coming periods for various other platforms by taking into account the requirements and properties of sensors, guns and munitions.







ASELSAN PRODUCES AND DEVELOPS THERMAL SYSTEMS, DAYTIME VISION SYSTEMS, NIGHT VISION SYSTEMS, LASER SYSTEMS, ELECTRO-OPTIC COUNTERMEASURE SYSTEMS AND MULTI-SENSOR ELECTRO-OPTICAL SYSTEMS.

MICROELECTRONICS, GUIDANCE AND ELECTRO-OPTICS BUSINESS SECTOR









ELECTRO-OPTIC SYSTEMS

Within the scope of the Electro-Optic (E/O) System solutions for land, air and sea platforms, activities are carried out on thermal vision, daytime vision, image enhancing night vision, laser, multi-sensor E/O systems and E/O counter-measures as well as basic technologies used in E/O systems.

NAVAL SYSTEMS

The Contract for the supply of the DENIZGOZU AHTAPOT-S Electro-Optical Reconnaissance and Surveillance System was signed at October 7th, 2019 with the Republic of Turkey, Ministry of Defence for the needs of Turkish Naval Force.

FAT, HAT and SAT tests of LİS and DENIZGOZU AHTAPOT Systems and LIS System have been completed on TCG KINALIADA which is the 4th ship of MILGEM Project. PIRI Infrared Search and Tracking System and AHTAPOT System production has started for LHD (Multi-Purpose Amphibious Assault Ship).

The final deliveries out of 10 Submarine Periscope Thermal Cameras (DEPETEK) was completed for the German periscope supplier Hensoldt Opt. GmbH. YUNUS Systems are put into operation for use of Turkish Coast Guards.

SGRS Project acceptance activities have started. Acceptance of Cavus Island Coast Guard Station coastal surveillance systems and temporary acceptance of Hopa Coast Guard



SEAEYE KIRLANGIÇ



SEAEYE MARTI



LASER WARNING SYSTEM



ATS-71



EYE-LR-S

Station coastal surveillance systems have been completed. Regarding the needs of Turkish Coast Guards, the production of KIRLANGIC and MARTI Systems has started.

Two contracts for the Laser Warning System (LIS), which was designed to alert against laser threats, have been signed with separate abroad customers. Factory Acceptance Test of Advanced LIS for LHD Project was successfully completed.

RECONNAISSANCE AND SURVEILLANCE SYSTEMS

With the number of deliveries approaching 3.000 each, ATS-70/71 is used by Turkish Land Forces, Turkish Gendarmerie and Turkish National Police as the constant sight system of SARP RCWS.

Regarding the needs of a foreign client's missile sight, EYE-LR-S Thermal Camera deliveries have been completed. The high performance EYE-LR Thermal Camera family, which can also be used for reconnaissance and surveillance against Mini / Micro UAV threats, have been delivered within the scope of domestic and international contracts.

The deliveries of FALCONEYE-MW E/O Systems have been completed within the scope of ATES and KAYI Border Security Projects. Production activities of FALCONEYE-MW have started for the needs of EU Border Security Project and Turkish Gendarmerie.

A contract was signed with a foreign platform manufacturer company for PERIEYE thermal cameras.

Within the scope of the contract signed with FNSS for the need of Weapon Carrier Vehicles (STA) of Turkish Armed Forces, deliveries of SAGER-STA E/O systems produced for STAs with KORNET-E Weapon Systems have been completed.

Preparation of manufacturing/test lines and system integration laboratories of ALTAY Turkish Main Battle Tank Serial Production Program continues.

FALCONEYE-MW, YAMGOZ and ATS-70 deliveries continue within the scope of MGUB Projects. 8th stage of E/O deliveries have been successfully completed and 9th stage deliveries are on the way.

After the successful completion of qualification tests, DRAGONEYE E/O Systems serial production has started in 2019. Nearly 200 deliveries were achieved, of which the main end-users are Turkish Armed Forces and Qatar Armed Forces.



EYE-LR-L



TANK DRIVER VISION SYSTEM



YAMGOZ

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Tank Driver Vision System (TSGS), Tank Laser Warning System (TLUS), YAMGOZ and ATS-70 deliveries have been completed in M60T Tank Modernization Project.

In DNTSS-II Project, the deliveries of nationally redesigned Thermal Sight Unit (TSU) and Thermal Electronics Units (TEU), used for the maintenance of Armored Combat Vehicles (ZMA) are completed.

E/O systems, consists of PERIEYE Thermal Camera, GUNGOR-HD-M Day Sight and ADLR Laser Range Finder have been delivered in KORKUT Project.



DRAGONEYE





THERMAL CLIP-ON WITH 1,5X-6X DAY LIGHT





THERMAL CLIP-ON WITH 3-12X SNIPER SCOPE



ENCLOSED REFLEX SIGHT



3-12X SNIPER SCOPE

PORTABLE TACTICAL SYSTEMS

Within the scope of "Komando Modernizasyonu" and "MPT-76" projects aimed at the needs of Turkish Land Forces, deliveries of 1x-4x, 1.5x-6x Day Sights, Reflex Sights, SRS3-12 Sniper Scopes, Clip-on devices have continued.

Eye-Mobile Thermal Handheld Sight, STINGER Mini Thermal Weapon Sight and Thermal Weapon Sights were delivered to the several foreign end-users.

Within the scope of the need of Turkish Naval Forces, Day Sights were delivered. DORUK E/O Sensor Systems have been delivered to Turkish Land Forces.

Sniper Scopes with accessories and Day Sights were delivered to Turkish Air Forces. SHARPEYE Electro-Optic Sensor Systems, Day Sights and Thermal Sight Clip-on were delivered to Turkish Gendarmerie.



DORUK EO SENSOR SYSTEM



ATMACA

TARGETING SYSTEMS

Integrated Electro Optical System (IEOS) Technology Development Project under the Turkish Fighter Development (TF-X) Program has been going on.

Serial production of the ASELPOD Targeting System together with indigenous subsystems is ongoing and deliveries was carried out within the framework of domestic and foreign contracts.

CATS E/O Reconnaissance, Surveillance and Targeting System has integrated to different platforms. Design of DASS (Distributed Aperture Surveillance System) for rotary wing platforms has been started with same infrastructure of CATS.

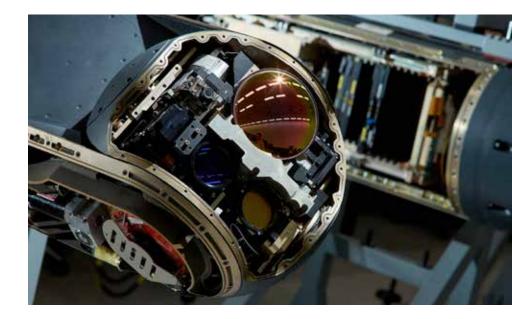
Deliveries of ASELFLIR-300T E/O Reconnaissance, Surveillance and Targeting System were realized within the scope of the ATAK Project. ASELFLIR-300T deliveries for the modernization of the Cobra Helicopter is ongoing within the scope of an international contract.

Electro Optical Wide Area Surveillance and ATMACA Reconnaissance and Surveillance Systems Factory Acceptance Tests were performed.

ATMACA, KUZGUN and FINCH E/O Reconnaissance and Surveillance Systems were deployed on unmanned platforms.



ASELPOD





KUZGUN



LASER DEFENCE SYSTEM

LASER SYSTEMS

ASELSAN crowned its laser systems designs, which has been continuing for more than 20 years, in 2019 with the Laser Defence System-Mobile (LSS-M) product.

LSS-M, which is considered to be a superior power factor to adversary systems in the tactical field regarding 21st century war technology, has been developed with ASELSAN's own resources.

ASELSAN LSS-M has been developed for the detection and destruction of suspicious objects and hand-made explosives, tarpaulin and cover-like temporary barriers used in residential areas and mini-UAVs. Demonstrations of the system to end users continues.

ELECTRO-OPTICS PRODUCTS PROGRAMS

Deliveries of A-Series Night Vision Devices to various end-users in Turkey and abroad have been completed. A portable E/O device was exported to an African country for the first time and with this delivery, this country was added to the list of export countries.

With the cooperation of ASELSAN Middle East (AME), IGLA Mini-TSD and IGLA YIGIT E/O system deliveries were made in order to meet the thermal vision system needs of a country in the Middle East.

Night vision kits, night vision attachments, sniper scope and thermal camera sales were made to our subsidiary, Kazakhstan ASELSAN Engineering (KAE).

INFRARED PHOTON DETECTORS

MCT (Mercury Cadmium Telluride) cooled infrared detector development activities have been progressing within the scope of TF-X Integrated Electro-Optical System Technology Development and Infrared Detector Assembly Development Projects.

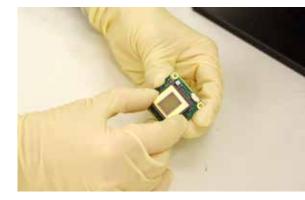
Design verification and qualification for MWIR MCT detectors are planned to be completed in 2020-2021 according to the Infrared Detector Assembly Development Project schedule.

Super-lattice cooled infrared detector and SWIR uncooled detector development activities have advanced. Super-lattice and SWIR detectors are planned to be integrated into ASELSAN thermal cameras.



MULTI LASER SENSOR SYSTEM

ASELSAN CROWNED ITS LASER SYSTEMS DESIGNS, WHICH HAS BEEN CONTINUING FOR MORE THAN 20 YEARS, IN 2019 WITH THE LASER DEFENCE SYSTEM-MOBILE (LSS-M) PRODUCT.







UVTUBE 2

UV SOLAR BLIND IMAGE INTENSIFIER TUBE

UV Solar Blind Image Intensifier Tube production and fiber optical bonding with sensor chip have continued for missile warning applications.

INERTIAL MEASUREMENT UNITS (IMU)

ASELSAN has continued integration activities of the domestically designed KILAVUZ series Tactical and Navigational Grade IMU's for miscellaneous platforms for the mission of gaining the critical technologies.

Activities to integrate domestically designed and produced Tactical Grade Inertial Measurement Unit (KILAVUZ-20) into Precision Guidance Unit 2 (HGK) are in progress. After the completion of verification tests, serial production of KILAVUZ 20 is planned to be started.

KILAVUZ-10 Inertial Measurement Units have been delivered to different domestic firms in Turkey in order to integrate and use in their original systems.



KILAVUZ-10 (TG-IMU)



KILAVUZ-20 (TG-IMU)



KILAVUZ-100 (NG-IMU)



UNCOOLED INFRARED THERMAL DETECTORS (MICROBOLOMETER)

Microbolometer type detectors are used in ASELSAN Thermal Weapon Sights, Surveillance and Reconnaissance Systems and Missile Seeker Heads.

Prototype detectors have been manufactured in a progressive manner during the year of 2019 at ASELSAN's MEMS facility.

Vacuum packaging processes for the detectors have also been developed by ASELSAN.

The design validation activities are ongoing and it is aimed to complete line and product qualification and start production in 2020.





AVIONIC SYSTEMS

ASELSAN continued manufacturing and delivery activities regarding Gendarmerie Helicopter Modernization, Turkish Special Forces Helicopter Modernization, ATAK, ANKA, Turkish Utility Helicopter, Turkish Light Utility Helicopter (GÖKBEY) and HÜRKUŞ-B New Generation Basic Trainer Aircraft Programs.

HELICOPTER PROGRAMS

ASELSAN is responsible for the development of hardware and software of Avionic Central Control Computer (ACCC), development and integration of all other avionic and weapon systems managed by ACCC for the ATAK Program. Besides, serial production, delivery of avionic systems and technical support activities for the program are performed.

Deliveries for one Prototype Helicopter, nine EDH Helicopters, twenty-nine ATAK Phase-1 Helicopters and twenty-one ATAK Phase-2 Helicopters were completed in the Program.

"Initial Flight Tests" with the "Integrated Central Control Computer" which is designed for ATAK Phase-2 Helicopter has been accomplished in the scope of ATAK Phase-2 Helicopter Qualification.

Kit deliveries have been continued for the EGEMEN Helicopters developed for the Republic of Turkey, Ministry of Interior.

The design and integration of Helmet Integrated Cueing System (AVCI), which was specifically developed for T-129 ATAK Helicopter is completed. The serial production and kit deliveries of AVCI has been continued.

In scope of AH-1W Helicopter Modernization Program for Turkish Land Forces, integration phase has been continued.



THE FLIGHT MANAGEMENT, NAVIGATION, ELECTRO-OPTIC, COMMUNICATION, RADAR, ELECTRONIC WARFARE, WEAPON AND MISSION SYSTEMS DESIGNED AND MANUFACTURED BY ASELSAN HAVE BEEN FIELDED AND OPERATED BY THE TURKISH ARMED FORCES FOR MANY YEARS.



ASELSAN STATE OF THE ART INDIGINEOUS AVIONICS SYSTEMS DEVELOPED AND PRODUCED IN THE SCOPE OF ASELSAN AND SIKORSKY COLLABORATION ARE NOW INVOLVED IN THE STANDARD CONFIGURATION OF BLACK HAWK HELICOPTERS.



For various air platforms of Turkish Land Forces, design and integration activities concerning ASELSAN Software Defined Radios and Identification of Friend or Foe (IFF Mod-5) Systems have been continuing.

With the Turkish Utility Helicopter Program signed with Sikorsky Aircraft Company, ASELSAN is responsible for the development, production and integration of critical avionic systems including mission, navigation, communication and electronic warfare systems. After integration of ASELSAN indigenous IMAS (Integrated Modular Avionics System) System, S-70i helicopter will be renamed as T-70. Hardware and software development activities are completed, testing and verification process have been continued in the Program. Platform initial flight tests are scheduled to be performed in the first half of year 2020.

Within the scope of the Avionic Modernization of Gendarmerie Helicopter Program, ASELSAN is responsible for the avionic modernization of Sikorsky S-70A, AB-205 and Mi-17 helicopters currently existing in inventory of Turkish Gendarmerie. Serial integration activities for Mi-17 and AB-205 helicopters are completed and serial integration activities for S-70A helicopters are still running.

The Modernization of Turkish Special Forces S-70A helicopters has been included in the Gendarmerie Helicopters Avionics Modernization Project contract, and with the completion of prototype integration the serial integration phase was initiated.

ASELSAN signed an export contract with TUSAS for the modernization of AH-1E Cobra Helicopters in 2015. In June 2017, the scope of the contract has been expanded by addition of AH-1F Cobra Helicopters. Serial production deliveries have been continued in compliance with the contract.

As a part of GÖKBEY Light Utility Helicopter Program, for military and civilian purpose light utility helicopter prototypes, ASELSAN is responsible for the development of certified (Civilian standards) cockpit avionics, automatic flight control computers, health and usage monitoring computers, mission and flight management software as a national project. Besides development activities of the Program, currently existing ASELSAN avionic systems are integrated to the helicopter as well. Certification activities have been continued





with regards to civil helicopter configuration and the deliveries of the developed avionic equipment have been completed for the civilian type helicopter. GÖKBEY Helicopter certification flights have been started in June 2019.

Deliveries of HTAWS (Helicopter Terrain Awareness and Warning System) integrated to the tablets have been completed in 2017 for the contract signed with STM. Serial integration activities have been continued in 2019 for the helicopters of 7 different end users.

In the scope of the contract signed with PDI, newly developed HTAWS displayed in the cockpit as integrated with other avionics of the platform, will be integrated to helicopters of Turkish Land Forces (S-70A Blackhawk, UH-1H/AB-205 and AS-532 Cougar). PDR has been completed successfully and development activities are still ongoing.

The integration activities of TEMREN Guidance Missiles to S-70B Sea Hawk Helicopters of Turkish Naval Forces have been continued.

AIRCRAFT PROGRAMS

As part of Turkish Airborne Reconnaissance Program (TARP), the integrated logistic support under warranty period is continuing for the first lot of delivered and operational EO/ IR reconnaissance systems on F-16s. Furthermore, the scope of the TARP contract has been expanded to meet the additional needs of TurAF. The deliveries are planned to be completed within 2020.

Under ANKA UAV Program, Flight Control Computer (FCC), Mission Computer (MC), Inertial Navigation System (ANS), Electro-Optical Reconnaissance, Surveillance and Targeting System (CATS) are indigenously developed and integrated by ASELSAN.

In the scope of the New Generation Basic Trainer Aircraft Project (HÜRKUŞ-B), avionic suite including glass cockpit displays and mission computer are developed by ASELSAN. In addition, on-board avionic equipment are integrated to the Mission Computer. ASELSAN developed Operational Flight Program (OFP) and Digital Map Software and these are updated in accordance with the feedbacks gathered after flight tests.

All the activities are accomplished in the LN-100G/GT Testing System Service Procurement Program signed with Turkish Air Force Logistics Command.

DELIVERIES OF HTAWS (HELICOPTER TERRAIN AWARENESS AND WARNING SYSTEM) INTEGRATED TO THE TABLETS HAVE BEEN COMPLETED IN 2017 FOR THE CONTRACT SIGNED WITH STM. SERIAL INTEGRATION ACTIVITIES HAVE BEEN CONTINUED IN 2019 FOR THE HELICOPTERS OF 7 DIFFERENT END USERS.



ICCC INTEGRATED CENTRAL CONTROL COMPUTER



KDU-45 KEYBOARD DISPLAY UNIT



VMFD-68 VIDEO MULTIFUNCTIONAL DISPLAY



IMD-820 INTEGRATED MISSION DISPLAY



ANS-600 AIRBORNE INERTIAL NAVIGATION SYSTEM

IN THE SCOPE OF THE NEW GENERATION BASIC TRAINER AIRCRAFT PROJECT (HÜRKUŞ-B), AVIONIC SUITE INCLUDING GLASS COCKPIT DISPLAYS AND MISSION COMPUTER ARE DEVELOPED BY ASELSAN. IN ADDITION, ON-BOARD AVIONIC EQUIPMENT ARE INTEGRATED TO THE MISSION COMPUTER. ASELSAN DEVELOPED OPERATIONAL FLIGHT PROGRAM (OFP) AND DIGITAL MAP SOFTWARE AND THESE ARE UPDATED IN ACCORDANCE WITH THE FEEDBACKS GATHERED AFTER FLIGHT TESTS.



On December 2019, ASELSAN has been awarded for Simulated Avionics Software Subcontract by HAVELSAN under the HÜRKUŞ-B Simulator (HÜRSİM) Program.

The contract is signed between ASELSAN and subcontractor company ESEN for the Radio Navigation Equipment Development Program and the Preliminary Design Phase is completed. In the scope of National IFF Program, indigenous IFF Systems will be developed by ASELSAN. The IFF systems will be integrated to 17 different airborne and naval platforms of TurAF and Turkish Naval Forces. Equipment development and integration design activities for have been continuing. System Integration Lab Tests are completed successfully for the integration of IFF Transponder system to F-16 Block 30TM platform and ground tests are progressing as scheduled.

The navigation requirement of Turkish Armed Forces has been satisfied by manufacturing and integration of indigenous ASELSAN navigation systems such as ANS-510, ANS-511 (Navigation Grade), ANS- 310, ANS-311 and ANS-313 (Tactical Grade) to various land, naval and airborne platforms through different programs since year 2010.

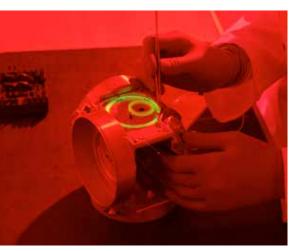
As part of the STR EİRS, Kalkan, HTR, ADESTİM and YİTP programs, deliveries of 136 land navigation systems has been completed in 2019.

Indigenous ASELSAN Land Navigation System development and integration activities for the New Generation FIRTINA Howitzer Program has been continued in the scope of Turkish Land Forces requirements. With the completion of prototype acceptance phase, a total of 140 navigation systems are going to be manufactured and delivered.

All the activities are completed for the First Party Factory Acceptances of ASELSAN Naval Navigation Systems for Turkish Navy Gabya and Barbaros platforms.

Delivery of ANS-510 Airborne Navigation Systems to ATAK, AH-1E Cobra helicopter, and ANKA MALE UAV platforms, and ANS-311 Navigation System for ANKA MALE UAV platform accomplished in compliance with the respective delivery schedules.





FILEDS OF ACTIVITY





GUIDANCE AND UNMANNED SYSTEMS

MINIATURE BOMB AND SMART MULTIPLE CARRIAGE RACK

GPS/INS guided Miniature Bomb which can be used against reinforced concrete surface targets and Smart Multiple Carriage Rack which can carry 4 Miniature Bombs were developed for the need of Turkish Air Force Command. The first Miniature Bomb was dropped from an F-16 fighter aircraft on 12 December 2019 and hit the target with high accuracy.

PRECISION GUIDANCE KITS (HGK-82, HGK-84)

The serial production of Precision Guidance Kit-84 (HGK-84) were continued in the scope of the agreement between Minister of Defense (MSB) and ASELSAN.

The production of Laser Seeker developed for HGK-84 was successfully started. HGK-84 with Laser Seeker (LHGK-84) has better target hit accuracy and has the capability of hitting moving targets also.

ASELSAN starts the serial production of HGK-82 under a contract awarded by Presidency of Defence Industries (SSB). HGK-82 is a GPS/INS guidance kit that converts MK-82 general purpose dumb bombs into all-weather precision guided munitions.

HISAR-A/O IMAGING INFRARED SEEKER DEVELOPMENT PROJECTS

HISAR Low and Mid Altitude Air Defence Missile Systems firing tests were successfully executed. HISAR Imaging Infrared seeker detected and tracked high speed target drones with high performance in all through the tests. In October, a high speed target drone in long range was shot down by a HISAR-A missile with live warhead.

LASER GUIDANCE KIT - 82/84 SERIAL PRODUCTION PROJECT

Serial production of the combat proven Laser Guidance Kits (LGK-82, LGK-84), that convert the MK-82 and MK-84 general purpose bombs into laser-guided weapons, continues. The deliveries under the contract signed with Presidency of Defence Industries in 2018 have been completed. The localization of LGK's electrical motors has been completed. LGK is successfully used in operations including the Operation Peace Spring.

KARAOK INFRARED SEEKER DEVELOPMENT PROJECT

In the KARAOK Short-Range Antitank Missile Seeker Development Project, first lot of functional seekers were delivered and flight worthy seeker development activities have been in progress.

UMTAS (LONG RANGE ANTI-TANK MISSILE)

The serial production of UMTAS Imaging Infrared Seekers continued. Firing tests of UMTAS missiles from ATAK helicopter were successfully performed.

OMTAS (MEDIUM RANGE ANTI-TANK MISSILE)

OMTAS Imaging Infrared Seeker serial production contract has been signed in January 2019 and the first lot of seekers delivered in 2019. In the firing tests performed in Weapons Carrier Vehicle (STA) project, the targets were successfully hit with OMTAS medium-range anti-tank missiles fired from vehicles in motion.



















UNMANNED SEA VEHICLE PROJECTS

Within the scope of Unmanned Surface Target Boat Purchase Service Contract, 4 ALBATROS-T and 1 ALBATROS-K services were provided in the Eastern Mediterranean Sea and North Aegean Sea.

Upon the request of the Turkish Naval Forces Command, successfully served with ALBATROS-T in the Eastern Mediterranean Invitation Exercise which was conducted in November 2019 with the participation of NATO member countries.

Within the scope of the agreement signed with the Republic of Turkey, Ministry of Defence for the procurement of 4 New Type Semi-Autonomous Survey Boats in order to meet the needs of the Naval Forces two Surveying Boats were delivered.

UNMANNED GROUND VEHICLES PROJECTS

ERTUGRUL Explosive Ordnance Disposal Robots, which were developed to meet the needs of the General Directorate of Security with the contract signed with the Presidency of Defence Industry, mass production and deliveries have been completed.

It has been continued to develop various types of unmanned vehicle kits for existing vehicles for NATO's standardization activities for interoperability of unmanned vehicles. Development and testing activities have been continued for the Kaplan Warrior prototype vehicle, which was produced by integrating a steerable weapon system on two axis on the KAPLAN vehicle platform.

Studies have been carried out on the Kaplan platform to provide the abilities of traveling autonomously to the coordinate determined on the console and tracking people or vehicles by moving around obstacles.

by walking around the obstacles that it confronts, to autonomously go to the coordinate determined on the console and to gain human or vehicle tracking capabilities.

Within the scope of the Middle Class 2nd Level Unmanned Ground Vehicle Project, development studies have been initiated for the unmanned ground vehicle capable of reconnaissance, surveillance, target detection and can be different weapons systems integrated on it.

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MINI UNMANNED AERIAL SYSTEM (MUAS)

In the Safety Project of BOTA\$ Oil and Natural Gas Pipelines, signed with SSB; MUAS development activities, which are used for target detection, surveillance and reconnaissance, can be controlled by RF link and can fulfill pre-programmed flight and mission functions, continued.

In project, two sets of MUAS Unmanned Aerial Vehicle Systems are continued by ASELSAN.

SERCE UNMANNED AERIAL SYSTEM

Within the scope of Turkish Land Forces, Turkish Air Forces, General Command of Gendarmerie and Directorate General of Security needs, SERÇE-1 and SERÇE-2 UAV Systems deliveries have been completed.

SERÇE UAV systems integrated with MGÜB (Modular Base Security Solutions) acceptances have also been completed in MGÜB Project 4, 5, 6, 7 and 8. Phases and systems to be delivered for phase 9 are being prepared.

In the Border Security System Project, Acceptance Tests for the integration of the SERÇE UAV system to the ASELSAN SECANS Systems to monitor the immediate surroundings of the base areas are continued.

The new SERÇE-3 system has been developed with the help of feedback from the field feedback and additional user requests and performed successfully flight tests In order to increase its operational efficiency, the technical efforts on mechanisms for releasing ammunition from SERÇE systems and integration on armored land vehicles have been successfully carried out at Turkey and abroad.

KAMIKAZE MULTI-ROTOR UAV

Within the scope of the MOU signed with ROKETSAN, impact tests were carried out using a live warhead with the Kamikaze Multi Rotor UAV for the first time. For the version of Larger warhead is ongoing.











KARAGOZ AEROSTAT SURVEILLANCE SYSTEM

In Border Security Project signed with SSB, KARAGÖZ Aerostat Surveillance System is developed in order to provide wide area surveillance and intelligence capability from high altitude.

In the Aerostat Wide Area Surveillance System Project, ATMACA and Wide Area Surveillance camera systems were delivered.

ARI-1T ROTARY WING MINI UAV SYSTEM

In the ARI-1T Project, improvings on Electronic Engine Control Unit integration, vibration reduction at the engine and gimbal blocks and sensitive autonomous landing and take-off capability to UAV are continuing.

NANO UAV R&D PROJECT

Development studies have been performed and test flights have been started in the scope of self-founded development project NANO UAV, which has low visual and audible signatures and is easily portable and can be integrated with ground vehicles for reconnaissance, surveillance and intelligence purposes in both open and closed environment.

SWARM UAV TECHNOLOGY GAIN OBLIGATION PROJECT

The SWARM UAV Project (The ERTUĞRUL Explosive Ordnance Disposal Robot "Technology Gain Obligation" Project) which was initiated with the protocol signed with SSB, has been successfully completed.

In order to develop the algorithms of the SWARM UAV systems locally, the necessary technological infrastructure is aimed to be created and studies have been carried out with METU, ITU and Atılım University.

SWARM UAV R&D PROJECT

The SWARM UAV Project which was Self-Funded, swarm algorithm development studies have continued.

Within the scope of the project, swarm algorithm development, autopilot development and Multi Rotor UAV integration will be realized.

TEPEGOZ TETHERED PERSISTENT SURVEILLANCE SYSTEM R&D PROJECT

Within the scope of self-funded TEPEGOZ Project, UAV development studies, which incorporates a jamming resistant datalink and a special data and power cable in order to provide prolonged perimeter protection for critical infrastructures and forward operating bases have been continued, and test flights for newly added capabilities have been started.

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IN TODAY'S COMPLEX WARFARE ENVIRONMENT, ELECTRONIC WARFARE AND RADAR SYSTEMS OFFER EXCELLENT SOLUTIONS WITH STATE-OF-THE-ART RECEIVERS, PROCESSORS, ANTENNA UNITS AND USER FEATURES. WITHIN THIS SCOPE, ASELSAN DEVELOPS NUMEROUS RADAR, ELECTRONIC SUPPORT (ES) AND ELECTRONIC ATTACK (EA) SOLUTIONS FOR THE ELECTRONIC ORDER OF BATTLE WHICH WORKS AS FORCE MULTIPLIER.

RADAR AND ELECTRONIC WARFARE SYSTEMS BUSINESS SECTOR







RADAR AND ELECTRONIC WARFARE SYSTEMS BUSINESS SECTOR



ELECTRONIC WARFARE SYSTEMS

ASELSAN has been working on equipping platforms, which are currently being used by the Turkish Armed Forces and related agencies, with indigeniously designed cutting edge Land-Based/ Airborne/Naval Electronic Warfare systems to complete their mission survivability and maximize situational awareness. Besides ASELSAN's domestic programs, ASELSAN has also been focusing on export activities to meet the international users' needs for electronic warfare systems. ASELSAN has also undertaken several concept development activities to introduce latest technologies and EW concepts, reduce the size of its existing systems to make them more compact and compatible, and improve their technical performance.

ASELSAN has been working with several strategic partners, Small and Medium-sized Enterprises (SMEs) and sub-industry companies to create a sustainable domestic ecosystem. In line with the strategic plans of ASELSAN, full cooperation with domestic subcontractors is ensured for integrated circuits, complex boards, power amplifiers, antenna adaptation units, power generators, air-conditioning units, power distribution units, power supplies, easy-to-install antenna mechanisms and masts.

EW PRODUCT LINE SYSTEMS

Advanced technology Electronic Warfare Systems, which are greatly needed for national defence, asymmetric warfare and civilian usage, are developed genuinely and domestically in order to increase the survivability of platforms, estimate location of the targets, provide situational awareness, disrupt and monitor target communication and radar systems.



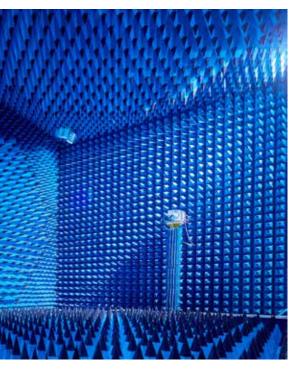
ASELSAN HAS BEEN WORKING ON EQUIPPING PLATFORMS, WHICH ARE CURRENTLY BEING USED BY THE TURKISH ARMED FORCES AND RELATED AGENCIES, WITH INDIGENIOUSLY DESIGNED CUTTING EDGE LAND-BASED/ AIRBORNE/NAVAL ELECTRONIC WARFARE SYSTEMS TO COMPLETE THEIR MISSION SURVIVABILITY AND MAXIMIZE SITUATIONAL AWARENESS. In this regard, projects have been carried out with Turkish Presidency, Turkish Presidency of Defence Industries (SSB), Turkish MoD, Turkish Armed Forces, Turkish General Directorate of Security (EGM), Turkish Military Police, Turkish Coast Guard, Turkish Special Forces, Governor's Offices, BTK, STM and other several abroad customers.

Within this context, below Contracts have been signed in year 2019:

- AKKOR Active Protection System Procurement Agreement for ALTAY MBTs
- Electronic Circuited Improvised Explosive Device (IED) Detection and Neutralization
 System Development Project
- Anti-Drone/Mini UAV RF Jammer System Procurement Project
- Anti-Drone/Mini UAV Portable RF Jammer System Procurement Project
- Manpack/Vehicle Type Jammer System Procurement Project
- EGM Manpack/Vehicle Type/Suitcase Jammer System Procurement Project
- Counter Measure System Project against IEDs
- Radar Cross Section Analysis and Signature Management Solution (Radar Absorbing Material Coating) under the scope of Preveze Class Submarine MLU Project
- Electronic Warfare Systems Procurement Agreements to Tunisia, Azerbaijan and Kazakhstan

Below deliveries have been performed in line with Contractual requirements in year 2019:

- Communications Jamming and Deception System (MUKAS)
- Portable V/UHF Electronic Attack Systems (MİLKAR-3A3)
- Radar Electronic Warfare Electronic Support Measures System
- İHASAVAR™ Anti-Drone/Minai UAV RF Jammer Systems
- MEERKAT Pocket Receivers
- KiRPi[™] Manpack Jammer Systems
- KANGAL[™] Vehicle Type Jammer Systems
- GERGEDAN™ Vehicle Type Jammer Systems
- Portable Electronic Attack System
- Doğan Class Assault Boat ESM System Modernization Project
- ARES-2NS ESM System under the scope of New Type Submarine Project
- ARES-2SC ESM System for TCG PREVEZE submarine
- RWR/GPS Antenna and Signal Distribution Unit under the scope of Pakistan AGOSTA-90B MLU Project
- 4XPOL GSM Base Station Antenna
- MSU Processing Board and Power Supply Unit under the scope of A400M Processing Board – Power Supply Unit Project
- SATCOM Radome, V/UHF Passive Blade Antennas, HF Towel Bar Antennas for Mi-17, Mi-24, Mi-8 and Mi-35 platforms, Dual Polarized Band-III+ Reflector Antennas for Portable Radio-link System, Multi-band Digital Radio, V/UHF Passive Blade Antennas and AS-532, S-70A, CN-235, AH-1W, HF Towel Bar Antennas for genuine helicopter platforms





RADAR AND ELECTRONIC WARFARE SYSTEMS BUSINESS SECTOR



Development, design, test, production and integration activities were carried out for the below listed projects in 2019. The critical design phase of many of the projects listed below has been completed.

- AKKOR and PULAT Active Protection Systems Development Projects
- Radar Jamming and Deception System (RAKAS)
- High Frequency (HF) Electronic Attack System Project, High Frequency (HF) Direction Finding (DF) and Monitoring System Project
- Portable V/UHF Electronic Support System Project
- Radar Electronic Warfare Support and Electronic Attack System Project
- Kılıç-II Class Assault Boat ESM System Modernization Project
- Productions of ARES-2NS ESM System under the scope of New Type Submarine Project
- New Generation, National Spectrum Monitoring System Project
- 4XPOL GSM Antenna Project and 8XPOL GSM Antenna Project

Broad range of Electronic Warfare products are exhibited in IDEF 2019, TDOA Receiver and MEERKAT Pocket Receiver grabbed particular attention. Furthermore, PULAT Active Protection System was demonstrated on M60T main battle tank.





DETECTION AND IDENTIFICATION OF DRONE/MINI UAV ABILITIES OF MEERKAT POCKET RECEIVER WERE SUCCESSFULLY DEMONSTRATED TO THE GENDARMERIE GENERAL COMMANDS, THE GENERAL STAFF, LAND FORCES COMMAND, SPECIAL FORCES, THE NATIONAL INTELLIGENCE ORGANIZATION, THE SIGNAL INTELLIGENCE DIRECTORATE, THE TURKISH PRESIDENCY OF DEFENCE INDUSTRIES, THE GENERAL DIRECTORATE OF SECURITY AND DEPARTMENT OF PRESIDENTIAL SECURITY.



The presentation of the High Power Electromagnetics (HPEM) System's effectiveness against Improvised Exlosive Device and Drones / mini UAV was carried out with the participation of The Turkish Presidency of Defence Industries, the General Staff, the Land Forces, the Special Forces, the Training Doctrine, the Gendarmerie General Commands and the General Directorate of Security.

Detection and identification of drone/mini UAV abilities of MEERKAT Pocket Receiver were successfully demonstrated to the Gendarmerie General Commands, The General Staff, Land Forces Command, Special Forces, the National Intelligence Organization, the Signal Intelligence Directorate, The Turkish Presidency of Defence Industries, the General Directorate of Security and Department of Presidential Security.

PULAT Active Protection System presentation was delivered in 5th Future Armored Vehicles Survivability (FAVS) event held in London.

We participated in the Communication Electronic Information Systems School Drill carried out in many regions by the General Staff, where the MUKAS System, which we delivered in 2019, was deployed. The MUKAS system successfully completed the tasks given.

The studies for the Superhydrophobic Surface Development Project have been continued with Süleyman Demirel University. Application of the end products of the project to EW system components and their testing are underway.

Flexible and High Frequency Cables -which are durable against pressure and load- for Submarine Electronic Support Systems were designed and produced domestically.

GaN Jammer Project; design & development activities for GaN based HEMT (High Electron Mobility Transistor) and MMIC (Monolithic Microwave Integrated Circuit) components were carried out. The components are planned to be used in ultra wide band and high power military and non-military applications.

Electronic Warfare applications on UAV Swarms are studied.

Research and design activities of Fluorescent nanoparticle production (Nanopar) Project were carried out.

RADAR AND ELECTRONIC WARFARE SYSTEMS BUSINESS SECTOR

Systems solution was submitted with METU MEMS to TUBİTAK for collaboration in matters of high range detection of explosives and armed personnel with the utilization of Terahertz technology in the scope of TERASENS project.

AKKOR and PULAT Active Protection System solutions were submitted for Leopard-2A4, M60A3 main battle tanks and New Generation Light Armoured Vehicles, Residential Area Vehicle, Armoured Combat Vehicle and the Tank Saving Vehicle platforms.

New counter-UAS products were continued to be designed and delivered by ASELSAN.

EW PROGRAM LINE SYSTEMS

As part of the Airborne Electronic Warfare Projects, ASELSAN conducted business operations and submitted various proposals to domestic and international users for the Electronic Warfare Self Protection (EWSP) System, the Communication Electronic Support (ES) System and the Radar Electronic Support (ES) System solutions. ASELSAN has continued its operations on schedule for the projects under the current contracts. For the R&D projects conducted with its own resources, ASELSAN performed several concept development activities to miniaturize the components and increase systems' performance.

Under the HEWS RWR/RFJ/LWR/SCPU Procurement and Integration Contract, ASELSAN continued the mass-produced HEWS deliveries, and delivered a large number of systems. In 2019, Group-A kits for S-70A-28D/DSAR Sikorsky helicopters were delivered for platform integration activities. Concerning the Electronic Warfare Support Center (EWSC),

AKKOR AND PULAT ACTIVE PROTECTION SYSTEM SOLUTIONS WERE SUBMITTED FOR LEOPARD-2A4, M60A3 MAIN BATTLE TANKS AND NEW GENERATION LIGHT ARMOURED VEHICLES, RESIDENTIAL AREA VEHICLE, ARMOURED COMBAT VEHICLE AND THE TANK SAVING VEHICLE PLATFORMS.





TECHNICAL SUPPORT WAS PROVIDED FOR THE EW SELF-PROTECTION SYSTEMS IN ATAK HELICOPTERS REGARDING THE HELICOPTER INTEGRATION OF THE PHASE-2 SYSTEMS CONSISTING OF THE RADAR WARNING RECEIVER, RF JAMMER AND LASER WARNING RECEIVER SUB-SYSTEMS. HELICOPTER QUALIFICATION ACTIVITIES HAVE BEEN INITIATED. user trainings performed and the delivery of the last phase of the laboratory has been completed. Contract Changes were signed to include the modification of the CN-235 platform integration activities along with the procurement of a DIRCM system and its integration to the system.

Technical support was provided for the EW Self-Protection Systems in ATAK Helicopters regarding the helicopter integration of the Phase-2 systems consisting of the Radar Warning Receiver, RF Jammer and Laser Warning Receiver sub-systems. Helicopter qualification activities have been initiated.

Within the scope of the General Purpose Helicopter Project, EW Self-Protection System deliveries were made, and technical documentation and support were provided.

Within the scope of the contract signed with Chile to meet its needs for electronic warfare systems, the on-site integration and testing processes were completed and delivery of all the platforms has been successfully completed within the scope of the program.

CMDS (Countermeasure Dispensing System) Support Center activities under the HEWS-CMDS/CFD (Chaff Flare Decoy) Project continued with ROKETSAN. The integration activities of HITL Simulator have been completed and HITL Integration Tests have been planned for January 2020.

As part of the development of the Next-Generation Countermeasure Dispensing System (NG-CDS), the Magazine and Dispenser Base Unit (MDBU) has been developed. The prototype MDBU is being tested within the scope of Qualification Tests.

Within the scope of the Self Protection Electronic Warfare Systems (SPEWS-II) Project, system compliance and performance tests were carried out for the Second Package F-16 Aircraft. With the positive results observed in these tests, work was carried out in order to activate the SPEWS-II System on a larger number of aircraft. Aircraft integration was completed, and pilot and line level training was repeated at the Air Forces bases and the systems started to be actively used.

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RADAR AND ELECTRONIC WARFARE SYSTEMS BUSINESS SECTOR

Within the scope of the project carried out by The Turkish Presidency of Defence Industries and ASELSAN, aircraft modification and certification activities were carried out on the business jet, which will be delivered by integrating special task systems that are developed and/or supplied by ASELSAN. The aircraft modification was brought to a mature stage by the platform modification subcontractor, ground tests got underway and the Certification Plan was approved.

The Electronic Support Measures (ESM) system verification flight tests were carried out on the three platforms which are in use under the Airborne Early Warning and Control Aircraft (AEWCA) Electronic Support Measures (ESM) System contract. Integrated logistics support activities have been carried out for Electronic Support Measures systems. Integrated logistics support activities were carried out for the ESM systems.

Within the framework of the Airborne Early Warning and Control Aircraft (AEWCA) Electronic Support Measures (ESM) Development contract, national ESM system design and production activities have been carried out.

Within the scope of the Integrated RF System of the National Combat Aircraft (TF-X) Technology Development Project, the Integrated Baselined Review was completed in 2019. Technology Requirement Documents, Concept Analysis and Critical Technology Element Design documents for Critical Technology Elements were prepared and delivered to the customer. In addition, support was provided for platform design activities. Work was carried out on the Alternative System Review phase. Reports were prepared for the provisional systems to be utilized at the aircraft level.

Within the scope of the Remote Electronic Support / Electronic Attack from the Airborne Platform the Stand-Off Jammer Aircraft (AIRBORNE SOJ) needed by the Air Force Command Project, Project Kick off Meeting and Program Review Meetings were held with The Turkish Presidency of Defence Industries and the Air Force Command. The issues posing risk for the project were identified and risk mitigating activities were carried out. System requirements were defined for the Task System, system architecture was determined, production activities were initiated and interface control documents were created. Technical and administrative work were carried out with TUSAŞ, our Business Partner.





WITHIN THE SCOPE OF THE LHD NAVAL ELECTRONIC WARFARE SUITE SUPPLY PROJECT, FACTORY ACCEPTANCE TESTS FOR THE CENTRAL MANAGEMENT SYSTEM, THE CHAFF / INFRARED DECOY PULSE SYSTEM, THE RADAR ELECTRONIC SUPPORT SYSTEM AND THE ELECTRONIC ATTACK SYSTEM WERE SUCCESSFULLY COMPLETED. Within the scope of the LHD Naval Electronic Warfare Suite Supply Project, Factory Acceptance Tests for the Central Management System, the Chaff / Infrared Decoy Pulse System, the Radar Electronic Support System and the Electronic Attack System were successfully completed. The delivery of the Naval Electronic Warfare Suite will be completed with Sea Acceptance Tests to be performed on the TCG Anadolu Platform in 2020.

The Naval Electronic Warfare Suite, which was designed and produced through domestic resources and with the accumulated knowledge and long lasting experience of the Naval Forces Command and ASELSAN's extensive EW experience, was integrated for the first time onto the TCG FATIH and TCG YILDIRIM Platforms and was successfully delivered following a series of challenging field performance tests. The Sea Acceptance Tests of the EW systems of the TCG YAVUZ, the third ship and TCG TURGUTREIS, the fourth ship were completed successfully and the systems were delivered to the Turkish Navy.

Within the scope of the MidLife Modernization of the BARBAROS Class Frigates EW Suite contract, which was signed in April 2018 and entered force in August 2018, the design, development and production processes were carried out.

The design, development, verification and production activities of the "ARES-2NCL Extended" Electronic Support systems, which will be integrated into 2 platforms belonging to the Pakistan Navy, were carried out. Delivery invoices of the "ARES-2NCL Extended" ES system that is to be integrated into two platforms were issued in December 2019. The

RADAR AND ELECTRONIC WARFARE SYSTEMS BUSINESS SECTOR

Factory Acceptance Tests and the shipment of these systems to Pakistan is planned to be completed within the first quarter of 2020. Activities are continuing within the scope of the GaN Based RF Power Transistor on the Silicon Carbide (SiC) Substrate Project, which an essential part of the EW and RADAR systems. Work also started on the development of the circulator and thermal carrier material needed in the systems. High power GaN Based power amplifiers for EW projects were developed.

In the scope of development and qualification of Ka Band Low Noise Amplifier (LNA) Project, development of Ka Band LNA module which is planned to be placed TURKSAT 5B Satellite is completed.

RADAR SYSTEMS

ASELSAN Radar and Electronic Warfare (EW) Business Sector continued its highly focused business development, concept definition, design, development, production, test and after sales support activities for various radar programs in cooperation with domestic solution partners and universities at ASELSAN Gölbaşı Facility. With the work carried out in the radar activity arena; it is aimed to fulfill radar requirements of Turkish Armed Forces equipped with advanced technology and indigenously designed systems, and to sell our radar systems abroad while expanding the core business activities to include civil radar applications.

In line with the international demands received during the year, bids were submitted for radars. In addition, business development and demo / test activities were carried out with customers.

Mass production of Mobile Search Radar (MSR) and Fire Control Radar (FCR) has been followed with the contract awarded to ASELSAN by Presidency of Defence Industries (SSB). Moreover, related tests were carried out regarding HİSAR and KALKAN Air Defence Radar Systems.

Within the scope of KALKAN - II serial production, the manufacturing activities of KALKAN-II Air Defence Early Warning Radar were continued, and deliveries have been completed.

Production and verification activities for the Portable Early Warning Radar Systems with Active Phased Array, Electronic Scanning (AESA) antenna structure carried out within the scope of the "Early Warning Radar Systems Phase-1 Project" of our Air Force Command continued.



WITHIN THE SCOPE OF KALKAN - II SERIAL PRODUCTION, THE MANUFACTURING ACTIVITIES OF KALKAN-II AIR DEFENCE EARLY WARNING RADAR WERE CONTINUED, AND DELIVERIES HAVE BEEN COMPLETED.



ÇAFRAD PROGRAM FOR TURKISH NAVY'S TF2000 ANTI AIR WARFARE FRIGATE, NAMELY TECHNOLOGY DEMONSTRATION PROTOTYPE, HAS BEEN SUCCESSFULLY COMPLETED.



The development of Long Range Surveillance Radar, Multi-Function Fire Control Radar and Radar Seeker of the missile programs were continued within the scope of Long Range Air and Missile Defence System Project Contract (SIPER System). System and Subsystem design activities of the project continued. In this context, prototype production activities have been started.

ÇAFRAD program for Turkish Navy's TF2000 Anti Air Warfare Frigate, namely Technology Demonstration Prototype, has been successfully completed.

In accordance with the SERHAT Counter Mortar Radar contract, systems have been delivered and installed to Turkish Land Forces. For the remaining batch of the contract will be delivered in 2020.

The remaining deliveries are expected to be completed in 2020. In addition, the systems produced under the Contract, which was signed for the needs of the Naval Forces Command within the year, were delivered to their troops and put into operation.

In line with the needs of the Land Forces Command, within the scope of the "Weapon Locating Radar System Project", which identifies the mortar, artillery and rocket launchers carried out by friendly and enemy elements, and precisely calculates the point of impact and point of origin, production and verification work of units / sub-systems continued and system integration activities were carried out.

RADAR AND ELECTRONIC WARFARE SYSTEMS BUSINESS SECTOR



In line with the need of the Air Forces Command, the integration and testing activities of the Air Traffic Control Radar System Project were continued. Following the completion of the activities which will continue in 2020, the first delivery under the project will be carried out in March 2021.

In order to detect and identify buried metal/plastic mines and handmade Improvised Explosives Devices (IEDs), imaging radar with ground penetration capability development and prototype production contract has been signed with SSB.

Within the scope of the project, the Ground Penetrating Radar with new generation, specially developed imaging algorithms will be developed, which will be used as the main sensor in the detection of Improvised Explosives Devices.

Within the lasting activities of AKKOR Active Protection System Development Project, Radar Sensor studies have been proceeded.

Integration and acceptance tests for MILGEM-4 radar systems were successfully worked off.

Regarding Multi-Function Amphibious Assault Ship (Landing Helicopter Dock - LHD) Project; the production of radar systems was completed and integration to the platform and combat management system continued in accordance with the contract schedule.

Activities related to the Design and manufacturing of CW (Continuous Wave) illumination capable fire control radars for Barbaros Class Frigate Mid-Life Modernization Project continued with detailed design and improvement undertakings.

In line with the contract signed with Turkish Aerospace signed in 2018 the Integrated RF System of the TF-X National Fighter Aircraft Development Project, ASELSAN continued preliminary design activities of multi-functional nose aperture radar functions and technology readiness level studies of critical technology elements.

For the F-16 platforms in the inventory, multi-function AESA radar development studies have been continued.

The design and development activities as part of the national AKINCI Unmanned Aerial Vehicle Nose Radar, which will be used for air to air and air to ground missions have been continued as planned.



WITHIN THE SCOPE OF PRODUCTION OF SARPER SYNTHETIC APERTURE RADARS, THE FIRST NATIONAL IMAGING AND GROUND MOVING TARGET INDICATING (GMTI) RADAR SYSTEM DEVELOPED FOR AIRBORNE PLATFORMS, HAVE BEEN COMPLETED AND DELIVERED TO TUSAŞ. Within the scope of production of SARPER Synthetic Aperture Radars, the first national imaging and ground moving target indicating (GMTI) radar system developed for airborne platforms, have been completed and delivered to TUSA\$. One of these radars has been integrated into ANKA platform and flight tests have been completed.

Design, prototype production and validation activities including field tests and hardware in the loop tests for various radar seeker units have been conducted for various missile projects.

Live firing tests of ATMACA surface to surface missile, which is the first national missile with an RF seeker, are conducted. In the last test, ATMACA missile has been launched from the KINALIADA Corvette and Radar Seeker provided the missile fully successful terminal guidance and a perfect hitting performance. The serial production contract for ATMACA surface to surface missile project was signed, and production activities within this framework were continued. The estimated delivery plan of radar seekers is scheduled as 2020.

The first air to air radar seeker of TURKEY have ever been qualified and ground firing of GOKTUG Beyond Visual Range Missile (GOKDOGAN) was conducted. Development and validation activities for HİSAR-O Medium Altitude Missile Radar Seeker have been continued and first live firing test will be performed in 2020.

ASELSAN continued to work on various applications of ACAR Surveillance Radar Family for ever growing domestic and international requirements. In this perspective, ACAR-UAV4015 Radar equipped with 40 degrees of elevation coverage antenna has been



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RADAR AND ELECTRONIC WARFARE SYSTEMS BUSINESS SECTOR



developed and produced. In addition to counter-UAV purposes, ACAR-Dual1015 Radar has been developed and manufactured. During the year, the production of nearly 100 radars of the ACAR Surveillance Radar Family was completed and delivered.

The SERDAR-7M Radar System is produced within the scope of the contract signed with the Republic of Turkey, Ministry of Transport and the Coastguard Command for the purposes of coastal surveillance and ship traffic management. The Factory Acceptance activities for the REIS Radars, which is the version of the SERDAR-7M Radar System, with the ability to work with redundant operating capability brought into the Send and Receive structure, were completed in 2019.

SERDAR-7M Radars delivered Within the scope of the Coastal Surveillance Radar Systems Project were put into operation. In addition, the acceptance of SERDAR-4M and SERDAR-7M Radars produced within the scope of contracts signed with the Coast Guard Command has been completed.

The design of FOPRAD, which is an innovative in-forest surveillance radar that provides real-time situational awareness by performing tasks such as identifying and tracking moving targets within the vegetation and forest, was completed and put into service in the field.



THROUGHOUT 2019, EFFORTS CONTINUED TO SELL ALL OF OUR SURVEILLANCE RADAR SYSTEMS AND THEIR SUBCOMPONENTS ABROAD. BY PARTICIPATING IN NATO WORKING GROUPS, STUDIES AND ACTIVITIES WERE CARRIED OUT TO IDENTIFY FUTURE RADAR NEEDS AND TECHNOLOGIES.



Throughout 2019, efforts continued to sell all of our surveillance radar systems and their subcomponents abroad. By participating in NATO working groups, studies and activities were carried out to identify future radar needs and technologies.

With the experience and knowledge gained through military radar system projects, ASELSAN continued to develop radar systems for civil applications as well. For the mentioned scope, X-Band Weather Radar hardware test and validation activities completed in 2019, efforts continued for traffic radar integration into existing systems.



CMMI FOR DEVELOPMENT V1.3 LEVEL 3

While REHIS Business Sector continues to improve its Management System according to international standards, certified 3rd time for CMMI-DEV v1.3 Level 3 besides AS9100D, ISO9001: 2015, ISO20000-1: 2011, AQAP2310 Edition B, AQAP 2110 Edition B, ISO17025:2012 for Environmental Test Lab and ISO17025: 2012 for EMC Test Lab certificates.

The scope of certificate covers System, Hardware, Software Development and Platform Integration activities and valid until June 26^{th} , 2022.



WITHIN THE SCOPE OF TRANSPORTATION, SECURITY, ENERGY, AUTOMATION AND HEALTHCARE PROJECTS, UGES BUSINESS SECTOR CONTINUES TO HAVE ACTIVITIES FOR TECHNOLOGICAL SOLUTIONS, HARDWARE, SOFTWARE, DEVICE AND SYSTEM DEVELOPMENT, PRODUCTION, DOMESTIC AND INTERNATIONAL SALES AND AFTER-SALES SUPPORT FOR RAIL VEHICLE SYSTEMS, ELECTRIC AND HYBRID VEHICLE SYSTEMS, RAIL VEHICLE SIGNALING AND CONTROL SYSTEMS, BORDER SECURITY SYSTEMS, COASTAL SECURITY SYSTEMS, PUBLIC SECURITY SYSTEMS, SMART TRANSPORTATION SYSTEMS, INDUSTRIAL AUTOMATION SYSTEMS, MEDICAL TECHNOLOGIES SYSTEMS, POWER MANAGEMENT AND RENEWABLE ENERGY SYSTEMS.

TRANSPORTATION, SECURITY, ENERGY, AUTOMATION AND HEALTHCARE SYSTEMS











RAIL VEHICLE SYSTEMS

Traction (Cer) Control Systems

The traction systems, which are described as the heart of rail vehicles, have been designed and developed by ASELSAN. These systems have been procured from abroad until ASELSAN has developed the national solutions. The traction system with its hardware, software and algorithms was developed and locally manufactured by ASELSAN.

The traction control system with its modular architecture, new generation IGBT (Insulated Gate Bipolar Transistor) technology and DSP (Digital Signal Processing) based control electronics has been developed as per the international rail vehicle standards such as EN50155, EN50125, EN50163, EN50121, EN61287, EN61377.

The systems have been integrated into Ankara Metro and Silkworm vehicles and the system has been successfully employed during the operational tests. With TÜLOMSAŞ and TÜVASAŞ, these projects have been brought to important stages for the use in locomotive and regional train platforms. The traction system developed by ASELSAN in the Hybrid Shunting Locomotive Project has come to realization in collaboration with TÜLOMSAŞ. In the traction chain development project, the National Train prototype units have been successfully verified, customer acceptance tests have been performed and the mass production has already begun.



TRAIN CONTROL AND MANAGEMENT SYSTEM, WHICH IS KNOWN TO BE THE BRAIN OF RAIL VEHICLES, HAS BEEN DEVELOPED FOR HIGH-SPEED TRAINS, REGIONAL TRAINS AND SUBWAYS. INNOVATIVE ARCHITECTURES FOR VEHICLES, ALGORITHMS, HARDWARE AND SOFTWARE WERE ALL DEVELOPED TO HAVE A HIGH LEVEL OF SAFETY AND RELIABILITY.

Auxiliary Power Systems

Different auxiliary power units that are used in rail system vehicles are being developed as there are different power requirements for trams, subways, regional trains, locomotives, etc.

These systems are used in Hybrid Shunting Locomotive, National Train and ANKARAY light rail systems. The site acceptance testing for the products developed for National Train and ANKARAY vehicles was successfully completed in 2019.

Train Control and Management System

Train Control and Management System, which is known to be the brain of rail vehicles, has been developed for high-speed trains, regional trains and subways. Innovative architectures for vehicles, algorithms, hardware and software were all developed to have a high level of safety and reliability.

The modular computer system developed in this project consists of Central Control Unit (CCU), Automatic Train Operation System (ATO), Automatic Train Protection System (ATP), Human Machine Interface (HMI) and signalization. It can be employed in vital computer systems required by all rail vehicle systems such as high speed train, regional train, metro, and tram.

In accordance with the contract signed with TÜVASAŞ, development and prototype production of the Train Control and Monitoring System developed for National Train was finished. The customer acceptance testing has been successfully completed.

Energy Management System

ASELSAN has been active in areas of energy management system development to increase the efficiency and to reduce the cost for rail transportation vehicles. Energy management systems allow the reduction of the electricity consumption in rail transportation vehicles and their operation without catenary.

Energy Management System has been developed to store the braking energy in the Hybrid Shunting Locomotive, which was developed with TCDD TRANSPORTATION and TÜLOMSAŞ, to reach the level of emission-free operation in a closed environment, to reduce the noise level and to provide fuel savings.







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Main Line and Metro Signalization System

High technology signaling protection hardware and software systems are being developed in accordance with the international standards for safe and secure main line and city rail transportation systems. ASELSAN's work on railway signalization systems are divided into two main areas: Metro Line and Main Line. For both areas; ASELSAN continues its R & D activities in an ecosystem that includes its clients, TUBITAK, universities and competent subcontractors.

In M1 metro line signaling project developed jointly with Metro Istanbul and TUBITAK, ASELSAN works on the technical and administrative solutions. In this project, ASELSAN is the project technical manager. And ASELSAN holds the same responsibility for the development of on-board equipment of the National CBTC System project.

ELECTRICAL VEHICLE & ENERGY SYSTEMS

ELECTRICAL VEHICLE SYSTEMS

Production, testing and certification activities as well as R&D for ASELSAN Electrical Vehicle System components designed to be utilized in civilian and military applications have been carried out through 2019. In addition, in line with the expectations of the automotive industry our serial production capabilities have been developed and effective cost management processes have been implemented.

Besides the development activities realized together with TEMSA and ANADOLU ISUZU automotive groups, sales of ASELSAN Electrical Vehicle Systems to BMC Company also started. The first vehicle of Avenue 12 m Electrical Busses developed together with TEMSA is expected to be released within the first quarter of 2020.

ASELSAN has also actively participated and contributed to the public and semi-public working groups to provide solutions for the initial investment costs for electrical public transportation systems which is considered to be the main market entry barrier.

Marketing and business development activities to end-users consisting of mainly metropolitan municipalities have been accomplished. ASELSAN has also contributed to the joint working groups for financing and transportation system development projects as well. THE TRACTION SYSTEMS, WHICH ARE DESCRIBED AS THE HEART OF RAIL VEHICLES, HAVE BEEN DESIGNED AND DEVELOPED BY ASELSAN. THESE SYSTEMS HAVE BEEN PROCURED FROM ABROAD UNTIL ASELSAN HAS DEVELOPED THE NATIONAL SOLUTIONS. THE TRACTION SYSTEM WITH ITS HARDWARE, SOFTWARE AND ALGORITHMS WAS DEVELOPED AND LOCALLY MANUFACTURED BY ASELSAN.



IN 2019, WORKS TO PROVIDE SYSTEM SOLUTIONS FOR R&D, PRODUCTION, INTEGRATION AND SOLAR FV POWER CONVERSION WERE CARRIED OUT.



Energy Systems

ASELSAN UGES Business Sector has been carrying out its activities with the aim to become the leading local technology provider within the fields of electromechanical power conversion and power electronics by using the engineering experience accrued during its previous activities. In 2019, works to provide system solutions for R&D, production and integration of wind and solar FV power conversion were carried out.

Renewable Energy Systems

We have engaged in the development of innovative and indigenous solutions to produce efficient energy generation by utilizing the rich renewable energy resources, mainly wind and solar. Some of the critical system components that were mainly developed locally to have competitive advantages in the market for Renewable Energy System solutions are:

- WIND POWER: Research, development and production infrastructure establishment for full-scale wind power conversion systems and main electric network connection algorithms have been completed in order to meet the demands of the wind turbine producers. Engineering activities for system improvement of the medium scale (<500kW) power conversion systems to enhance to a full-scale power conversion performance were carried out in 2019. ASELSAN has financed the development of >MW full-scale power conversion systems.
- PHOTOVOLTAIC SOLAR ENERGY: Improvements have been achieved for cell energy transformation in the joint development effort done together with the METU-GÜNAM.
- Production and delivery of GURU Compact Systems to the Turkish Armed Forces have been realized. The primary aim of the project was to provide reliable, cost effective and clean energy from both wind and solar within a portable and structural design.
- Also R&D activities to develop a hybrid renewable micro-grid network system have started. This project, which is a joint effort with the METU-KKK, is funded by ASELSAN.



Activities in the field of Security Systems are carried out within the areas of "Field Security Systems", "Urban Security Systems" and "Infrastructure Security Systems" Programs.

FIELD SECURITY SYSTEMS

Activities in the field of Homeland Security Systems are carried out under the following sub areas:

- Border Security,
- Security Systems Integrated On Mobile Platform,
- Coastal Security,
- Border Patrol and Base Security,
- · Counter Improvised Explosive Devices Measures,
- Oil and Gas Pipeline Security.

BORDER SECURITY AND SECURITY SYSTEMS INTEGRATED ON MOBILE PLATFORMS

The contract for the Border Security Project (KAYI) was signed in 2018 with the Presidency of Defence Industries for the establishment of the Integrated Border Security System in the Syrian borderline. Within the scope of the project, advanced technological electronic systems such as electro-optical sensor system, land surveillance radar, military radio systems and gunshot detection systems will be designed and manufactured by ASELSAN while other sample systems produced by domestic companies. These systems will be controlled by MIRSAD Security Management System developed by ASELSAN.

The scope of project has been expanded by new systems such as Manned Surveillance Tower, Wide Area Surveillance System, Mobile Mast Mounted Surveillance System, ULAK System for wireless video transfer and Multipurpose Intelligent Distributed Acoustic Sensor for Iğdır Border.

In 2019, Facility Acceptance Tests of subsystems were conducted; and the infrastructure for data/electric, installation and start up activities were completed in border patrols.

The bid arranged for ATE\$ Project (Supply of Mobile Surveillance Units for Increasing Border Surveillance Capacity) is funded with the support of Instrument for Pre-Accession Assistance (IPA). The bid was open for all EU countries to give proposal and ASELSAN got the first place. Within the ATE\$ Project, production activities were finished. LOT-2 phase was completed after the delivery of 20 vehicles. As for LOT-1; 27 vehicles have been delivered so far. After the delivery of the remaining 10 vehicles in 2020, LOT-1 will be completed as well. THE SCOPE OF BORDER SECURITY PROJECT (KAYI) HAS BEEN EXPANDED BY NEW SYSTEMS SUCH AS MANNED SURVEILLANCE TOWER, WIDE AREA SURVEILLANCE SYSTEM, MOBILE MAST MOUNTED SURVEILLANCE SYSTEM, ULAK SYSTEM FOR WIRELESS VIDEO TRANSFER AND MULTIPURPOSE INTELLIGENT DISTRIBUTED ACOUSTIC SENSOR FOR IĞDIR BORDER.



THE WARRANTY PERIOD ACTIVITIES CONTINUED FOR AKSAZ AND FOCA ABOVEWATER / UNDERWATER SURVEILLANCE AND DETECTION SYSTEM (YUNUS) PROJECT.

The AB-SGS Project (Supply for Increasing Border Surveillance Capacity of Turkey) was also signed with the Republic of Turkey, Ministry of Treasury and Finance. The system design and field explorations have been completed and the setting up of the system has begun in prior locations.

The high-tech electronic systems such as electro-optical sensor system, land surveillance radar, military radio systems and sniper detection systems that have been designed and manufactured by ASELSAN are being employed in the ATES and the AB-SGS Projects.

SEDA-Acoustic Gunshot Detection System employs the acoustic detection technology to locate snipers. The system demonstrated a very high performance in the shooting tests. The SEDA system, which was developed as three different models to be used for stable, on-board and single-soldier wearing applications has begun to operate primarily in internal security applications and base areas. The SEDA, which is a commercial product already, has started to be produced in mass. The development work continues to provide additional capabilities in order to meet the needs of domestic and foreign security units.

The ASELSAN MÜGAS Mobile Mast Mounted Surveillance System was developed to meet the limited period surveillance and security needs of troops regardless of their location and without the need for infrastructure. It is a remote mobile security and surveillance system that includes advanced electronic systems that provide detection, identification and tracking of potential threats, and security management software that ensures that these systems work together in harmony. The build-in self-navigation sensors allow the system to be operated without any calibration. It has been set up in various places to meet the urgent safety needs of Turkish Land Forces Command and Turkmenistan Armed Forces.

COASTAL SECURITY SYSTEMS

The warranty period activities continued for Aksaz and Foca Abovewater / Underwater Surveillance and Detection System (YUNUS) Project. The YUNUS Project ensures an uninterrupted monitoring of underwater and above-water activities at the port entrances using advanced technology based on Electro-Optics, RADAR and Underwater sensors. Thus, the system provided a full protection for Aksaz and Foca Naval Bases.

Within the scope of Development of Prototype Mobile Radar (MORAD) Vehicle Project, which is conducted in line with the Protocol signed with Turkish Coast Guard Command, the development activities have been continued. In this project, A van in the Coast Guard Command inventory has been equipped with the ASELSAN Coast Guard Radar System, the Electro-Optical System, Communication Systems integrated with ASELSAN SECANS Security Management Software.



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In the scope of the Upgrading and Extending of Turkish Straits Vessel Traffic Management Systems (TBGTH) Project, the production of çıkartılmış. Wordde yazan şekli: "4 Coastal Surveillance Radar Systems, 9 Radio Direction Finder (RYB) Systems and 13 Electro Optical (EO) Systems completed and installation activities have continued. The replacement service for one existing radar was also completed. All factory acceptance tests have been done with HAVELSAN and General Directorate of Coastal Safety, and the technical support were provided for the integration of HAVELSAN Vessel Traffic Management Software.

BORDER PATROL AND BASE SECURITY

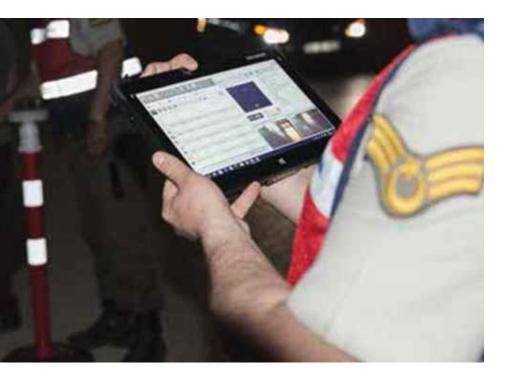
The contract of "Batman Air Force Commandership Physical Security System" was signed with the Presidency of Defence Industries on 24 July 2019. Within the scope of the project, a physical security system with IP Cameras and Lase Motion Detectors, Security Management Center and some infrastructure work such as Remote Controlled Weapon System Towers, Thermal Camera Towers etc. will be conducted in Batman Air Force Commandership.

In Diyarbakır Air Force Commandership, Remote Controlled Weapon System Towers will be built and Weapon Systems will be installed.

With relation to the Modular Base Security Solutions (MGUB) Project for which the contract was signed on 5th of February, 2013 and has been continued with changes in contract from one phase to another, the works of MGUB 6-7 and 8th phases were successfully completed in 2019. A new contract was signed on 7 August 2019 for the MGUB-9th phase that includes 12 full equipped and 10 including only electronic system integration.

The components to meet the "electronic and physical security", "Ballistic Protection" and "Surviving" needs along with the requirements to be defined by the Land Forces Commandership, Gendarmerie General Commandership and Coast Guard Commandership were provided. System maintenance and logistics support activities have continued at the bases where the system was installed. By the end of 2019, a total of 48 MGUB have been installed and installation work for the remaining 24 MGUB is in progress.

Within the scope of the "Remote Control Weapon System Supply" project signed with the Republic of Turkey, Ministry of National Defence on April 4, 2019, it was requested to install SARP Weapon System, SARP Tower, the system operating container, video recording system, generator and uninterrupted power supply as a turn-key project in nine bases. The provisional Acceptances of the eight systems were done in November 2019.



THE CONTRACT OF "BATMAN 14. AIR FORCE COMMANDERSHIP PHYSICAL SECURITY SYSTEM" WAS SIGNED WITH THE PRESIDENCY OF DEFENSE INDUSTRIES ON 24 JULY 2019.



ATTHE REQUEST OF THE REPUBLIC OF TURKEY, MINISTRY OF ENERGY AND NATURAL RESOURCES, WITH THE CONTRACT SIGNED BETWEEN THE PRESIDENCY OF DEFENSE INDUSTRY AND ASELSAN-HAVELSAN BUSINESS PARTNERSHIP, IT IS AIMED TO IMPLEMENT INDIGENOUS SECURITY SYSTEMS TO SECURE OIL AND GAS (LNG) PIPELINES AND ITS FACILITIES DEPLOYED IN TURKEY.

FIGHT AGAINST MINE/IMPROVISED EXPLOSIVE DEVICES (EYP)

In the year of 2016, the first design studies of Robotic Arm System have started for Fighting and Detecting Mine/Improvised Explosives with Explosive Detection – Inspection System Development Project. Eight meter long Robotic Arm System called ÇAK-II is planned to be mounted in front of an armored vehicle which aims Mine/Improvised Explosives detection and intervention from a safe distance and inside a safe vehicle.

The system developed in this scope had the opportunity to turn into a product along with the Robotic Arm System Contract signed with BMC on 31 December 2018. The system will be delivered to Presidency of Defence Industries in the middle of 2020 and will allow our armed forces to fight in safety through Mine/Handmade Explosives threats.

PETROLEUM AND GAS PIPELINE SECURITY

At the request of the Republic of Turkey, Ministry of Energy and Natural Resources, with the contract signed between the Presidency of Defence Industry and ASELSAN-HAVELSAN Business Partnership, it is aimed to implement indigenous security systems to secure oil and Gas (LNG) Pipelines and its facilities deployed in Turkey.

The whole project is planned to be implemented in phases. In the first phase, the business partnership is going to install indigenous security systems onto the Iraq-Turkey Raw Oil Pipeline and its twenty-nine-Line Valve Facilities and nine Cathodic Protection Facilities besides thirteen Operational Campuses.

During 2019, designing, manufacturing and verification processes of the project-specific subsystems were realized. The COTS products were procured. For the integration of the products with security software was completed. The documents with contractual obligations were submitted to the Presidency of Defence Industry. In addition to these activities, implementation projects of thirteen facilities were planned and submitted to the MoD for approval.

At the end of 2019, the infrastructures of five primary facilities in Tekirdağ, Hanak, Türkgözü, Doğubeyazıt, and Silopi were finished, and commissioning of CCTV systems was completed.

For the implementation of Multipurpose Intelligent Distributed Acoustic Sensor (MIDAS), the site teams were put together and thanks to these teams possible theft activities were prevented.







URBAN SECURITY SYSTEMS

Under the Urban Security and Security Management System programs, the following activities are in process:

- Urban Security Management System (KGYS) and Plate Recognition System (PTS),
- Safe Schools

The installations within the scope of the Urban Security Management System (KGYS) and the Plate Recognition System (PTS) projects which were signed between the Presidency of Defence Industries and ASELSAN to supply the needs of Security General Directorate for Camera Recording and Monitoring System, Plate Recognition System and Security Systems Sensitive to Heat and Motion across the country have been going on. As of today, the installation activities have been completed in 104 regions of the project that has a total of 106 regions. The acceptance procedures of 103 regions have been completed. In eighty of eighty one provinces operating within the scope of the 1st additional package, installation activities were completed and the acceptance of seventy one regions was completed. The second additional package was signed within the scope of the project for the expansions requested. In ten of twenty seven provinces operating within the scope of the second additional package, the installation activities were completed. The 3rd additional package was signed for the establishment of an Urban Security Management System in the Turkish Republic of Northern Cyprus (TRNC). The installation activities are currently underway in Lefkoşa and Girne regions. Within the scope of the project, it is aimed to equip the TRNC Police Forces with the capabilities of KGYS.

As part of the Urban Security Management System, the Safe School Project contract was signed. Within the scope of the project, the systems were installed in 762 schools with security risks across the country. The project management authority to be realized within the scope of the needs of the Republic of Turkey, Ministry National Education and General Directorate of Security is the Presidency of Defense Industries. Within the scope of the comtract, the camera systems were established and the activities of transferring the camera images to the Urban Security Management System Centre in the district where the school is located were completed.

INFRASTRUCTURE SECURITY SYSTEMS

All facilities with internal and external threats are considered within the scope of critical facility:

- Public Institutions
- Military Facilities and Security Units
- · Penal Institutions

THE INSTALLATIONS WITHIN THE SCOPE OF THE URBAN SECURITY MANAGEMENT SYSTEM (KGYS) AND THE PLATE RECOGNITION SYSTEM (PTS) PROJECTS WHICH WERE SIGNED BETWEEN THE PRESIDENCY OF DEFENSE INDUSTRIES AND ASELSAN TO SUPPLY THE NEEDS OF SECURITY GENERAL DIRECTORATE FOR CAMERA RECORDING AND MONITORING SYSTEM, PLATE RECOGNITION SYSTEM AND SECURITY SYSTEMS SENSITIVE TO HEAT AND MOTION ACROSS THE COUNTRY HAVE BEEN GOING ON.

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ASELSAN DRAWS UPON ITS KNOWLEDGE, EXPERIENCE AND TECHNOLOGICAL INFRASTRUCTURE GAINED FROM THE DEFENSE PROJECTS TO MEET THE ELECTRONIC AND PHYSICAL SECURITY NEEDS OF CRITICAL FACILITIES.



- Energy Facilities
- Transportation Facilities
- Industrial Facilities
- Customs and Border Gates
- Organized Industrial Zones
- Logistics Centers

ASELSAN draws upon its knowledge, experience and technological infrastructure gained from the defence projects to meet the electronic and physical security needs of critical facilities. The projects where the field exploration and requirement analysis, system design, electronic and mechanical production, system integration, installation, commissioning and after-sales support services that are handled as a whole have been implemented. Integrated system solutions were provided under the main headings of video viewing, recording and analysis, security management software, violation detection, access control, physical security and professional communication.

In line with market analysis and strategic planning studies, road maps were determined in order to add X-Ray scanning systems, Thz Imaging Systems, Biometric Authentication and Access Control Systems to ASELSAN's product portfolio. There are ongoing negotiations for possible collaboration with various companies and institutions operating in these areas.



Operations were carried out in the area of toll collection systems, traffic management systems and industrial automation systems.

TOLL COLLECTION SYSTEMS

ASELSAN, as the leading Turkish company in toll collection systems, has carried out intensive work in this field in 2019 as well. On the Istanbul-Izmir Highway, Yavuz Sultan Selim Bridge and Northern Ring road, along the newly opened road sections, new toll collection stations have been added to the existing tolling systems.

Furthermore, the installation of the Toll Collection Systems on Menemen-Aliağa-Çandarlı Highway are completed and opened to traffic, and a contract was signed for Ankara-Niğde highway toll collection system and the installation works have started as of the end of 2019. The toll collection system on the Ankara-Niğde highway has been planned to be completed in 2020 and the highway will be opening for service.

In 2019, ASELSAN's tolling systems hit a record high by collecting tolls from about 350 million vehicles both on the 2,200 km long state-operated highways and on the highways operated by the private sector.

In addition to securing tolls for the constructed highways, ASELSAN toll collection systems also play an important role in the revenue reconciliation and auditing of the private concessions by the state institutions. Special solutions developed for the security, reliability, traceability and auditability of the data recorded in these systems were integrated to all ASELSAN toll collection systems in 2019.

The "average speed enforcement corridor system" installed by ASELSAN on the 2,200 km long state operated highway is one of the largest electronic speed enforcement system in scale in the country. Although there is a significant increase in traffic on our highways, the accident rates have been decreasing with the effective use of this system.

In Corridor 10 toll collection system developed for the Republic of Macedonia, six out of the total seven stations have been completed and opened to traffic. The state of the art tolling system developed by ASELSAN integrates DSRC based tolling, contactless smart card tolling and cash based tolling systems.

INDUSTRIAL AUTOMATION SYSTEMS

Within the scope of Industrial Automation Systems, activities such as Mass Notification Siren Systems, Scada Systems, Energy Management and Smart Grid Systems, and Intrusion Detection Systems have been carried out.

MASS NOTIFICATION SIREN SYSTEM

With regard to the contract signed between ASELSAN and the Republic of Turkey, Ministry of Interior Disaster and Emergency Management Authority (AFAD) on 19th February 2019, ASELSAN has been developing remote controlled Mass Notification Siren System in order to rapidly warn and inform public about imminent threats and make announcements either by delivering different kinds of notification signals, pre-recorded messages or live announcements in any kind of emergency situations and disasters.

The mass notification siren system consists of primary and secondary command centers in each city and the siren units with subsidiary components on the field that can broadcast embedded alarms and warning records in addition to making live announcement.



WITH REGARD TO THE CONTRACT SIGNED BETWEEN ASELSAN AND AFAD ON 19TH FEBRUARY 2019, ASELSAN HAS BEEN DEVELOPING REMOTE CONTROLLED MASS NOTIFICATION SIREN SYSTEM IN ORDER TO RAPIDLY WARN AND INFORM PUBLIC ABOUT IMMINENT THREATS AND MAKE ANNOUNCEMENTS IN ANY KIND OF EMERGENCY SITUATIONS AND DISASTERS.







DEPAR LOW VOLTAGE MONITORING AND CONTROL UNIT The secure connection between the command centers and siren units on the field is provided by ASELSAN's JEMUS radio infrastructure.

Furthermore, the special application software, which will be used in the command centers, has been developed by ASELSAN. In addition to the command center software, the system can also be integrated into the countrywide Communication & Information Distribution (HAY) infrastructures. The user interfaces where software developments & related system integrations are also developed by ASELSAN. With the experience gained from the Mass Notification Siren System Project, it is planned to extend the coverage by increasing number of cities in the upcoming years in Turkey.

SCADA SYSTEMS

In 2019, ASELSAN accelerated its efforts on developing national SCADA software that is flexible, reliable and can be tailored to customer needs. In this context; software development studies were conducted based on the contract signed between Presidency of Defense Industries and ASELSAN in order to develop Oil SCADA Software. Line valve stations and pumping stations along Batman-Dörtyol Crude Oil Pipeline site surveys were finished and the detailed engineering activities were completed. In the automation system, twenty four line valve stations and four pumping stations will be connected together and ASELSAN-made ARTU will be utilized. All other tasks under the signed contract will be completed by the system commissioning and inauguration in 2021.

ENERGY MANAGEMENT AND SMART GRID SYSTEMS

System solutions consisting of critical hardware, algorithms and software for smart grid systems have been developed in order to use electrical energy in an efficient, flexible and effective manner throughout Turkey from production to final consumption. In this context, in order to reduce the dependence on import, to ensure the safe and high quality production, transmission and distribution of energy:

- The development of National Electricity SCADA and National Energy Management Systems continued.
- Advanced Remote Terminal Unit (ASELSAN ARTU) used at the endpoints of smart grids has reached the final stage of its development phase. ASELSAN ARTU, which we expect that it will find widespread use in electricity, natural gas, oil and water networks, has achieved its first commercial sale.
- Activities were carried out to expand the use of DEPAR low voltage monitoring and control system, which was developed for the transformation of the electricity distribution network to smart grids.



MIDAS

Recently, Distributed Acoustic Sensing (DAS) technology is more ubiquitously used in long lines, such as pipelines, borders and railways for the purpose of monitoring and securing. Similarly, in order to improve situational awareness in critical infrastructures and facilities in Smart Cities, similar technologies are utilized. In this context, the MIDAS product whose development activities started in 2014 has been used in various projects and a total of fifty systems has been installed.

- Within the scope of the university-industry collaboration vision, MIDAS has been developed in collaboration with the NANOTAM Research Center at Bilkent University. Considering the final product, this relationship is a successful example of the universityindustry collaboration. Detection and classification algorithms of the system are based on Artificial Intelligence technology. The first contribution to the literature in this subject is made by ASELSAN and a relevant patent is obtained.
- Field experiments have been conducted on better performance on railway security and carriage tracking and signalization for MIDAS to be enhanced.
- A pilot project with the Istanbul Gas Distribution Inc. (IGDAS), an Istanbul Municipality (IBB) firm has been signed for monitoring excavations without a permit that may damage the gas pipelines under the city roads. With the on-going project, not only gas pipelines but also water pipelines, fiber optic and other infrastructural lines can be monitored.
- R&D project for leak detection on gas pipelines in the city has been launched after a contract signed between Bursagaz Dagitim A.S. and ASELSAN with the approval of EPDK (Energy Market Regulatory Authority).

Because MIDAS is considered to have a high potential within the scope of export growth targets, the studies towards signing an OEM agreement with an American company for worldwide sales have reached an important stage.



MIDAS / P



MIDAS / I

MIDAS / B

MIDAS / R



ASELSAN HAS BEEN WORKING ON PROJECTS AND SOLUTIONS IN ORDER TO REDUCE THE DEPENDENCY ON IMPORT IN THE FIELD OF MEDICAL TECHNOLOGIES AND TO INCREASE LOCAL DESIGN AND PRODUCTION CAPABILITIES.



ASELSAN has been working on projects and solutions in order to reduce the dependency on import in the field of medical technologies and to increase local design and production capabilities. In this context, design activities have been continuing in the development of the Mobile Digital X-Ray System and Magnetic Resonance Imaging System (MRI) projects.

Additionally, there is ongoing work on a high voltage x-ray generator that is one of the critical components of the radiography devices. TÜBİTAK has recently announced a new grant program, namely SAYEM that aimed at the development of products with high technological content. ASELSAN applied to SAYEM Phase-1 for the commercialization of Mobile Digital X-Ray and Magnetic Resonance Imaging devices and was awarded with a grant. As part of this grant, in 2019, commercialization road maps for these two devices were studied.

The tender documents for the Industry Cooperation Project concerning five medical devices (magnetic resonance imaging, computed tomography, ultrasonography, patient monitor, digital radiography) were released for public bidding in May 2018. The tender was going to be held in accordance with the Industry Cooperation Program regulation prepared under the leadership of the Republic of Turkey, Ministry of Science and Technology. The bid preparation activities have been conducted for this tender which was again postponed to 30th of June 2020. During the preparation, in addition to the supply price, the commitments on domestic production, technology transfer to the country, investment and exports were taken into account.

The collaboration opportunities for joint product development with local medical device manufactures have been studied. Our first joint product development agreement has been signed with METSİS, a national defibrillator manufacturer, for Automated External Defibrillators (AED). The newly designed AED will be launched as a commercial product in 2020. As part of this collaborative effort, pre design activities for a Manuel Defibrillator/ Monitor has also been started.

Moreover, ASELSAN has been working in three different areas in healthcare sector: medical imaging, life support systems and in vitro diagnostics. With the aim of developing medical devices in these areas, it is planned to build collaboration with both local and international companies as well as research centers to develop mammography, coagulation test device, glucometer, heart lung machine and ventilator for intensive care units.



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WE ARE ONE OF THE BIGGEST 100 GLOBAL DEFENCE COMPANY

FINANCIAL INFORMATION







aselsan PROVEN TECHNOLOGY

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CONSOLIDATED STATEMENT OF FINANCIAL POSITION AS OF 31 DECEMBER 2019

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

		Audited	
	_	31 December	31 December
	Note References	2019	2018
ASSETS			
Current Assets		13.976.498	11.616.680
Cash and Cash Equivalents	3	3.513.842	3.115.691
Financial Investments	29	6.039	
Trade Receivables	6	3.884.933	3.072.113
From Related Parties	5	1.118.103	772.851
From Third Parties		2.766.830	2.299.262
Other Receivables	7	380.554	204.117
From Related Parties	5	1.150	24
From Third Parties		379.404	204.093
Inventories	9	4.473.927	3.576.618
Prepaid Expenses	10	1.320.266	1.319.330
From Related Parties	5	284.767	311.668
From Third Parties		1.035.499	1.007.662
Other Current Assets	18	396.937	328.811
Non-Current Assets		11.656.545	7.856.951
Financial Investments	29	988.464	778.665
Trade Receivables	6	5.584.899	2.826.939
From Related Parties	5	4.266.624	1.976.539
From Third Parties		1.318.275	850.400
Other Receivables	7	1.064	764
From Third Parties		1.064	764
Equity Accounted Investments	8	121.769	93.586
Property, Plant and Equipment	11	1.573.931	1.336.297
Intangible Assets	12	1.276.578	1.082.067
Prepaid Expenses	10	584.653	504.399
From Related Parties	5	299.369	155.933
From Third Parties		285.284	348.466
Deferred Tax Assets	27	785.951	734.092
Other Non-Current Assets	18	739.236	500.142
TOTAL ASSETS	=	25.633.043	19.473.631

CONSOLIDATED STATEMENT OF FINANCIAL POSITION AS OF 31 DECEMBER 2019

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

		Audited	
	Note	31 December	31 December
	References	2019	2018
LIABILITIES			
Current Liabilities		7.743.870	4.684.478
Short-term Financial Liabilities	30	1.612.321	698.526
Short-term Portion of Long-term Financial Liabilities	30	611.198	67.277
Trade Payables	6	3.607.856	2.548.583
To Related Parties	5	763.186	593.911
<i>To Third Parties</i>		2.844.670	1.954.672
Employee Benefit Obligations	17	145.939	34.873
Other Payables	7	58.500	2.732
To Related Parties	5		60
<i>To Third Parties</i>		58.500	2.672
Government Grants and Incentives	13	43.194	53.818
Deferred Income	10	580.389	632.645
To Related Parties	5	418.578	510.751
<i>To Third Parties</i>		161.811	121.894
Corporate Tax Liability	27	12.847	2.836
Short-term Provisions		1.067.379	634.951
For Employee Benefits	17	72.819	49.382
Other	15	994.560	585.569
Other Current Liabilities	18	4.247	8.237
Non-Current Liabilities		4.320.274	4.612.132
Long-term Financial Liabilities	30	9.098	20.234
Trade Payables	6	1.860.305	1.768.283
To Related Parties	5	1.425.811	1.617.969
To Third Parties		434.494	150.314
Other Payables	7	4.929	106
To Third Parties		4.929	106
Deferred Income	10	1.837.987	2.296.513
To Related Parties	5	1.262.598	1.669.160
To Third Parties		575.389	627.353
Long-term Provisions		607.561	526.996
Long-term Provisions for Employee Benefits	17	225.731	198.611
Other	15	381.830	328.385
Other Non-Current Liabilities		394	

CONSOLIDATED STATEMENT OF FINANCIAL POSITION AS OF 31 DECEMBER 2019

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

		Audited	
	-	31 December	31 December
	Note References	2019	2018
EQUITY		13.568.899	10.177.021
Equity Attributable to Equity Holders of the Parent		13.498.388	10.132.601
Share Capital	19	1.140.000	1.140.000
Inflation Adjustments on Share Capital Differences	19	98.621	98.621
Share Premiums		2.796.723	2.796.723
Other Comprehensive Income/(Expense) that will not be			
Reclassified to Profit or (Loss)		175.077	189.358
Gain on Revaluation of Property, Plant and Equipment		207.431	207.431
Gain/Loss on Remeasurement of Defined Benefit Plans		(32.354)	(18.073)
Other Cumulative Comprehensive Income/(Expense) will be			
Reclassified to Profit/Loss		968.740	755.119
Gain on Revaluation of Available for Sale Financial			
Assets		933.298	729.612
Cumulative Translation Adjustments		35.442	25.507
Restricted Reserves	19	276.827	172.687
Retained Earnings		4.701.953	2.661.896
Net Profit for the Year		3.340.447	2.318.197
Non-Controlling Interests		70.511	44.420
TOTAL LIABILITIES AND EQUITY	-	25.633.043	19.473.631

CONDENSED CONSOLIDATED STATEMENT OF PROFIT OR LOSS and OTHER

COMPREHENSIVE INCOME FOR THE TWELVE-MONTH PERIOD ENDED 31 DECEMBER 2019

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

		Audited	
		1 January- 31 December	1 January- 31 December
	Note References	2019	3 December 2018
PROFIT OR LOSS	References	2019	2010
Revenue	20	13.012.551	9.008.516
Cost of Sales (-)	20	(9.640.818)	(6.797.424)
	_		
GROSS PROFIT		3.371.733	2.211.092
General Administrative Expenses (-)	21	(343.456)	(221.719)
Marketing Expenses (-)	21	(204.118)	(150.760)
Research and Development Expenses (-)	21	(211.565)	(114.408)
Other Operating Income	22	3.818.370	5.654.167
Other Operating Expenses (-)	22	(3.253.702)	(5.153.276)
OPERATING PROFIT	-	3.177.262	2.225.096
Income From Investing Activities	23	6.379	4.789
Shares of Profit of Equity Accounted Investees	8	2.325	(8.951)
OPERATING PROFIT BEFORE FINANCIAL EXPENSE	_	3.185.966	2.220.934
Financial Income	24	985.207	876.479
Financial Expense (-)	25	(862.642)	(855.647)
PROFIT BEFORE TAX FROM CONTINUING OPERATIONS	_	3.308.531	2.241.766
Tax Income from Continuing Operations		44.142	77.581
- Current Corporate Tax Expense (-)	27	(14.868)	(11.022)
- Deferred Tax Income	27	59.010	88.603
PROFIT FOR THE PERIOD FROM CONTINUING OPERATIONS	=	3.352.673	2.319.347
Profit for the Period Attributable to			
Non-Controlling Interest		12.226	1.150
Owners of the Company	28	3.340.447	2.318.197
	=	3.352.673	2.319.347
Earnings for per 100 Shares (in full kuruş)	28	293,02	214,69

CONDENSED CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER

COMPREHENSIVE INCOME FOR THE TWELVE-MONTH PERIOD ENDED 31 DECEMBER 2019

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

		Audited	
		1 January-	1 January-
	Note	31 December	31 December
	References	2019	2018
PROFIT FOR THE YEAR		3.352.673	2.319.347
OTHER COMPREHENSIVE INCOME			
Items that will not to be Reclassified Subsequently in Profit or Loss		(14.281)	(19.729)
Gain on Remeasurement of Defined Benefit Plans	17	(17.851)	(24.662)
Deferred Tax Expense	27	3.570	4.933
Items that may be Reclassified Subsequently to Profit or Loss		213.621	214.429
Gain on Revaluation of Available for Sale Financial Assets	26	214.406	204.387
Cumulative Translation Adjustments	26	9.935	20.261
Deferred Tax Expense	26-27	(10.720)	(10.219)
OTHER COMPREHENSIVE INCOME		199.340	194.700
TOTAL COMPREHENSIVE INCOME		3.552.013	2.514.047
Total Comprehensive Income Attributable to			
Non-Controlling Interest		12.226	1.150
Owners of the Company		3.539.787	2.512.897
		3.552.013	2.514.047

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 DECEMBER 2019

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

				Other Comprehensive Income Expense that will not to be Reclassified Subsequently to Profit or Loss		Income/ that ma be Recl Subsequen	Other Comprehensive Income/Expense that may not to be Reclassified Subsequently to Profit or Loss		Retained				
	Share Capital	Inflation Adjustments on Share Capital	Share Issuance Premiums/ (Discounts)	Revaluation Reserves	Remeasurement of Defined Benefit Plans	Reserves	Translation Reserves	Restricted Reserves	Retained Earnings	Net Profit/ (Loss) for the Year	Equity Attributable to Owners of the Company	Non- Controlling Interests	Total
Balance as of 1 January 2018	1.000.000	98.621		207.431	1.656	535.444	5.246	124.062	1.419.220	1.375.901	4.767.581	542	4.768.123
Transfers								48.625	1.242.676	(1.291.301)			
Capital Increase	140.000		2.796.723								2.936.723		2.936.723
Total Comprehensive Income					(19.729)	194.168	20.261			2.318.197	2.512.897	1.150	2.514.047
Consolidation Effect of New Establishment										-	-	42.728	42.728
Dividends										(84.600)	(84.600)		(84.600)
Balance as of 31 December 2018 (Closing Balance)	1.140.000	98.621	2.796.723	207.431	(18.073)	729.612	25.507	172.687	2.661.896	2.318.197	10.132.601	44.420	10.177.021
Balance as of 1 January 2019	1.140.000	98.621	2.796.723	207.431	(18.073)	729.612	25.507	172.687	2.661.896	2.318.197	10.132.601	44.420	10.177.021
Transfers								104.140	2.040.057	(2.144.197)			
Capital Increase													
Total Comprehensive Income					(14.281)	203.686	9.935			3.340.447	3.539.787	12.226	3.552.013
Consolidation Effect of New													
Establishment												13.865	13.865
Dividends										(174.000)	(174.000)		(174.000)
Balance as of 31 December 2019													
(Closing Balance)	1.140.000	98.621	2.796.723	207.431	(32.354)	933.298	35.442	276.827	4.701.953	3.340.447	13.498.388	70.511	13.568.899

The accompanying notes are an integral part of the consolidated financial statements.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

		Audited		
		1 January- 31 December	Revised 1 January- 31 December	
A Cash Flaur from Onombing Activities	Note References	2019 850.900	2018	
A. Cash Flows from Operating Activities Profit for the Period		3.352.673	2.319.347	
Adjustments to Reconcile Profit for the Period		1.798.425	1.907.656	
- Adjustments for Depreciation and Amortization Expense	11-12	241.216	171.391	
- Adjustments for Impairment Loss (Reversal of Impairment Loss)	11-12	64.450	(36.780)	
Adjustments for Impairment Loss (Reversal of Impairment Loss) of Receivables	6	56.742	(19.239)	
Adjustments for Impairment Loss (Reversal of Impairment Loss) of Inventories	9	7.708	(17.541)	
-Adjustments for Provisions	5	729.803	747.129	
Adjustments for (Reversal of) Provisions Related with Employee Benefits	17	76.847	55.008	
Adjustments for (Reversal of) Lawsuit and/or Penalty Provisions	15	198.240	385.888	
Adjustments for (Reversal of) Warranty Provisions	15	448.790	305.852	
Adjustments for (Reversal of) Other Provisions	15	5.926	381	
- Adjustments for Interest (Income) Expenses		(278.178)	(112.645)	
Adjustments for Interest Income	22-24	(795.743)	(657.252)	
Adjustments for Interest Expense	22-25	517.565	544.607	
- Adjustments for Retained Profit of Equity Accounted Investees	8	(2.325)	8.951	
- Adjustments for Tax (Income)/Expenses	27	(44.142)	(77.581)	
-Other Adjustments for which Cash Effects are Investing or Financing Cash Flow		137.302	108.318	
-Other Adjustments to Reconcile Profit (Loss)		950.299	1.098.873	
Changes in Working Capital		(4.060.678)	(3.715.776)	
- Decrease (Increase) in Trade Receivables		(3.374.680)	(1.268.990)	
- Decrease (Increase) in Other Receivables Related with Operations		(176.737)	(91.459)	
- Decrease (Increase) in Inventories		(877.880)	(1.316.341)	
- Decrease (Increase) in Prepaid Expenses	10	(49.364)	(690.885)	
- Increase (Decrease) in Trade Payables		1.302.132	770.883	
- Increase (Decrease) in Employee Benefit Obligations		111.066	(11.260)	
-Adjustments for Stage of Completion of Construction or Service Contracts in Progress		83.418	(731.312)	
- Increase (Decrease) in Other Operating Payables		60.591	1.239	
- Increase (Decrease) in Government Grants and Subsidies		(10.624)	12.175	
- Increase (Decrease) in Deferred Income		(891.292)	(87.993)	
- Other Increase (Decrease) in Working Capital		(237.308)	(301.833)	
Cash Flows From Operations		1.090.420	511.227	
Payments Related with Provisions for Employee Benefits	17	(44.141)	(25.426)	
Payments Related with Other Provisions	15	(190.520)	(204.698)	
Income Taxes Refund (Paid)		(4.859)	(8.903)	
B. Cash Flows From Investing Activities		(1.695.069)	(1.746.003)	
Proceeds from Sales of Property, Plant, Equipment and Intangible Assets		2.939	1.057	
Purchase of Property, Plant and Equipment	11	(355.248)	(343.541)	
Purchase of Intangible Assets	12	(1.301.610)	(1.394.893)	
Proceeds from Derivative Instruments	23	(6.039)	5.222	
Dividends Received Other Cash Outflows	23	4.618 (39.729)		
C. Cash Flows From Financing Activities		(39.729) 1.256.612	(13.848) 3.268.754	
Proceeds from Borrowings		3.568.237	1.128.345	
Repayments of Borrowings		(2.263.577)	(991.092)	
Payments of Finance Lease Liabilities		(2.203.377)	2.936.723	
Dividends Paid	19	(174.000)	(84.600)	
Interest Paid	25	(88.153)	(25.142)	
Interest Received	23	(00.100)	(23.142)	
		214.105	304.520	
NET INCREASE/DECREASE IN CASH AND CASH EQUIVALENTS BEFORE EFFECT OF EXCHANGE RATE CHANGES (A+B+C)		412.443	1.794.951	
D. EFFECT OF EXCHANGE RATE CHANGES ON CASH AND CASH EQUIVALENTS		13.573	30.685	
NET INCREASE/DECREASE IN CASH AND CASH EQUIVALENTS (A+B+C+D)		426.016	1.825.636	
E. CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE PERIOD		3.087.387	1.261.752	
CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD (A+B+C+D+E)	3	3.513.403	3.087.388	

The accompanying notes are an integral part of the consolidated financial statements.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

1. ORGANIZATION AND OPERATIONS OF THE GROUP

ASELSAN Elektronik Sanayi ve Ticaret Anonim Şirketi ("the Company") was established in order to engage principally in research, development, engineering, production, tests, assembly, integration and sales, after sales support, consultancy and trading activities, to provide and conduct all sorts of activities for project preparation, engineering, consultancy, service providing, training, contracting, construction, publishing, trading, operation and internet services regarding various software, equipment, system, tools, material and platforms in the fields of electrical, electronics, microwave, electro-optics, guidance, computer, data processing, encryption, security, mechanics, chemistry and related areas within the army, navy, air force and aerospace applications to all institutions, organizations, companies and individual consumers.

The Company was established at the end of 1975 as a corporation by Turkish Land Forces Foundation. The Company commenced its production activities in Macunköy Facilities in early 1979.

As of the reporting date, the Company has been organized under five divisions under the Vice Presidential Sector with regard to investment and production requirements of projects. These divisions comprise Communication and Information Technologies Vice Presidency ("HBT"), Radar and Electronic Warfare Systems Vice Presidency ("REHIS"), Defense Systems Technologies Vice Presidency ("SST") and Microelectronics, Guidance & Electro-Optics Vice Presidency ("MGEO") and Transportation, Security, Energy and Automation Systems Vice Presidency ("UGES").

In addition to the Vice Presidencies above, the Company organization also includes the Financial Management Vice Presidency, Corporate Management Vice Presidency, Technology and Strategy Management Vice Presidency and Business Development and Marketing Vice Presidency making a total of four Vice Presidencies; in addition to these, there are also Legal Affairs and Private Secreteriat.

The Company maintains engineering operations in Ankara, Middle East Technical University (METU) Teknokent and Ankara Teknokent; production and engineering operations in Macunköy, Akyurt and Gölbaşı. General Management is located in Ankara Macunköy. Furthermore SST and REHİS Sector Presidency management offices are located in Istanbul Teknopark.

Turkish Armed Forces Foundation ("TSKGV") is the main shareholder of the Company which holds 74,20 percent of the capital and maintains control of the Company. TSKGV was established on 17 June 1987 with the law number 3388, in order to manufacture or import guns, equipment and appliances needed for Turkish Armed Forces.

The Company is registered to Capital Markets Board of Turkey ("CMB") and its shares have been quoted in Borsa İstanbul Anonim Şirketi ("BIST") since 1990. As of 31 December 2019, 25,80 percent of the Company's shares are publicly traded (31 December 2018: 25,70 percent) (Note 19).

The Company's trade registered address is Mehmet Akif Ersoy Mahallesi 296. Cadde No: 16 06370 Yenimahalle/Ankara. The average number of personnel employed by the Group as of 31 December 2019 is 6.797 (31 December 2018: 5.694).

The Company's consolidated subsidiaries are ASELSAN Baku ("ASELSAN Baku"), Mikroelektronik Ar-Ge Tasarım ve Ticaret Ltd. Co. ("Mikro AR-GE"), ASELSANNET Elektronik ve Haberleşme Sistemleri Sanayi Ticaret İnşaat ve Taahhüt Ltd. Co. ("ASELSANNET"), ASELSAN Malaysia Sdn. Bhd. ("ASELSAN Malaysia"), Aselsan Konya Silah Sistemleri Anonim Şirketi ("ASELSAN Konya"), BİTES Savunma Havacılık ve Uzay Teknolojileri Yazılım A.Ş. ("BITES"), ASELSAN Global Dış Ticaret ve Pazarlama A.Ş. ("ASELSAN GLOBAL"), ULAK Haberleşme A.Ş. ("ULAK"). They are collectively referred as the "Group" in the accompanying notes.

The Company has three branch offices; Aselsan Elektronik Sanayi ve Ticaret Anonim Şirketi EP Co. ("ASELSAN South Africa"), ASELSAN Makedonya Corridor-10 Highway Toll Collection System Project ("ASELSAN Macedonia") and ASELSAN Kıbrıs İleri Teknolojiler Araştırma Merkezi ("ASELSAN Kıbrıs") located in South Africa, Macedonia and Turkish Republic of Northern Cyprus ("KKTC"), respectively. The branches are included in the consolidated financial statements.

2. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS

2.1 The Basis of Presentation

Statement of Compliance to TAS

The accompanying consolidated financial statements are prepared in accordance with the requirements of CMB Communiqué Serial II, No: 14.1 "Basis of Financial Reporting in Capital Markets" ("Communiqué"), which were published in the Official Gazette No: 28676 on 13 June 2013 and in accordance with the Turkish Accounting Standards ("TAS") and Interpretations that have been put into effect by the Public Oversight Accounting and Auditing Standards Authority ("POA").

The consolidated financial statements has been presented with examples of Financial Statement and User Guide in the Official Gazette No: 30794 on 7 June 2019 by the POA. All reports have suited the TFRS formats.

The consolidated financial statements are prepared according to historical cost accounting except for the revaluation of land and financial instruments.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

2. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (continued)

2.1 The Basis of Presentation (continued)

Approval of the Consolidated Financial Statements

These consolidated financial statements have been approved for issue by the Board of Directors with the resolution number 1067 on 11 February 2019. There is no authority other than General Assembly and legal entities has the right to amend the consolidated financial statements.

Functional Currency

The individual financial statements of each Group entity are presented in the currency of the primary economic environment ("Functional Currency") in which the entity operates.

The Company's reporting currency is Turkish Lira ("TL"). For the purpose of the consolidated financial statements, the results and financial position of each entity are expressed in TL, which is the functional, and presentation currency of the Company for the consolidated financial statements. Amounts are expressed in thousands of TL or Foreign Currency unless otherwise stated. Kuruş, Turkish Currency subunit and 1 TL is equal to 100 Kuruş.

Preparation of Financial Statements in Hyperinflationary Periods

CMB, with its resolution dated 17 March 2005 numbered 11/367 declared that companies operating in Turkey which prepare their financial statements in accordance with CMB Accounting Standards, effective 1 January 2005, will not be subject to the application of inflationary accounting. Consequently, in the accompanying financial statements ("TAS/TAS 29") "Financial Reporting in Hyperinflationary Economies" has not been applied since 1 January 2005.

Basis of Consolidation

Subsidiaries:

The details of the subsidiaries of the Group are as follows:

			Group's proporti and voting po		
Subsidiaries	Location	Functional Currency	31 December 2019	31 December 2018	Main Activity
ASELSANNET	Turkey	TL	100	100	Communication systems
ASELSAN Baku	Azerbaijan	AZN	100	100	Marketing and sales of the group products
ASELSAN GLOBAL	Turkey	TL	100		Export
Mikro AR-GE ASELSAN Malaysia ASELSAN Konya	Turkey Malaysia Turkey	TL MYR TL	85 100 51	85 100 51	Microelectronic R&D projects Remote controlled weapon systems Weapon and weapon systems
BITES	Turkey	TL	51		Defense, Aerospace, Space Technologies, Software
ULAK	Turkey	TL	51		Communication systems

The consolidated financial statements include the financial statements of 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 when if facts and circumstances arise there are changes to one or more of the three elements of control listed above.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

2. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (continued)

2.1 The Basis of Presentation (continued)

Basis of Consolidation (continued)

Subsidiaries (continued):

The 51% shares of BİTES are transferred to ASELSAN on 28 February 2019, after share transfer agreement has signed on 13 February 2019.

The share transfer agreement on the 51% shares of ULAK Haberleşme A.Ş. which wholly owned by SSTEK Savunma Teknolojileri A.Ş. has signed on 1 October 2018. Capital structure is as follows; 51% ASELSAN, 49% SSTEK Savunma Teknolojileri A.Ş.

Aselsan Konya Silah Sistemleri A.Ş. has been established with Konya Savunma Sanayi A.Ş. and registration of the entity has been completed in 12 November 2018. Capital structure is as follows; 51% ASELSAN, 49% Konya Savunma Sanayi A.Ş.

The Company titled "ASELSAN Global DIs Ticaret ve Pazarlama A.Ş." was established in order to carry out import, export and marketing activities of all kinds of civil and military electronic products and systems. The company is wholly owned by ASELSAN A.Ş. The company is established with 50.000 TL capital. The establishment was registered on August 06, 2019.

Even though the Company has voting rights less than a majority, if it has ability to manage the operation of the investee unintentionally, then the Group assess that it has control over that investee. 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:

- comparison of voting rights of the Group and the others,
- potential voting rights held by the Group, and others,
- rights arising from contractual arrangements; and
- any additional facts and circumstances that indicate the Group has, or does have, the current ability to direct the relevant activities at the time that decisions need to be made (including voting patterns at previous shareholders' meeting).

The financial statements of subsidiaries are included in the consolidated financial statements from the date on which control commences until the date on which control ceases. Income and expenses of a subsidiary acquired or disposed of during the year 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.

Each item of profit or loss and 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 results in the non-controlling interests having a deficit balance.

When necessary, adjustments are made to the financial statements of subsidiaries to align with the Group accounting policies and the Group's accounting policies.

All intragroup balances, equity, income and expenses, profits and losses and cash flows relating to transactions between members of the Group are eliminated during consolidation.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

2. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (continued)

2.1 The Basis of Presentation (continued)

Basis of Consolidation (continued)

Joint Ventures

The details of the Group's interests in joint ventures as of 31 December 2019 and 2018 are as follows:

			Group's proportion of ownership and voting power held (%)		
Joint Ventures	Principal Activity	Country of establishment and operation	31 December 2019	31 December 2018	
Hassas Optik Sanayi ve Ticaret Anonim Şirketi ("ASELSAN Optik")	Sensitive optic technologies	Turkey	50	50	
Mikro Nano Teknolojileri Sanayi ve Ticaret Anonim Şirketi ("ASELSAN Bilkent")	Production of micro and nano sized devices which contains semi-conductive and similar technological materials	Turkey	50	50	
International Golden Group ("IGG") ASELSAN Integrated Systems LLC ("IGG ASELSAN")	Production, integration, sales and technical maintenance service of high technology product	United Arab Emirates	49	49	
Kazakhstan ASELSAN Engineering LLP ("ASELSAN Kazakhstan")	Production, sales and technical maintenance service of electronic and electro-optic devices and systems	Kazakhstan	49	49	
ASELSAN Middle East PSC ("ASELSAN Jordan")	Production, sales and technical maintenance service of electronic and electro-optic devices and systems	Jordan	49	49	
Saudi Arabian Defence Electronics Corporation ("SADEC LLC")	Production and sale of radar, electronics, warfare and electro-optic products	Saudi Arabia	50	50	
TÜYAR Mikroelektronik Sanayi ve Ticaret Anonim Şirketi ("TÜYAR")	Production of micro and nano-sized devices containing semiconductor	Turkey	51	51	
BARQ QSTP LLC. ("BARQ QSTP LLC.")	Command and control systems, thermal and night vision camera, crypto, remote-controlled weapon systems	Qatar	48	48	
Teknohab Teknoloji Geliştirme Bölgesi Yönetici Anonim Şirketi ("TEKNOHAB")	To create investment opportunities in technology intensive areas, provide job opportunities to researchers and skilled people, help technology transfers and facilitate foreign capital to enter our country that will enable high technology	Turkey	30	30	
EHSİM Elektronik Harp Sistemleri Müh. Tic. A.Ş. ("EHSİM")	Electronic Warfare and Tactical Command Systems	Turkey	50		
TR Eğitim ve Teknoloji A.Ş.	Realizing Human Resources studies, Consultancy with respect to HR studies, acreditation services and trainings for every level, educational, cultural, art, sports, fair organizations and digital marketing operations.	Turkey	50		

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

2. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (continued)

2.1 The Basis of Presentation (continued)

Basis of Consolidation (continued)

Joint Ventures (continued):

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

A share transfer agreement for the acquisition of 50% of the total shares of Havelsan EHSİM Hava Elektronik Harp Sistemleri Mühendislik Ticaret Anonim Şirketi, has been signed. 1 percent of the shares has taken from Havelsan Hava Elektronik Sanayi ve Ticaret A.Ş. and 49 percent of the shares has taken from real person partners. Payment for share transfer to HAVELSAN A.Ş. and to real person partners were completed on 18 September 2019. At the extraordinary general meeting held on September 9, 2019, the Company's title was changed to EHSİM Elektronik Harp Sistemleri Müh. Tic. A.Ş. EHSİM operates in Electronic Warfare and Tactical Command and Control systems.

A share transfer agreement was signed for the acquisition of 50% of TR Eğitim ve Teknoloji A.Ş. from TUSAŞ Türk Havacılık ve Sanayii A.Ş. The payment regarding the share transfer was made to TUSAŞ A.Ş. on 09 September 2019.

The Group's joint ventures; IGG ASELSAN and ASELSAN Kazakhstan have been established in 2011, ASELSAN Jordan has been established in 2012 and ASELSAN Optik and ASELSAN Bilkent which were established in 2014, SADEC LLC has been established in 2016, TÜYAR has been established in 2017, ULAK has been established in 2018, TEKNOHAB has been established in 2018 and EHSİM has been established in 1998 were included in the condensed consolidated interim financial statements by using the equity method. Since BARQ QSTP LLC and TR Eğitim Teknoloji have not started to operate yet, there is no consolidation effect on the Group's financial statements.

2.2 Comparative Information and Restatement of Prior Period Consolidated Financial Statements

In order to determine the financial position and performance trends, the Group's consolidated financial statements are presented comparatively with the corresponding figures. For the purpose of having consistency with the current term's presentation of consolidated financial statements, comparative information is reclassified and significant differences are explained if necessary.

While purchase expenses regarding research and development in tangible assets in 2019 are subject to cost of sales decreasing the profit for the period and having the characterisctic of expenses not providing cash outflow, a positive reclassification has been made and posted under "Adjustments to reconcile profit for the period". Such cash outflows and inflows were reported under "Cash flows from investing activities" as net value previously.

The reclassification of 31 December 2018 is as below.

	31 December 2018		31 December 2018
Cash Flow Statement	(Previously Reported)	Reclassification	Reported
Other Adjustments to Reconcile Profit (Loss)	132.003	998.502	1.130.505
Decrease (Increase) in Prepaid Expenses	(723.315)	32.429	(690.886)
Purchase of Intangible Assets	(396.392)	(998.502)	(1.394.894)
Other Cash Outflows	18.583	(32.429)	(13.846)

2.3 Accounting Policies, Changes in Accounting Estimates and Errors

Significant changes in accounting policies and errors are applied retrospectively and prior period financial statements are restated, changes in accounting estimates are reflected to the financial in current period profit/loss.

When change in estimate in accounting policies are related with only one period, changes are applied on the current period but if the estimated changes are for the following periods, changes are applied both on the current and following periods prospectively.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

2. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (continued)

2.4 New and Revised Turkish Accounting Standards

a) Standards Adopted as of 01 December 2019

TFRS 16 Leases

On April 2018, Public Oversight Accounting and Auditing Standarts Authority ("POA") has issued the new leasing standard which will replace TAS 17 Leases, TFRSI 4 Determining Whether an Arrangement Contains a Lease, TASI 15 Operating Leases – Incentives, and TASI 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.

Within the framework of the amendment, as of the date of transition, the Group has accounted for right of use assets and the lease obligation amounting TL 6.264 on its consolidated financial statements.

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

In 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 standard is effective for annual periods beginning on or after 1 January 2019. This amendment have no effect on Group's consolidated financial statements.

TFRS 23 – Uncertainty Over Income Tax Treatments

On May 2018, POA issued TFRSI 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. TFRSI 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 standard is effective for annual periods beginning on or after 1 January 2019. This amendment has no effect on Group's consolidated financial statements.

Amendments to TAS 19 - Plan Amendment, Curtailment or Settlement -

On 15 January 2019, POA issued Plan Amendment, Curtailment or Settlement (Amendments to TAS 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 standard is effective for annual periods beginning on or after 1 January 2019. This amendment has no effect on Group's consolidated financial statements.

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 standard is effective for annual periods beginning on or after 1 January 2019. This amendment has no effect on Group's consolidated financial statements.

Annual Improvements to TFRSs 2015 - 2017 Cycle

TFRS 3 Business Combinations and TFRS 11 Joint Arrangements

TFRS 3 and TFRS 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 remeasures the previously held interest at fair value. If a party maintains (or obtains) joint control, then the previously held interest is not remeasured. The standard is effective for annual periods beginning on or after 1 January 2019. This amendment has no effect on Group's consolidated financial statements.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

2. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (continued)

2.4 New and Revised Turkish Accounting Standards (continued)

TAS 12 Income Taxes

TAS 12 is amended to clarify that all income tax consequences of dividends (including payments on financial instruments classified as equity) are recognised consistently with the transactions that generated the distributable profits – i.e. in profit or loss, other comprehensive income (OCI) or equity. The standard is effective for annual periods beginning on or after 1 January 2019. This amendment has no effect on Group's consolidated financial statements.

TAS 23 Borrowing Costs

TAS 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. The standard is effective for annual periods beginning on or after 1 January 2019. This amendment has no effect on Group's consolidated financial statements.

b - Standards Issued But Not Yet Effective and Not Early Adopted as of 31 December 2019

Amendments to TFRS 4: Applying TFRS 9 Financial Instruments with TFRS 4 Insurance Contracts

TFRS 4 has been amended by POA, to reduce the impact of the differing effective dates of the new insurance contracts standard and TFRS 9. These amendments to TFRS 4 provide two optional solutions for insurers to reduce concerns about implementations: i) when applying TFRS 9 by insurers to its financial assets, an insurer will be permitted to reclassify the difference between profit or loss and other comprehensive income and the amounts recognised in profit or loss under TFRS 9 and those that would have been reported under TAS 39; or ii) an optional temporary exemption from applying TFRS 9 for companies whose activities are predominantly connected with insurance before January 1, 2021. These companies will be permitted to continue to apply existing requirements for financial instruments in TAS 39.

The Group does not expect that application of this amendment will have significant impact on its consolidated financial statements.

TFRS 17 – Insurance Contracts

On 16 February 2019, POA issued TFRS 17 Insurance Contracts. This first truly globally accepted standard for insurance contracts will help investors and others better understand insurers' risk exposure, profitability and financial position. TFRS 17 replaces TFRS 4, which was brought in as an interim Standard in 2004. TFRS 4 has given companies dispensation to carry on accounting for insurance contracts using national accounting standards, resulting in a multitude of different approaches. As a consequence, it is difficult for investors to compare and contrast the financial performance of otherwise similar companies. TFRS 17 solves the comparison problems created by TFRS 4 by requiring all insurance contracts to be accounted for in a consistent manner, benefiting both investors and insurance companies. Insurance obligations will be accounted for using current values – instead of historical cost. The information will be updated regularly, providing more useful information to users of financial statements. TFRS 17 has an effective date of 1 January 2021 but companies can apply it earlier.

The Group does not expect that application of TFRS 17 will have significant impact on its consolidated financial statements.

Definition of Material (Amendments to TAS 1 and TAS 8)

On 07 June 2019, The amendments clarify the definition of material and how it should be applied by including in the definition guidance that until now has featured elsewhere in TFRS Standards. In addition, the explanations accompanying the definition have been improved. Finally, the amendments ensure that the definition of material is consistent across all TFRS Standards. This amendments have an effective date of 1 January 2020 but companies can apply it earlier.

The Revised Conceptual Framework

The revised Conceptual Framework issued on 11 May 2019 by POA. The Conceptual Framework sets out the fundamental concepts for financial reporting that guide the Board 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.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

2. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (continued)

2.4 New and Revised Turkish Accounting Standards (continued)

The Revised Conceptual Framework (continued)

The revised Framework is more comprehensive than the old one – its aim is to provide the Board with the full set of tools for standard setting. It covers all aspects of standard setting from the objective of financial reporting, to presentation and disclosures. For companies that use the Conceptual Framework to develop accounting policies when no TFRS Standard applies to a particular transaction, the revised Conceptual Framework is effective for annual reporting periods beginning on or after 1 January 2020, with earlier application permitted.

Amendments to TFRS 3 - Definition of a Business

Determining whether a transaction results in an asset or a business acquisition has long been a challenging but important area of judgement. The IASB has issued amendments to IFRS 3 Business Combinations to make it easier for companies to decide whether activities and assets they acquire are a business or merely a group of assets. In May 2019, POA has also published the Definition of Business (Amendments to TFRS 3). With this amendments confirmed that a business shall include inputs and a process, and clarified that the process must be substantive and the inputs and process must together significantly contribute to creating outputs.. It narrowed the definitions of a business by focusing the definition of outputs on goods and services provided to customers and other income from ordinary activities, rather than on providing dividends or other economic benefits directly to investors or lowering costs and added a concentration test that makes it easier to conclude that a company has acquired a group of assets, rather than a business, if the value of the assets acquired is substantially all concentrated in a single asset or group of similar assets. This is a simplified assessment that results in an asset acquisition if substantially all of the fair value of the gross assets is concentrated in a single identifiable asset or a group of similar identifiable assets. If a preparer chooses not to apply the concentration test, or the test is failed, then the assessment focuses on the existence of a substantive process. The amendment applies to businesses acquired in annual reporting periods beginning on or after 1 January 2020. Earlier application is permitted.

The Group is assessing the potential impact on its consolidated financial statements resulting from the application of the amendments to TFRS 3.

Interest Rate Benchmark Reform (Amendments to TFRS 9, TAS 39 and TFRS 7)

Interest Rate Benchmark Reform, which amended TFRS 9, TAS 39 and TFRS 7 issued in September 2019, added Section 6.8 and amended paragraph 7.2.26. About this issue, IASB identified two groups of accounting issues that could affect financial reporting. These are: pre-replacement issues-issues affecting financial reporting in the period before the reform; and replacement issues—issues that might affect financial reporting when an existing interest rate benchmark is either reformed or replaced.

IASB considered the pre-replacement issues to be more urgent and decided to address the following hedge accounting requirements as a priority in the first phase of the project:

- The highly probable requirement,
- Prospective assessments,
- Retrospective assessments,

All other hedge accounting requirements remain unchanged. A company shall apply the exceptions to all hedging relationships directly affected by interest rate benchmark reform.

The Group shall apply these amendments for annual periods beginning on or after 1 January 2020 with earlier application permitted.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

2. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (continued)

2.5 Summary of Significant Accounting Policies

Related Parties

A related party is a person or entity that is related to the entity that is preparing its financial statements (referred to as the "reporting entity").

(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;

(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 defined 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).

Transaction with related party is a transfer of resources, services or liabilities between the reporting entity and the related party, disregarding it is with or without a value.

Revenue

TFRS 15 establishes a comprehensive framework for determining whether, how much and when revenue is recognised.

It replaces existing revenue recognition guidance, including TAS 18 Revenue, TAS 11 Construction Contracts and TFRYK 13 Customer Loyalty Programmes.

General model for revenue recognition

TFRS 15 requires revenue recognition for all contracts with customers to follow the five-step approach to revenue recognition.

Step 1: Identifying the contract with customers

A contract exists only if it is legally enforceable, the collection of the consideration is probable, the rights to goods and services and payment terms can be identified, the contract has commercial substance; and the contract is approved and the parties are committed to their obligations.

If either contracts were negotiated as a single commercial package, or consideration in one contract depends on the other contract or goods or services (or some of the goods or services) are a single performance obligation the Group accounts the contracts as a single contract.

Step 2: Identifying the performance obligations

Group defines "performance obligation" as a unit of account for revenue recognition. The Group assesses the goods or services promised in a contract with a customer and identifies as a performance obligation either a good or service that is distinct; or a series of distinct goods or services that are substantially the same and have the same pattern of transfer to the customer.

A contract may contain promises to deliver a series of distinct goods or services that are substantially the same. At contract inception, an entity determines whether the series of goods or services is a single performance obligation.

Step 3: Determining the transaction price

In order to determine the transaction price, the Group assesses how much consideration it expects to be entitled to by fulfilling the contract. In arriving at the assessment, the Group considers variable elements of consideration, as well as the existence of a significant financing component.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

2. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (continued)

2.5 Summary of Significant Accounting Policies (continued)

Revenue (continued)

Significant financing component

The Group revises the promised amount of consideration for the effect of a significant financing component to the amount that reflects what the cash selling price of the promised good or service.

As a practical expedient, the Group does not adjust the transaction price for the effects of a significant financing component if, at contract inception, the entity expects the period between customer payment and the transfer of goods or services to be one year or less. In cases where advance for the services are received and the payment scheme is broadly aligned with the Group's performance throughout the period, the Group concludes that the period between performance and payment is never more than 12 months, therefore the expedient is applied.

Variable consideration

The Group identifies items such as price concessions, incentives, performance bonuses, completion bonuses, price adjustment clauses, penalties, discounts, credits, or similar items may result in variable consideration if there is any in a customer contract.

Step 4: Allocating the transaction price to performance obligations

If distinct goods or services are delivered under a single arrangement, then the consideration is allocated based on relative stand-alone selling prices of the distinct goods or services (performance obligations). If directly observable stand-alone selling prices are not available, the total consideration in the service contracts is allocated based on their expected cost plus a margin.

Step 5: Revenue Recognition

The Group recognises revenue over-time if any of the following conditions is met:

- customer simultaneously receives and consumes the benefits as the entity performs, or
- the customer controls the asset as the entity creates or enhances it, or
- Group's performance does not create an asset for which the entity has an use; and alternative there is a right to payment for performance to date.

For each performance obligation that is satisfied over time, an entity selects a single measure of progress, which depicts the transfer of control of the goods or services to the customer. The Group uses a method that measures the work performed reliably.

The Group uses cost incurred to measure the progress towards to completion of the project where the input method is used and uses units transferred to measure the progress towards to completion of the project where the output method is used.

If a performance obligation is not satisfied over time, then the Group recognise revenue at the point in time at which it transfers control of the good or service to the customer.

The Group recognises a provision in accordance with TAS 37 "Provisions, Contingent Liabilities and Contingent Assets" when the unavoidable costs of meeting the obligations under a contract exceed the economic benefits.

Contract modifications

The Group recognises a contract modification as a separate contract if the modification results in a promise to deliver additional goods or services that are distinct and an increase in the price of the contract by an amount of consideration that reflects the entity's stand-alone selling price of those goods or services adjusted to reflect the circumstances of the contract.

If the goods or services are distinct, then the entity accounts for the modification as if it were a termination of the existing contract and the creation of a new contract.

If the modification to the contract does not add distinct goods or services, then the entity accounts for it on a combined basis with the original contract, as if the additional goods or services were part of the initial contract.

Dividend and interest income

Dividend income from investments is recognized when the shareholder's right to receive payment has been established (provided that it is probable that the economic benefits will flow to the Group and the amount of income can be measured reliably).

Interest income from a financial asset is recognized when it is probable that the economic benefits will flow to the Group and the amount of income can be measured reliably. Interest income is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable, which is the rate that exactly discounts estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount on initial recognition.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

2. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (continued)

2.5 Summary of Significant Accounting Policies (continued)

Inventories

Inventories are stated at the lower of cost and net realizable value. Inventories are valued on the basis of the project according to the weighted average method. Net realizable value represents the estimated selling price less all estimated costs of completion and costs necessary to realize sales. 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 profit or 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.

Property, Plant and Equipment

Land held for use in the production or supply of goods or services, or for administrative purposes, are stated in the consolidated statement of financial position at their revalued amounts, being the fair value at the date of revaluation, less any subsequent accumulated impairment losses.

Revaluations are performed with sufficient regularity such that the carrying amounts do not differ materially from those that would be determined using fair values at the end of each reporting period.

Any increase in the fair value arising on the revaluation of such land is recognized in gain on revaluation of property.

A decrease in the carrying amount arising on the revaluation of such land is recognized in profit or loss to the extent that it exceeds the balance in the accumulated in the equity, if any, held in the properties revaluation reserve relating to a previous revaluation of that asset.

On the subsequent sale or retirement of a revalued property, the attributable revaluation surplus remaining in the properties revaluation reserve inequity is transferred directly to retained earnings.

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

Properties in the course of construction for production, rental or administrative purposes, or for purposes not yet determined, are carried at cost, less any recognized impairment loss. Borrowing cost is capitalized when the assets took a substantial period of time to get ready for their intended use or sale.

These assets are classified to property, plant, and equipment when the assets are completed and ready for their intended use. Depreciation of these assets, on the same basis as other property assets, commences when the assets are ready for their intended use.

Depreciation is charged as to write off the cost of assets, other than land and properties under construction, over their estimated useful lives, using the straight-line method. The estimated useful lives, residual values and depreciation method are reviewed at each year end, 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. If the ownership of the finance lease is not obvious at the end of the leasing period, it is depreciated over their expected useful lives or, where shorter, the term of the relevant lease.

The 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.

The maintenance and repair expenses arising from changing any part of the fixed assets can be realized if the economic benefit of the asset is increased. All other expenses are recognized in the expense accounts in the consolidated profit and loss when they are realized.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

2. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (continued)

2.5 Summary of Significant Accounting Policies (continued)

Property, Plant and Equipment (continued)

The useful lives of Property, Plant and Equipment are as follows:

	<u>Useful life</u>
Buildings	5-50 years
Land improvements	7-25 years
Machinery and equipment	2-35 years
Motor vehicles	3-18 years
Furniture and fixtures	2-50 years
Leasehold improvements	2-11 years
Other tangible assets	2-20 years

Intangible Assets

Intangible assets acquired

Intangible assets acquired are recognized at cost less accumulated amortization and accumulated impairment losses. Amortization is charged on a straight-line basis over their estimated useful lives. The estimated useful life and amortization methods are reviewed at the end of each annual reporting period, with the effect of any changes in accounting estimates for on a prospective basis.

Trademarks and Licenses

Acquired licenses are shown at historical cost. 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.

Internally generated intangible assets – Research and Development

Expenditure on research activities is recognized as an expense in the period in which it is incurred.

An internally-generated intangible asset arising from development (or from the development phase of an internal project) is recognized if, and only if, all of the following have been demonstrated:

- The technical feasibility of completing the intangible asset so that it will be available for use or sale,
- The intention to complete the intangible asset and use or sell it,
- · The ability to use or sell the intangible asset,
- · How the intangible asset will generate probable future economic benefits,
- The availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- The ability to measure reliably the expenditure attributable to the intangible asset during its development.

The amount initially recognized for internally-generated intangible assets is the sum of expenditure incurred from the date when the intangible asset first meets the recognizion criteria listed above. Where no internally-generated intangible asset can be recognized, development expenditure is charged to profit or loss in the period in which it is incurred.

Subsequent to initial recognition, internally-generated intangible assets are reported at cost less accumulated amortization and accumulated impairment losses, on the same basis as intangible assets acquired separately.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

2. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (continued)

2.5 Summary of Significant Accounting Policies (continued)

Intangible Assets (continued)

Internally generated intangible assets - R&D expenditure (continued)

The useful lives of the intangible assets are as follows:

	<u>Useful life</u>
Rights	1-15 years
Computer software	2-3 years
Development expenditures	1-5 years

Impairment of Assets

Non-derivative Financial Assets

For financial assets that are not recognized in profit or loss, including shares in investments accounted for by equity method, it is assessed if there is objective evidence of impairment at each reporting period.

Objective evidence of impairment in financial assets includes the sentences below.

- failure to fulfill the commitment or obligation by debtor;
- depending on the circumstances that the Group may not take into consideration;
- the possibility of bankruptcy of the debtor or the issuer; •
- arise of a negative status in debtor or issuer's payment status; •
- elemination of a marketable asset from the active market or •
- observable information indicating a measurable decrease in expected cash flows from a group of financial assets.

The fact that the fair value of an investment based on stocks falls permanently below the cost price for an important period or for a long period of time is also an objective evidence of impairment. The Group considers a 20 percent decline to be significant and a 12-month period as long-term and permanent.

Available-for-sale financial assets

Impairment losses on available for sale financial assets are recognized by reclassfying the losses accumulated in the gain on revaluation of available for sale financial assets reserve to profit or loss. The amount reclassified is the difference between the acquisition cost (net of any principal repayment and amortization) and the current fair value, less any impairment loss previously recognized in profit or loss.

If the fair value of an impaired available for sale debt security subsequently increases and the increase can be related objectively to an event occuring after the impairment loss was recognized, then the impairment loss is reversed through profit or loss. Impairment loss is recognized in profit or loss for an investment in an equity instrument classified as available for sale are not reversed through profit or loss.

If there is an increase in the fair value of a debt instrument classified as impaired or available for sale and if that increase is recognized as reliably correlated to an event occurred after the impairment loss is recognized, withdrawal of impairment loss is accounted for in profit or loss, otherwise in comprehensive income. Impairment losses recognized in profit or loss by associating with investments in equity instruments classified as available-for-sale cannot be witdrawn through profit or loss.

Equity Accounted Investees

An impairment loss in respect of an equity accounted investee is measured by comparing the recoverable amount of the investment with its carrying amount. An impairment loss is recognized in profit or loss, and is reversed if there has been a favorable change in the estimates used to determine the recovarable amount.

Borrowing Cost

Borrowing costs 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.

When the Group borrows funds specifically for the purpose of the qualifying assets, the amount of borrowing costs eligible for capitalization is the actual borrowing costs incurred on that borrowing during the period less any investment income on the temporary investment of those borrowings.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

2. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (continued)

2.5 Summary of Significant Accounting Policies (continued)

Non-derivative Financial Assets (continued)

Available-for-sale financial assets (continued)

Financial Instruments

TFRS 9 Financial Instruments sets out requirements for recognising and measuring financial assets, financial liabilities and some contracts to buy or sell non-financial items. This standard replaces TAS 39 Financial Instruments: Recognition and Measurement.

i. Classification - Financial assets

TFRS 9 contains a new classification and measurement approach for financial assets that reflects the business model in which assets are managed and their cash flow characteristics.

TFRS 9 contains three principal classification categories for financial assets: measured at amortised cost, Fair Value Through Other Comprehensive Income ("FVOCI") and Fair Value Through Profit or Loss ("FVTPL"). The standard eliminates the existing TAS 39 categories of held to maturity, loans and receivables and available for sale. Financial investments classified as "Available for Sale Financial Assets" in accordance with TAS 39 are classified as FVOCI in accordance with TFRS 9.

Under TFRS 9, derivatives embedded in contracts where the host is a financial asset in the scope of the standard are never bifurcated. Instead, the hybrid financial instrument as a whole is assessed for classification. The Group does not have any embedded derivatives as of reporting date.

ii. Impairment - Financial assets and contract assets

TFRS 9 replaces the "incurred loss" model in TAS 39 with a forward-looking "expected credit loss" (ECL) model. This requires considerable judgement about how changes in economic factors affect ECLs, which is determined on a probability-weighted basis.

The new impairment model applies to financial assets measured at amortised cost or FVOCI, except for investments in equity instruments, and to contract assets.

Under TFRS 9, loss allowances are measured on either of the following bases:

- 12-month ECLs: these are ECLs that result from possible default events within the 12 months after the reporting date; and
- lifetime ECLs: these are ECLs that result from all possible default events over the expected life of a financial instrument.

Lifetime ECL measurement (simplified approach) is always applied to trade receivables and contract assets without a significant financing component.

iii. Classification - Financial liabilities

TFRS 9 largely retains the existing requirements in TAS 39 for the classification of financial liabilities.

However, under TAS 39 all fair value changes of liabilities designated as at FVTPL are recognised in profit or loss, whereas under TFRS 9 these fair value changes are generally presented as follows:

The amount of change in the fair value that is attributable to changes in the credit risk of the liability is presented in OCI; and the remaining amount of change in the fair value is presented in profit or loss.

The Group has not identified any liability for the fair value recognized in profit or loss and has no objective purpose.

iv. Hedge accounting

When initially applying TFRS 9, the Group may choose as its accounting policy to continue to apply the hedge accounting requirements of TAS 39 instead of the requirements in TFRS 9. During selection of the accounting policies, TFRS 9 gives option of continuing with TAS 39 hedge accounting principles and deferring hedge accounting rules in accordance with TFRS 9. The Group does not apply hedge accounting.

Capital

Common Stocks

Common stocks are classified as equity. Incremental costs that can be directly attributable to the issue of ordinary shares are recognised as a deduction from equity considering the tax effect.

Financial Lease Operations

Leasing- the group as lessor

Leases in terms of which the Group assumes substantially all the risks and rewards of ownership are classified as finance leases. All other leases are classified as operating leases.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

2. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (continued)

2.5 Summary of Significant Accounting Policies (continued)

Financial Lease Operations (continued)

Leasing- the group as lessor (continued)

Finance lease receivables are recognized at the amount of the Group's net investment in the leases. Finance lease income is recognized allocated to accounting periods so as to reflect a constant periodic rate of return on the Group's net investment outstanding in respect of the leases.

Payments made under operating leases are recognized in profit or loss on a straight-line basis over the term of the lease. Start-up costs for the realization and optimisation of the operational lease agreement are added to the cost of the leased asset and amortized through the leased time on a straight line basis method.

Foreign Currency Transactions

Foreign currency transactions and balances

The financial statements of each Group entity are presented in the currency of the primary economic environment in which the entity operates as its "functional currency". For the purpose of the consolidated financial statements, the operational results and financial position of each entity are expressed in TL, which is the functional currency of the Company, and the presentation for consolidated financial statements.

In preparing the financial statements of the individual entities, transactions in foreign currencies (other than TL) are recorded at the rates of exchange prevailing on the dates of the transactions. At each balance sheet date, monetary items (including advances) denominated in foreign currencies are retranslated at the rates prevailing on the balance sheet date. Non-monetary items carried at fair value that are denominated in foreign currencies are retranslated at the rates prevailing on the date when the fair value was determined. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences are accounted for the period in profit or loss in which they are incurred except for the following cases:

- Exchange differences which relate 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 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.

Earnings per Share

Earnings per share, disclosed in the consolidated statement of profit or loss, are determined by dividing the net income attributable to equity holders of the parent by the weighted average number of shares outstanding during the period concerned.

In Turkey, companies can increase 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 weighted average number of shares is computed by taking into consideration of the retrospective effects of the share distributions.

Events After the Reporting Period

Events after the reporting periods include all events that take place between the balance sheet date and the date of authorization for the release of the financial statements, although the events occurred after the announcements related to the net profit/loss or even after the public disclosure of other selective financial information.

In the case that events occur requiring an adjustment, the Group adjusts the amount recognized in its consolidated financial statements to reflect the adjustments after the balance sheet date.

Provisions, Contingent Liabilities and Contingent Assets

Provisions are recognized when the Group has a present obligation as a result of a past event, and it is probable that the Group will be required to settle that obligation, and a reliable estimate can be made for 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 balance sheet date, taking into account the risks and uncertainties related with the obligation.

Where 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.

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.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

2. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (continued)

2.5 Summary of Significant Accounting Policies (continued)

Operating Segments

Operations of the Company are technical system design, development, production and after-sales services for various products for defense industry. One kind of operating segment has occurred in consequence of similarities between methods that are used for products, quality of services and processes, client's type and class, and distribution or presentation of products. It is not required to disclose segment reporting for the consolidated subsidiaries, since revenue profit/loss and assets are below 10 percent of consolidated amounts.

Government Grants and Incentives

Government grants are not recognized until there is reasonable assurance that the Group will comply with the conditions attaching to them and that the grants will be received.

Government grants are recognized in profit or loss on a systematic basis over the periods in which the Group recognizes as expenses the related costs for which the grants are intended to compensate. Specifically, government grants whose primary condition is that the Group should purchase, construct or otherwise acquire non-current assets are recognized as deferred revenue in the consolidated statement of financial position and transferred to profit or loss on a systematic and rational basis over the useful lives of the related assets.

Government grants that are receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the Group with no future related costs are recognized in profit or loss in the period in which they become receivable.

Taxes Calculated on the Basis of the Company's 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.

Income tax expense represents the sum of the tax currently payable and deferred tax.

Current tax

The tax currently payable is based on taxable profit for the year. Taxable profit differs from profit as reported in the statement of profit or loss 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 balance sheet date.

Deferred tax

Deferred tax is recognized in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax liabilities are recognized for all taxable temporary differences and deferred tax assets are recognized for deductible temporary differences to the extent that it is probable that future taxable profits will be available against which they can be used. Deferred tax 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 future taxable profits will be available against which they can be used.

Deferred tax (continued)

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 period

Tax, provided that it is not related with a transaction directly recognized in equity, is classified in the statement of profit or loss. Otherwise, tax is recognized under equity.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

2. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (continued)

2.5 Summary of Significant Accounting Policies (continued)

Taxes Calculated on the Basis of the Company's Earnings (continued) 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 TAS 19 "Employee Benefits" ("TAS 19").

The retirement benefit obligation recognized in the consolidated financial statements represents the present value of the defined benefit obligation.

The actuarial gains and losses are recognized in other comprehensive income.

Dividend and bonus plans

The Group recognizes a liability and an expense for bonuses and dividend, 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.

The Group recognizes the cost of providing additional retirement bonuses to employees who have completed 20 years of service and earned the right to retirement benefits. In

26 November 2015, according Board of Directors' resolution numbered 869/6c, the Company has decided to terminate payment of retirement bonus employees worked for 20 years for the Company and is qualified pensioner, beginning from 30 July 2016. These compensations are deducted from the net present values of the unrealized liability amounts and are recognized in the accompanying consolidated financial statements.

Statement of Cash Flows

Current period statement of cash flows is categorized and reported as operating, investing and financing.

Offsetting

Financial assets and financial liabilities are offset and the net amount presented in the statement of financial position when, and only when, the Group currently has a legally enforceable right to offset the amounts and intends either to settle them on a net basis or to realize the asset and settle the liability simultaneously.

Non-Current Assets Held for Sale

Non-current assets are classified as "assets held for sale" when their carrying amount is to be recovered principally through a sale transaction and a sale is considered highly probable. They are stated at the lower of carrying amount and fair value less costs to sell. The assets can be a part of the Entity, disposal group as a single fixed asset.

2.6 Critical Accounting Judgments and Estimates

Critical judgments in applying the Group's accounting policies

In the process of applying the accounting policies, which are described in note 2.5, management has made the following judgments that have the most significant effect on the amounts recognized in the financial statements:

Deferred tax

Deferred tax assets and liabilities are recorded using substantially enacted tax rates for the effect of temporary differences between book and tax bases of assets and liabilities. Currently, there are deferred tax assets resulting from operating loss carry-forwards and deductible temporary differences, all of which could reduce taxable income in the future. Based on available evidence, both positive and negative, it is determined whether it is probable that all or a portion of the deferred tax assets will be realized.

The main factors which are considered include future earnings potential; cumulative losses in recent years; history of loss carry-forwards and other tax assets expiring; the carry-forward period associated with the deferred tax assets; future reversals of existing taxable temporary differences; tax-planning strategies that would, if necessary, be implemented, and the nature of the income that can be used to realize the deferred tax asset. If based on the weight of all available evidence, it is the Group's belief that taxable profit will not be available sufficient to utilize some portion of these deferred tax assets, then provision is set for some portion of or all of the deferred tax assets (Note 27).

Liabilities with respect to employee benefits

The Group makes various assumptions on discount, inflation rate, wage increase rate, the probability of quitting voluntarily for calculating provisions for employee benefits and retirement pays (Note 17).

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

2. BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (continued)

2.6 Critical Accounting Judgments and Estimates (continued)

Useful lives of tangible and intangible assets

The Group amortizes the non-current assets based on the useful lives of those assets stated in the accounting policies (Note 11-12).

Escalation

As of the reporting dates, the amounts of the projects subject to escalation are calculated with respect to the provisions of the contracts and estimated in accordance with TFRS 15 "Revenue from Contracts with Customers".

Provision for guarantee expenses

The Group calculates provision, according to the budgeted estimations for specific parts of the sales under the scope of warranty that needs specific guarantee calculations, and according to the realizations in previous years for the remaining part of the sales (Note 15).

Development Expenses

As of reporting dates, the Management assess the recoverability of the expenses regarding the Group's development activities. These expenses are started to be amortized with respect to their useful lives when their development phases are completed and it becomes probable that there is an associated economic benefit. When the development phase is completed and no economic benefit is foreseen, the related expenses are recognized in consolidated income statement (Note 12).

3. CASH AND CASH EQUIVALENTS

	31 December 2019	31 December 2018
Cash	261	153
Bank		
- Time deposit	3.159.194	2.987.934
- Demand deposit	82.257	96.981
	267.676	
Other	4.015	2.320
Cash and cash equivalents on the cash flow statement	3.513.403	3.087.388
Interest income accruals	439	28.303
	3.513.842	3.115.691

As of 31 December 2019, the Group has time deposits denominated in foreign currencies with maturities on January 2020 (31 December 2018: January 2019), with the interest rates between 0,2 percent and 2,5 percent (31 December 2018: 2 percent and 5 percent) amounting to TL 1.030.178 (31 December 2018: TL 253.662) in several banks.

As of 31 December, 2019, the Group has time deposits denominated in TL terms with maturities between January-February 2020 (31 December 2018: January-February 2019) with the interest rates between 10,25 percent and 11 percent (31 December 2018: 18,5 percent and 23,5 percent) amounting to TL 2.129.016 (31 December 2018: TL 2.734.272) in several banks.

As of 31 December, 2019 the Group has leasing certification denominated in TL terms with maturities 2020, March with 10 percent interest rates.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

4. INTERESTS IN OTHER ENTITIES

a) Subsidiaries

Details of the Group's material subsidiaries as of 31 December are as follow:

	Group's proportion of ownership and voting power held (%)						
Subsidiaries	Location	Functional Currency	31 December 2019	31 December 2018	Main Activity		
ASELSANNET	Turkey	TL	100	100	Communication systems		
ASELSAN Baku	Azerbaijan	AZN	100	100	Marketing and sales of the group products		
ASELSAN GLOBAL	Turkey	TL	100		Export		
Mikro AR-GE	Turkey	TL	85	85	Microelectronic R&D projects		
ASELSAN Malaysia ASELSAN Konya	Malaysia Turkey	MYR TL	100 51	100 51	Remote controlled weapon systems Weapon and weapon systems		
BITES	Turkey	TL	51		Defense, Aerospace, Space Technologies, Software		
ULAK	Turkey	TL	51		Communication systems		

Composition of the Group

Explained in Note 1.

Change in the Group's ownership interest in a subsidiary:

Change in the Group's subsidiaries ownership is explained in Note 2.1

b) Joint Ventures

Where a Group entity undertakes its activities under joint venture arrangements directly, the Group's share of jointly controlled assets and any liabilities incurred jointly with other ventures are recognized in the financial statements of the relevant entity and classified according to their nature. Liabilities and expenses incurred directly in respect of interests in jointly controlled assets are accounted for on an accrual basis. Income from the sale or use of the Group's share of the output of jointly controlled assets, and its share of joint venture expenses, are recognized when it is probable that the economic benefits associated with the transactions will flow to/from the Group and their amount can be measured reliably.

5. RELATED PARTY DISCLOSURES

Transactions between the Company and its subsidiaries which are related parties of the Company have been eliminated on consolidation, therefore have not been disclosed in this note.

The trade receivables from related parties generally arise from sales activities with maturities of 1-2 years.

The trade payables to related parties generally arise from the purchase activities with maturities of 1-9 months.

Total amount of salaries and other short-term benefits paid for key management for the period ended 31 December 2019 is TL 21.333 (31 December 2018: TL 14.863).

Balance of the loan borrowed from Presidency of Defence Industries for the period ended 31 December 2019 is zero TL. (Note 30) (31 December 2018: TL 87.511).

The details of transactions between the Group and other related parties are disclosed in the following pages.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

5. RELATED PARTY DISCLOSURES (continued)

	Receivables				
-		Short-term		Long-	term
-		Prepaid	Other		Prepaid
Balances with related parties	Trading	Expenses	Receivables	Long-te Pr 25 Trading 605 605 107.483 118.031 108.367 108.367 	Expenses
Main shareholder					
TSKGV	29				
Main shareholder's subsidiaries and associates					
Hava Elektronik Harp Sis. Müh. Tic. Anonim Şirketi					
("HAVELSAN EHSİM")		774			
Hava Elektronik San. ve Tic. Anonim Şirketi ("HAVELSAN")	16.521	49.336		605	676
HAVELSAN Teknoloji Radar San. ve Tic. Anonim Şirketi ("HTR")	1.235	17.875			22.861
İşbir Elektrik Sanayii Anonim Şirketi ("İŞBİR")		20.781			1.892
NETAŞ Telekomünikasyon Anonim Şirketi ("NETAŞ")	207	18.246			4.626
Savunma Teknolojileri Mühendislik ve Ticaret Anonim Şirketi					
("STM")	64.763	4.408		107.483	341
Türk Havacılık ve Uzay Sanayi ve Ticaret Anonim Şirketi					
("TUSAŞ")	111.118	110		118.031	
Financial Instruments					
Askeri Pil Sanayi ve Ticaret Anonim Şirketi ("ASPİLSAN")		1.853			
Roket Sanayi ve Ticaret Anonim Şirketi ("ROKETSAN")	136.186	85.042		108.367	251.901
Joint ventures and its related parties					
ASELSAN Bİlkent Nano		6.503			4.869
İhsan Doğramacı Bilkent Üniversitesi		566			
ASELSAN Optik	2.548	62.575	1.150		6.464
IGG	49.009			5.019	
IGG ASELSAN	6.694	1.561			
ASELSAN Kazakhstan	75.858			15.427	
ASELSAN Jordan	85.924			205	
TÜBİTAK BİLGEM		3.133			2.549
TÜBİTAK-UME		173			
TÜBİTAK BİLİMSEL TEKNOLOJİK ARAŞTIRMA	2.416	1.022		93.404	3.190
TÜBİTAK SAGE Savunma Sanayii		10.809		6.003	
TÜBİTAK UZAY TEKNOLOJİLERİ	470				
Savunma Sanayi Başkanlığı ("SSB")	563.585			3.812.080	
Ankaref Bilişim Teknolojileri Limited Şirketi ("ANKAREF")					
ULAK	878				
SADEC LLC	662				
	1.118.103	284.767			299.369

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

				31 December 2019
		Payables		
.rm	Long-tern	·	Short-term	
Deferred Incom	Trading	Other Payables	Deferred Income	Trading
-				5.130
-				69.350
-				10.339
-				19.473
-				75.100
19.81	1.965		11.005	4.016
289.68	39.982		20.162	33.203
-				16.511
63.81	13.313		38.202	351.016
				13.307
				6.693
				14.343
				319
			4	538
			1.654	54.099
				4.755
-				3
9.61	3.390		2.797	1.136
-				7.484
-				
879.67	1.367.161		344.754	76.252
-				30
-				89
1.262.59	1.425.811		418.578	763.186

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

5. RELATED PARTY DISCLOSURES (continued)

			Receivables		
		Short-term		Long-	term
		Prepaid	Other		Prepaid
Balances with related parties	Trading	Expenses	Receivables	Trading	Expenses
Main shareholder					
TSKGV	21				
Other shareholder					
Axa Sigorta Anonim Şirketi ("Axa Sigorta")					
Main shareholder's subsidiaries and associates					
Hava Elektronik Harp Sis. Müh. Tic. Anonim Şirketi					
("HAVELSAN EHSİM")		943			
Hava Elektronik San. ve Tic. Anonim Şirketi ("HAVELSAN")	21.196	29.676		957	7.365
HAVELSAN Teknoloji Radar San. ve Tic. Anonim Şirketi ("HTR")		19.592			
İşbir Elektrik Sanayii Anonim Şirketi ("İŞBİR")		26.112			
NETAŞ Telekomünikasyon Anonim Şirketi ("NETAŞ")	22	35.564			4.806
Savunma Teknolojileri Mühendislik ve Ticaret Anonim Şirketi					
("STM")	53.509	10.808		374	
Türk Havacılık ve Uzay Sanayi ve Ticaret Anonim Şirketi					
("TUSAŞ")	78.034	92		61.748	
Financial Instruments					
Askeri Pil Sanayi ve Ticaret Anonim Şirketi ("ASPİLSAN")	1.117	601			
Roket Sanayi ve Ticaret Anonim Şirketi ("ROKETSAN")	75.824	116.171		54.483	127.687
Joint ventures and its related parties					
ASELSAN Bİlkent Nano		4.809			3.939
İhsan Doğramacı Bilkent Üniversitesi		7.533			
ASELSAN Optik	2.726	34.985			
IGG	37.245			8.552	
IGG ASELSAN	1.934	1.534			
ASELSAN Kazakhstan	68.080			13.905	
ASELSAN Jordan	12.060				
TÜBİTAK BİLGEM		5.965			139
TÜBİTAK-UME		623			
TÜBİTAK BİLİMSEL TEKNOLOJİK ARAŞTIRMA	15.664	506		79.122	
TÜBİTAK SAGE Savunma Sanayii	28	16.064		5.245	11.997
TÜBİTAK UZAY TEKNOLOJİLERİ					
Savunma Sanayi Başkanlığı ("SSB")	360.249	90		1.752.153	
Ankaref Bilişim Teknolojileri Limited Şirketi ("ANKAREF")			24		
ULAK	44.556				
SADEC LLC	586				
	772.851	311.668	24	1.976.539	155.933
		0.11000			

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

		Payables		
Long-term			Short-term	
Trading Deferred Inc		Other Payables	Deferred Income	Trading
		60		
		60		
				5.769
4.040				55.460
				4.415
				14.524
				37.086
208.410 20			70.957	25.257
16.127 242			114.454	51.732
				6.027
23.632 20			118.359	50.722
				2.595
				3.499
				14.056
			1.785	89
				2.404
				10.259
				13
			9.029	11.015
				56.256
				722
1.365.760 1.382	1		196.167	241.789
2				
Z				222
1.617.969 1.669		60	510.751	593.911

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

5. RELATED PARTY DISCLOSURES (continued)

	1 January- 31 December	1 January- 31 December
	2019	2018
Transactions with related parties	Purchases	Purchases
Main Shareholder		
TSKGV	928	766
Main shareholder's subsidiaries and associates		
NETAŞ	133.535	132.739
STM	19.331	9.428
İŞBİR	57.029	47.964
HTR - HAVELSAN	63.854	36.305
MERCEDES-BENZ TÜRK ANONİM ŞİRKETİ ("MERCEDES")		4
TUSAŞ	1.657	2.548
HAVELSAN	45.697	70.976
HAVELSAN EHSİM	1.520	5.568
Financial Instruments		
ROKETSAN	328.570	34.748
ASPILSAN	40.202	24.412
Joint ventures and its related parties		
İHSAN DOĞRAMACI BİLKENT ÜNİVERSİTESİ	16.301	14.146
TÜBİTAK BİLGEM	27.395	28.585
TÜBİTAK BİLİMSEL TEKNOLOJİK ARAŞTIRMA	1.674	
TÜBİTAK-UME	892	200
TÜBİTAK SAGE SAVUNMA SANAYİİ	35.126	67.144
TUBİTAK UZAY TEKNOLOJİLERİ		612
SSB	514	
ULAK		3.463
SSTEK	25	
-	774.250	479.608

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

5. RELATED PARTY DISCLOSURES (continued)

	1 January-	1 January-
	31 December 2019	31 December 2018
Transactions with related parties	Sales	Sales
Main Shareholder		
TSKGV	290	293
Main shareholder's subsidiaries and associates		
TUSAŞ	384.259	313.638
STM	738.160	528.564
HAVELSAN	9.792	8.742
HTR	21.137	1.679
HAVELSAN EHSİM		121
NETAŞ	1.380	207
Financial Instruments		
ROKETSAN	194.459	132.613
ASPİLSAN		1.460
Joint ventures and its related parties		
İHSAN DOĞRAMACI BİLKENT ÜNİVERSİTESİ	521	
IGG		5.505
TÜBİTAK BİLGEM	546	
TÜBİTAK BİLİMSEL TEKNOLOJİK ARAŞTIRMA	1.483	113.347
TÜBİTAK SAGE SAVUNMA SANAYİİ	506	41
TÜBİTAK UZAY TEKNOLOJİLERİ	220	41
SSB	5.733.028	5.168.321
ULAK		81.302
SSTEK	39.442	
	7.125.223	6.355.874

Transactions with related parties are generally related to the purchases and sales of goods and services related to projects under TFRS 15 "Revenue from Contracts with Customers".

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

6. TRADE RECEIVABLES AND PAYABLES

a) Trade receivables

Details of the Group's trade receivables are as follows:

	31 December	31 December
Short-term trade receivables	2019	2018
Trade receivables	2.722.650	2.291.660
Trade receivables from related parties (Note 5)	1.118.103	772.851
Notes receivable	44.180	7.602
Doubtful trade receivables	58.960	2.218
Allowance for doubtful trade receivables (-)	(58.960)	(2.218)
	3.884.933	3.072.113
	21 December	21 December

	31 December	31 December
Long-term trade receivables	2019	2018
Unbilled receivables from contracts with customers	1.057.620	756.215
Trade receivables	260.655	94.185
Unbilled receivables from contracts with customers -Related party (Note 5)	4.260.764	1.976.302
Trade receivables from related parties (Note 5)	5.860	237
	5.584.899	2.826.939

The movement for the Group's allowance for doubtful receivables is as follows:

	31 December	31 December
	2019	2018
Opening balance	2.218	21.457
Provision for the period	56.743	
Provisions no longer required	(1)	(19.239)
Closing balance	58.960	2.218

The sectorial distribution of trade receivables is as follows:

	31 December	31 December
	2019	2018
Public sector	4.990.685	2.813.246
Private sector	2.528.297	1.935.259
Receivables from companies operating abroad	1.950.850	1.150.547
Total receivables	9.469.832	5.899.052

Receivables from public sector represent the receivables are due from the Presidency of Defense Industry and other public entities. The Group's operations are based on contracts and no other collaterals are obtained from the customers.

b) Trade payables

Details of The Group's trade payables are as follows:

	31 December	31 December
Short-term trade payables	2019	2018
Trade payables	2.220.802	1.624.670
Unearned revenue related to contracts with customers	373.895	325.838
Due to related parties (Note 5)	113.448	320.051
Unearned revenue related to contracts with customers -Related party (Note 5)	649.738	273.860
Notes Payable	246.029	
Other trade payables	3.944	4.164
	3.607.856	2.548.583
	31 December	31 December
Long-term trade payables	2019	2018
Unearned revenue related to contracts with customers	413.598	150.294
Unearned revenue related to construction contracts in progress- Related		
party (Note 5)	1.425.811	1.617.969
Other trade payables	20.896	20
	1.860.305	1.768.283

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

7. OTHER RECEIVABLES AND PAYABLES

a) Other receivables

	31 December	31 December
Short-term other receivables	2019	2018
Receivables from tax office ¹	356.238	187.893
Deposits and guarantees given	1.903	1.391
Other receivables from related parties (Note 5)	1.150	24
Other ²	21.263	14.809
	380.554	204.117

¹ Mainly comprises Value Added Tax (VAT) returns and are expected to be offseted in the following periods. ² Consists of R&D Center social security premium incentive and R&D Center income tax exceptions.

	31 December	31 December
Long-term other receivables	2019	2018
Deposits and guarantees given	1.064	764

b) Other payables

	31 December	31 December
Short-term other payables	2019	2018
Short-term other payables	56.986	2.347
Deposits and guarantees received	380	325
Financial leasing	1.134	
Short-term other payables to related parties (Note 5)		60
	58.500	2.732
	31 December	31 December
Long-term other payables	2019	2018
Deposits and guarantees received	1.093	106
Financial leasing	3.836	
	4.929	106

8. EQUITY ACCOUNTED INVESTMENTS

The Group's financial information for its shareholdings consolidated with equity method, that are not presented, according to the Group's ownership rates are as below:

	Ownership Rate	Current	Non-current	Total	Short-term	Long-term	
31 December 2019	(%)	Assets	Assets	Assets	Liabilities	Liabilities	Total Liabilities
ASELSAN Kazakhstan	49	102.720	121.328	224.048	119.149	11.809	130.958
ASELSAN Jordan	49	94.927	22.335	117.262	82.531		82.531
ASELSAN Optik	50	93.400	61.703	155.103	57.863	68.880	126.743
IGG ASELSAN	49	5.202	806	6.008		880	880
ASELSAN Bilkent	50	48.554	141.191	189.745	39.661	120.423	160.084
SADEC LLC	50	4.927	1.073	6.000	1.472	443	1.915
TEKNOHAB	30	7.456	283	7.739	51		51
EHSİM	50	82.258	3.023	85.281	10.800	60.553	71.353
TÜYAR	51	15.644	525	16.169	132	3	135
		455.088	352.267	807.355	311.659	262.991	574.650

	Ownership Rate			Net Profit/	Group Share	Group Share of
31 December 2019	(%)	Revenue	Expenses	(Loss)	of Net Assets	Profit/(Loss)
ASELSAN Kazakhstan	49	83.928	(86.879)	(2.951)	45.613	(1.447)
ASELSAN Jordan	49	83.132	(82.069)	1.063	17.018	521
ASELSAN Optik	50	130.643	(120.604)	10.039	14.180	5.019
IGG ASELSAN	49	8.760	(7.393)	1.367	8.803	670
ASELSAN Bilkent	50	39.363	(28.462)	10.901	14.831	5.455
SADEC LLC	50	2.136	(10.389)	(8.253)	2.043	(4.128)
BARQ QSTP LLC.	48				834	
TEKNOHAB	30	346	(2.658)	(2.312)	2.306	(694)
EHSİM	50	15.483	(20.535)	(5.052)	6.964	(2.527)
TR Eğitim ve Teknolojileri	50				1.000	
TÜYAR	51	1.865	(2.931)	(1.066)	8.177	(544)
		365.656	(361.920)	3.736	121.769	2.325

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

8. EQUITY ACCOUNTED INVESTMENTS (continued)

	Ownership	Current	Non-current	Total	Short-term	Long-term	
31 December 2018	Rate (%)	Assets	Assets	Assets	Liabilities	Liabilities	Total Liabilities
ASELSAN Kazakhstan	49	91.850	113.145	204.995	107.365	10.484	117.849
ASELSAN Jordan	49	22.138	19.578	41.716	12.296		12.296
ASELSAN Optik	50	58.498	52.676	111.174	63.511	27.042	90.553
IGG ASELSAN	49	19.488	1.483	20.971	4.016	2.169	6.185
ASELSAN Bilkent	50	21.039	109.978	131.017	18.427	93.829	112.256
SADEC LLC	50	9.899	3.270	13.169	1.354		1.354
TÜYAR	51	2.987	1.072	4.059	58		58
		225.899	301.202	527.101	207.027	133.524	340.551

31 December 2018	Ownership Rate (%)	Revenue	Expenses	Net Profit/ (Loss)	Group Share of Net Assets	Group Share of Profit/(Loss)
ASELSAN Kazakhstan	49	61.722	(73.504)	(11.782)	42.702	(5.773)
ASELSAN Jordan	49	5.958	(11.454)	(5.496)	14.417	(2.693)
ASELSAN Optik	50	58.221	(50.917)	7.304	10.310	3.652
IGG ASELSAN	49	12.376	(11.401)	975	7.245	478
ASELSAN Bilkent	50	17.347	(15.512)	1.835	9.380	917
SADEC LLC	50	2.431	(13.184)	(10.753)	5.907	(5.376)
BARQ QSTP LLC.	48				834	
TEKNOHAB	30				750	
TÜYAR	51	706	(1.012)	(306)	2.041	(156)
		158.761	(176.984)	(18.223)	93.586	(8.951)

9. INVENTORIES

	31 December	31 December
	2019	2018
Raw materials	2.268.578	1.948.791
Work in progress	1.728.108	1.172.216
Goods in transit ³	178.206	196.567
Finished goods	234.811	174.341
Other inventories	28.654	19.561
Trade goods	51.398	73.262
Allowance for impairment on inventories (-)	(15.828)	(8.120)
	4.473.927	3.576.618

³ Goods in transit includes the goods for which significant risks and rewards of ownership has been transferred to the Group due to their shipping terms.

The Group provides an allowance for impairment on inventories when the inventories net realizable values are lower than their costs or when they are determined as slow-moving inventories.

The Group has identified raw material, work-in progress and finished goods inventories below net realizable value within the current year.

Impaired inventory movements for the period ended in 31 December are as follows:

	2019	2018
Opening balance	8.120	25.661
Provision for the period	8.347	11.908
Provision released	(639)	(29.449)
Closing balance	15.828	8.120

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

10. PREPAID EXPENSES AND DEFERRED INCOME

	31 December	31 December
Short-term prepaid expenses	2019	2018
Order advances given for inventory purchases	930.628	889.631
Short-term order advances given to related parties for inventory purchases (Note 5)	284.767	311.668
Prepaid expenses	104.871	118.031
	1.320.266	1.319.330
	31 December	31 December
Long-term prepaid expenses	2019	2018
Long-term order advances given to related		
parties for inventory purchases (Note 5)	299.369	155.933
Order advances given for inventory purchases	172.382	279.727
Order advances given for fixed assets purchases	92.447	60.621
Prepaid expenses	20.455	8.118
	584.653	504.399
	31 December	31 December
Short-term deferred income	2019	2018
Order advances received	131.022	92.303
Order advances received from related parties (Note 5)	418.578	510.751
Deffered income	30.789	29.591
	580.389	632.645

Short-term order advances received comprises advances received from 69 customers (31 December 2018: 61 customers) of which first 10 customers constitutes 99 percent of the total (31 December 2018: 99 percent).

	31 December	31 December
Long-term deferred income	2019	2018
Order advances received	575.385	627.349
Order advances received from related parties (Note 5)	1.262.598	1.669.160
Deferred income	4	4
	1.837.987	2.296.513

Long-term order advances received comprises advances received from 62 customers (31 December 2018: 39 customers) of which the first 10 customers constitutes 98 percent of the total (31 December 2018: 98 percent).

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

11. PROPERTY, PLANT AND EQUIPMENT

	Land		Machinery and		
Land	improvements	Buildings	equipment	Vehicles	
302.045	35.554	204.961	1.002.686	5.492	
17.634	1.346	19.923	152.825	1.668	
			(540)	(102)	
319.679	36.900	224.884	1.154.971	7.058	
	11.744	80.704	549.024	2.568	
	2.132	10.141	84.624	669	
			(540)	(65)	
	13.876	90.845	633.108	3.172	
319.679	23.024	134.039	521.863	3.886	
	Land		Machinery and		
Land	improvements	Buildings	equipment	Vehicles	
249.265	18.229	193.499	828.923	4.540	
52.780	421		170.755	1.272	
			(449)	(320)	
	16.904	11.462	3.457		
302.045	35.554	204.961	1.002.686	5.492	
	9.946	73.466	481.111	2.175	
		7.238	68.029	525	
	1.798	/.230			
	1.798	7.230		(132)	
			(116) 549.024	(132) 2.568	
			(116)	· · /	
	302.045 17.634 319.679 319.679 Land 249.265 52.780 302.045	Land improvements 302.045 35.554 17.634 1.346 319.679 36.900 319.679 36.900 319.679 36.900 319.679 23.024 319.679 23.024	Land improvements Buildings 302.045 35.554 204.961 17.634 1.346 19.923 319.679 36.900 224.884 11.744 80.704 2.132 10.141 2.132 10.141 13.876 90.845 13.876 90.845 319.679 23.024 134.039 319.679 23.024 134.039	Land improvements Buildings equipment 302.045 35.554 204.961 1.002.686 17.634 1.346 19.923 152.825 (540) 319.679 36.900 224.884 1.154.971 (540) 319.679 36.900 224.884 1.154.971 (540) 2.132 10.141 84.624 (540) 13.876 90.845 633.108 (540) (540) 13.876 90.845 633.108 (540) (540)	Land improvements Buildings equipment Vehicles 302.045 35.554 204.961 1.002.686 5.492 17.634 1.346 19.923 152.825 1.668

⁴ Comprises the mould model devices manufactured by the Group with net book value of TL 45.686 (31 December 2018: TL 38.417).

⁵ Includes of investments in molds, models, devices and construction works.

 6 TL 43.225 of additions are free of charge investment income (31 December 2018: TL 22.362).

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

	Construction		Leasehold		
Total	in progress ⁵	Financial leasing	improvements	Other fixed assets ⁴	Furniture and fixtures
2.231.201	133.711		202.083	105.946	238.723
398.473	115.240	6.264	7.538	18.919	57.116
(3.027)	(2.337)				(48)
2.626.647	246.614	6.264	209.621	124.865	295.791
894.904		-	32.655	67.529	150.680
158.417		1.481	8.359	11.650	39.361
(605)					
1.052.716		1.481	41.014	79.179	190.041
1.573.931	246.614	4.783	168.607	45.686	105.750
	Construction				

			Construction	
Furniture and fixtures	Other fixed assets	Leasehold improvements	in progress	Total
190.169	91.638	197.842	93.063	1.867.168
48.529	22	488	91.636	365.903
(320)		(194)	(587)	(1.870)
345	14.286	3.947	(50.401)	
 238.723	105.946	202.083	133.711	2.231.201
127.149	57.442	25.036		776.325
23.574	10.087	7.708		118.959
(43)		(89)		(380)
150.680	67.529	32.655		894.904
 88.043	38.417	169.428	133.711	1.336.297

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

11. PROPERTY, PLANT AND EQUIPMENT (continued)

The details of the depreciation expenses with respect to the plant, property and equipment is as follows:

	31 December	31 December
	2019	2018
Cost of sales	111.957	79.986
General administrative expenses	29.689	25.578
Inventories	16.114	13.032
Marketing expenses	657	363
	158.417	118.959

There is no tangible assets acquired through financial leasing as of 31 December 2019 and 2018.

There is no collateral, pledges, and mortgages on tangible assets as of 31 December 2019 and 2018.

There is no capitalized interest expense as of 31 December 2019 and 2018.

Fair value measurement of the Group's land

The lands owned by the Group are revalued and presented at fair value as of 31 December 2019. The fair value of the lands owned by the Group is revalued on 11 December 2017 by Metrik Gayrimenkul Değerleme Danışmanlık Anonim Şirketi ("Metrik Değerleme"), an independent appraisal company. Metrik Değerleme is authorized by the CMB and provides real estate appraisal services in accordance with the capital market legislation. The fair value of the lands is determined according to "Market Value Approach (Equivalent Comparison Method)". Gains resulting from revaluation are recognized under "Gain on Revaluation of Property" in other comprehensive income.

In accordance with TFRS 13 "Fair Value Measurement" standard, since measurement techniques do not include observable market inputs, fair values of the lands are considered as level 3 in respect of fair value hierarchy.

There are no restrictions on the distribution of revaluation funds. The valuation difference on the lands is TL 230.391 (31 December 2018: TL 230.391).

Details of the Group's lands and information regarding fair value hierarchy are as follows:

		Fair value	Fair value as of reporting date			
	31 December	Level 1	Level 2	Level 3		
	2019	TL	TL	TL		
Macunköy	173.421			173.421		
Akyurt	92.147			92.147		
Gölbaşı	1.110			1.110		
Oğulbey	52.780			52.780		
Gölbek	166			166		
Denizli	55			55		
	319.679			319.679		
		Fair value as of reporting date				
	31 December	Level 1	Level 2	Level 3		
	2018	TL	TL	TL		
Macunköy	173.421			173.421		
Akyurt	74.513			74.513		
Gölbaşı	1.110			1.110		
Oğulbey	52.780			52.780		
Gölbek	166			166		
Denizli	55			55		
	302.045			302.045		

The fair value level action table as of 31 December 2018 are as follows:

	Fair Value Level as of Reporting Date		
	Level 1	Level 2	Level 3
	TL	TL	TL
1 January 2019			302.045
Additions			17.634
31 December 2019			319.679

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

12. INTANGIBLE ASSETS

			Other intangible	
	Rights	Development Costs	assets ⁷	Total
Cost				
Opening balance as of 1 January 2019	51.569	1.247.730	177.480	1.476.779
Additions	23.052	1.230.946	47.612	1.301.610
Disposals		(997.163)		(997.163)
Transfers	6.176	(6.176)		
Closing balance as of 31 December 2019	80.797	1.475.337	225.092	1.781.226
Accumulated Amortization				
Opening balance as of 1 January 2019	32.783	231.611	130.318	394.712
Charge for the period	18.982	50.967	39.987	109.936
Closing balance as of 31 December 2019	51.765	282.578	170.305	504.648
Net book value as of 31 December 2019	29.032	1.192.759	54.787	1.276.578

⁷ Other intangible assets include licences related to computer software.

Other Intangible			
Rights	Development Costs	assets ⁸	Total
51.388	1.023.178	137.825	1.212.391
135	1.355.103	39.655	1.394.893
	(1.130.505)		(1.130.505)
46	(46)		
51.569	1.247.730	177.480	1.476.779
27.733	193.918	99.524	321.175
5.050	37.693	30.794	73.537
32.783	231.611	130.318	394.712
18.786	1.016.119	47.162	1.082.067
	51.388 135 46 51.569 27.733 5.050 32.783	51.388 1.023.178 135 1.355.103 (1.130.505) 46 (46) 51.569 1.247.730 27.733 193.918 5.050 37.693 32.783 231.611	Rights Development Costs assets ⁸ 51.388 1.023.178 137.825 135 1.355.103 39.655 135 1.355.103 39.655 (1.130.505) 46 (46) 51.569 1.247.730 177.480 27.733 193.918 99.524 5.050 37.693 30.794 32.783 231.611 130.318

⁸ Other intangible assets include licences related to computer software.

The details of amortization expenses regarding intangible assets is as follows:

	31 December	31 December
	2019	2018
Research and development expenses	49.831	37.338
Cost of sales	41.596	23.908
Inventories	11.023	8.073
Marketing expenses	356	301
General administrative expenses	7.130	3.917
	109.936	73.537

13. GOVERNMENT GRANTS AND INCENTIVES

The deferred incentive income shown under consolidated statement of financial position is as follows:

	31 December	31 December
	2019	2018
Current government grants and incentives	43.194	53.818

As part of the Decision on Government Incentives on Investments, there are 6 investment incentives taken from General Directorate of Turkish Undersecreteriat of the Treasury. The incentives allow VAT exemption and customs tax exemption. VAT exemption is applied in both domestic and international purchases while customs tax exemption is applied for international purchases.

In Corporate Tax Calculation, no tax payable is calculated because of R&D deduction and deductions due to investment incentive certificates cannot be applied. For this reason, no deferred tax effect is calculated for the temporary differences arising from investment incentives.

Government grants show the unearned proportion of the grant after the costs related with the completed parts of the projects are deducted from the grants taken by the Group for the ongoing projects that was obtained as of the reporting date.

Other intendible

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

13. GOVERNMENT GRANTS AND INCENTIVES (continued)

The incentive obtained consists of the incentives that are accrued in accordance with TÜBİTAK's R&D recognition letter prepared with respect to the Group's ongoing projects.

The Group obtains capital support from "Support and Price Stabilization Fund" of Central Bank of Turkey via Undersecretariat of Foreign Trade's consent. The Scientific and Technological Research Council of Turkey ("TÜBİTAK") and Technology Development Foundation of Turkey ("TTGV") act as intermediary in accordance with Communiqué No: 98/10 published by the Money-Loans and Coordination Board.

In accordance with Law on Technology Development Zones numbered 4691, Group utilizes withholding income tax incentive, social security premium incentive and stamp tax exceptions. Such incentives are utilized through not paying withholding income tax incentive, social security premium incentive and stamp tax exceptions calculated based on research and development and software personnel payroll. Income generated in accordance with law on Technology Development Zones numbered 4691 is exempt from corporate income tax until 31 December 2023.

The research and development expenditure deduction rate used as a tax benefit has been increased from 40 percent to 100 percent in accordance with the amended article 10 of the Tax Law numbered 5520, the amended article 89 of Law numbered 193 and 5746 with respect to the Support of Research and Development Activities. The aforementioned law was enacted of April 2008 after its issue in the Official Gazette dated 12 March 2008, numbered 26814. In accordance to the Law regarding the Incentive of Research and Development Activities numbered 6676 published on Official Gazettes numbered 29636 on 26 February 2016 and The Law Regarding the Amendments on Delegated Legislation, the content of the law and incentives has been broadened and additional exceptions has been given. Research and development expenditure may be used as a tax deduction in the determination of the taxable income. If taxable income levels are not sufficient to absorb all available tax deductions, any unused research and development tax deduction is allowed to be carried forward to the next tax period. The remaining amount from previous year is increased according to revaluation ratio defined at Tax Procedure Law. According to the item No. 8 of the related law, all the costs related with research and development can be subjected to deduction until 31 December 2023.

14. BORROWING COSTS

As of 31 December 2019, there is no borrowing cost regarding the qualifying assets. (31 December 2018: None).

15. PROVISIONS, CONTINGENT ASSETS AND LIABILITIES

a) Provisions

	31 December	31 December
Other short-term provisions	2019	2018
Provision for warranties ⁹	731.395	442.777
Provision for onerous contracts	129.518	87.772
Provision for delay penalties ¹⁰	100.508	41.403
Provision for legal cases	24.501	10.905
Provision for cost expenses	7.525	2.072
Other	1.113	640
	994.560	585.569

⁹ The Group's provision for warranty is based on sales under warranty are estimated in accordance with historical data. Provision for warranty is calculated by using warranty rate included in the contract as long as the invoice issued throughout the life of the Contract

¹⁰ Provision for delay penalties and fines are calculated in accordance with interest rates mentioned in the agreement for defaulet and within the client's knowledge.

The movement of the provision for warranties is as follows:

	1 January-	1 January-
	31 December	31 December
	2019	2018
Opening balance	442.777	253.253
Provision for the period	448.790	305.852
Realized during the period	(160.172)	(116.328)
Closing balance	731.395	442.777

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

15. PROVISIONS, CONTINGENT ASSETS AND LIABILITIES (continued)

a) Provisions (continued)

The movement of the provision for onerous contracts is as follows:

	1 January-	1 January-
	31 December	31 December
	2019	2018
Opening balance	87.772	106.318
Reclass from short-term provisions to long-term provisions		(54.140)
Provision for the period	41.746	42.769
Provision reversed during the period		(7.175)
Closing balance	129.518	87.772

The movement of the provision for delay penalties is as follows:

	1 January-	1 January- 31 December
	31 December	
	2019	2018
Opening balance	41.403	15.787
Provision for the period	93.963	118.914
Realized during the period	(30.348)	(88.370)
Provision reversed during the period	(4.510)	(4.928)
Closing balance	100.508	41.403

The movement of the provision for legal cases is as follows:

	1 January-	1 January-
	31 December	31 December
	2019	2018
Opening balance	10.905	5.917
Provision for the period	17.173	6.128
Realized during the period	(3.577)	(1.140)
Closing balance	24.501	10.905
	31 December	31 December
Other long-term provisions	2019	2018
Provision for delay penalties	381.830	328.385
	381.830	328.385

The movement of the provision for onerous contacts is as follows:

	1 January-	1 January-
	31 December	31 December
	2019	2018
Opening balance	328.385	42.925
Reclassification from short-term provisions to		
long-term provisions		54.140
Provision during the period	53.445	238.861
Provision reversed during the period		(7.541)
Closing balance	381.830	328.385

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

15. PROVISION, CONTINGENT ASSET AND LIABILITIES (continued)

b) Legal cases

There has not been any final judicial decision against the Group due to the violation of employee rights within 2019. There has not been any final judicial decision against the Group due to the responsibility related with work accidents within 2019.

As of the dates 31 December, according to the declarations written by the legal counselors, the lawsuits and legal executions in favor of and against the Group are as follows:

Description	2019	2018
a) Ongoing lawsuits filed by the Group	70.374	12.162
b) Execution proceedings carried out by the Group	193.568	119.415
c) Ongoing lawsuits filed against the Group	24.501	10.905
d) Executions against the Group	485	
e) Lawsuits finalized against the Group within the period	1.505	150
f) Lawsuits finalized in favor of the Group within the period	1.975	413

a) Ongoing lawsuits filed by the Group are comprised of lawsuits for patents, trademarks and lawsuits filed by the Group due to the disagreements related to previous lawsuits. These lawsuits will not be recognised in the financial statements until they are finalized.

b) Execution of proceedings carried out by the Group are comprised of lawsuits that would result in favor of the Group that will be recognised as revenue under "Other Operating Income" line when they are collected.

c) The Company made provisions for all lawsuits filed against the Group and recognised as "Provisions" in the statement of financial positon and "Other Operating Expense" in the statement of profit or loss and other comprehensive income.

d) Executions against the Group are not included in Financial Statements.

e) Lawsuits finalized against the Group are recognised in the statement of profit or loss to the extent that the amount differs from the amount previously provided are recognised under "Other Operating Expense" when the penalty is paid.

f) Lawsuits finalized in favor of the Group are recognised in statement of profit or loss and other comprehensive income under "Other Operating Income" line when the final judgement is determined.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

16. COMMITMENTS AND CONTINGENCIES

a) Operating lease

As of 31 December 2019, the Group has two lands that are rented for 49 years and 46 years. In 2019 the Group has paid rent amounting to TL 306 (31 December 2018: TL 229) and TL 542 (31 December 2018: TL 459) for property lands rented for 49 years and 46 years respectively. Rent payments escelated every year based on the "Producer Price Index (PPI)" rate. The rental period will end on 23 January 2061.

As of 31 December 2019, the Group has paid rent amounting to TL 4.484 (31 December 2018: TL 3.425) for vehicles rented during the year.

b) Guarantees received

	31 December 2019	31 December 2018
Letters of guarantees received from the suppliers	2.125.852	1.749.080
Collaterals received from the customers	19.952	18.084
Letters of guarantees received from the customers	6.450	4.901
Collaterals received from the suppliers	28.155	4.932
Letters of guarantees received from the suppliers	8.042	
Mortgages received from the customers	265	265
	2.188.716	1.777.262

c) Collaterals/Pledges/Mortgages ("CPM") given

The collaterals/pledges/mortgages ("CPM") given by the Group as of 31 December 2019 and 31 December 2018 is as follows:

In accordance with the terms of the Patrol and Anti-Submarine Warfare Ship Projects ("MILGEM"), the Company is a guarantor if HAVELSAN cannot be able to fulfill the obligations in this project of an amount of USD 288.493.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

16. COMMITMENTS AND CONTINGENCIES (continued)

31 December 2019	TL Equivalent	TL	USD
A. Total amount of CPM given on behalf of the legal entity			
-Collateral	19.163.727	5.678.746	1.209.264
-Pledge			
-Mortgage			
B. Total amount of CPM given on behalf of the subsidiaries included in full consolidation			
-Collateral			
-Pledge			
-Mortgage			
C. Total amount of CPM given to maintain operations and collect payables from third parties			
-Collateral			
-Pledge			
-Mortgage			
D. Total amount of other CPM given			
i. Total Amount of CPM on behalf of the main partner			
-Collateral			
-Pledge			
-Mortgage			
ii. Total amount of CPM given on behalf of other group companies that do not cover B and C $^{\rm 11}$			
-Collateral	18.231		3.069
-Pledge			
-Mortgage			
iii. Total amount of CPM on behalf of third parties that do			
not cover			
-Collateral			
-Pledge			
-Mortgage			
Total	19.181.958	5.678.746	1.212.333

The Group is responsible as joint guarantor for the portion amounting to EURO 2,5 Million of investment credit amounting to EURO 5 Million which will be used by ASELSAN Optik, the Group's joint venture.

¹¹ The ratio of the other CPM given by the Group to equity as of 31 December 2019 is 0,13 percent. TL 18.231 is the collateral amount pertaing to guarantee letter given on behalf of the entity's joint venture ASELSAN Bilkent.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

EURO	UAE Dirham	Indian Rupee	British Pound	Qatar Rial
947.409		10.000		25
947.409		10.000		25

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

16. COMMITMENTS AND CONTINGENCIES (continued)

c) Guarantees given (continued)

31 December 2018	TL Equivalent	TL	USD
A. Total amount of CPM given on behalf of the legal entity			
-Collateral	17.683.695	2.337.667	1.842.279
-Pledge			
-Mortgage			
B. Total amount of CPM given on behalf of the subsidiaries			
included in full consolidation			
-Collateral			
-Pledge			
-Mortgage			
C. Total amount of CPM given to maintain operations and			
collect payables from third parties			
-Collateral			
-Pledge			
-Mortgage			
D. Total amount of other CPM given			
i. Total Amount of CPM on behalf of the main partner			
-Collateral			
-Pledge			
-Mortgage			
ii. Total amount of CPM given on behalf of other group			
companies that do not cover B and C $^{ m 12}$			
-Collateral	22.590	495	4.200
-Pledge			
-Mortgage			
iii. Total amount of CPM on behalf of third parties that do			
not cover			
-Collateral			
-Pledge			
-Mortgage			
Total	17.706.285	2.338.162	1.846.479

The Group is responsible as joint guarantor for the portion amounted EURO 2,5 Million of investment credit amounted EURO 5 Million which will be used by ASELSAN Optik that is the Group's joint venture.

¹² The ratio of the other CPM given by the Group to equity as of 31 December 2018 is 0,22 percent. TL 22.590 is the collateral amount pertaing to guarantee letter given on behalf of the entities' affiliate company Mikro AR-GE and joint venture ASELSAN Bilkent.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

EURO	UAE Dirham	Indian Rupee	British Pound	Qatar Rial
935.983	50	10.000	1.654	25
				25
935.983	50	10.000	1.654	25

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

17. EMPLOYEE BENEFITS

a) Obligations for employee benefits

	31 December 2019	31 December 2018
Social security premiums payable	37.643	24.869
Taxes and funds payable	39.259	7.472
Due to personnel	69.037	2.532
	145.939	34.873

b) Short-term provisions for employee benefits

	31 December 2019	31 December 2018
Provision for vacation pay and overtime	72.819	49.382

As of 31 December the movement of the provision for vacation pay and overtime is as follows:

	2019	2018
Opening balance	49.382	42.301
Provision for the period	53.771	24.608
Provision paid during the period	(26.372)	(14.584)
Provision realized during the period	(3.962)	(2.943)
Closing balance	72.819	49.382

c) Long-term provisions for employee benefits

	31 December 2019	31 December 2018
Provision for severance pay	206.040	184.440
Provision for retirement pay	19.691	14.171
	225 731	198 611

As of 31 December the movement of severance and retirement pays are as follows:

	2019	2018
Opening balance	198.611	168.742
Service cost	21.193	11.254
Interest cost	6.100	4.795
Actuarial gains/(loss)	17.851	24.662
Payments	(18.024)	(10.842)
Closing balance	225.731	198.611

Provision for severance pay:

In accordance with the Labor Law Legislations, the Group is obliged to make legal severance indemnity payments to entitled employees whose employment has been terminated. Furthermore, with regard to Social Security Law numbered 506 dated 6 March 1981, number 2422 dated 25 August 1999 and law numbered 4447, article 60 denotes the legal obligation to make severance payments to all employees who are entitled to indemnity by the date of leave of employment.

Certain provisions regarding services before retirement, has been annulled on 23 May 2002 during the revision of the related law. As of 31 December 2019 severance payments are calculated on the basis of 30 days' pay, limited to a ceiling of TL 6.380¹ (31 December 2018: TL 5.434)¹ As of 1 January 2020, the ceiling for the severance payments is TL 6.730¹

The liability is not funded, as there is no funding requirement. The provision has been calculated by estimating the present value of the future probable obligation of the Group arising from the retirement of employees. TAS 19 ("Employee Benefits") requires actuarial valuation methods to be developed to estimate the entity's obligation under defined benefit plans.

¹ Amounts are shown in original Turkish Lira values.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

17. EMPLOYEE BENEFITS (continued)

Provision for severance pay (continued)

Provision for retirement grant:

Retirement bonus provision is recognized for the employees with service of more than 20 years within the Group and has earned/will earn their retirement.

Accordingly, the following actuarial assumptions were used in the calculation of the total liability:

	31 December 2019	31 December 2018
	(%)	(%)
Interest rate	12,88	15,60
Inflation rate	8,90	11,80
Discount ratio	3,35	3,40
Estimation of probability of retirement ratio	97	97

18. OTHER ASSETS AND LIABILITIES

a) Other current assets

	31 December 2019	31 December 2018
VAT carried forward ¹³	219.828	177.210
Restricted cash ¹⁴	49.949	74.269
Other VAT	70.185	53.873
Job advances	729	705
Other ¹⁵	56.246	22.754
	396.937	328.811

¹³ Taxpayers (Contractor/the Group) who deliver goods and provides services to the Natural Security Institutions (such as MOD and UDI) are to be approved by purchasers (contacting authority) in terms of content and nature accordingly. Value Added Tax (VAT) is exempted as of 1 March 2009 in accordance with General Declaration on Value Added Tax with the Serial Number 112 in the Official Gazette as of 12 February 2009. These amounts usually are not collected, but they are offset with other tax liabilities.

¹⁴ The amount consists of the restricted cash with regard to 1007 and the European Union projects.

¹⁵ Mainly comprises of other assets and liabilities of consolidated subsidiaries.

b) Other non-current assets

	31 December 2019	31 December 2018
VAT carried forward1	695.137	463.005
Prepaid taxes and funds	34.377	29.202
Other3	9.722	7.935
	739.236	500.142

c) Other short-term liabilities

	31 December 2019	31 December 2018
Taxes and funds payable	3.596	218
Other3	651	8.019
	4.247	8.237

19. SHARE CAPITAL, RESERVES AND OTHER EQUITY ITEMS

Capital

Shareholders	Share (%)	31 December 2019	Share (%)	31 December 2018
TSKGV	74,20	845.826	74,20	845.826
Publicly held	25,80	294.174	25,70	293.019
Axa Sigorta Anonim Şirketi ¹⁶			0,10	1.155
Nominal capital	100	1.140.000	100	1.140.000
Share capital adjustment		98.621		98.621
Inflation adjusted capital		1.238.621		1.238.621

¹⁶As of 12 July 2019, the nominal amount of TL 1.155 held by Axa Sigorta A.Ş. converted to publicly traded share with respect to the announcement "Conversion to the Type Traded on the Stock Exchange".

The Group's nominal capital is TL 1.140.000 comprising 1.140.000.000 shares each of which is TL 1. A total of 605.454.545 of the shares constitutes "Group A" and 534.545.455 of the shares constitutes "Group B" shares. All of the shares are nominative. "Group A" shares are privileged nominative shares and 6 Members of the Board of Directors are assigned from the holders of nominative "Group A" type shareholders or from the ones nominated by "Group A" type shareholders. Moreover, the Board of Directors shall be authorized in matters regarding issuing preferred shares or issuing shares above the nominal values. Regarding capital increases by restricting preemptive rights, the shares to be issued shall be "Group B". In accordance with the CMB's legislation, other Members of the Board of Directors, not including elected Independent Members of the Board of Directors, are assigned from nominative "Group A" shareholders or elected from among candidate nominated by "Group A" shareholders.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

19. SHARE CAPITAL, RESERVES AND OTHER EQUITY ITEMS (continued)

Restricted reserves

In accordance with Capital Markets Board's Communique Serial II No: 19.1 "Share of Profit", effective as of 1 February 2014, and with regard to the Turkish Commercial Code ("TCC"), legal reserves in publicly held companies will be generated by 5 percent of income until it reaches 20 percent of paid-in share capital. After the 5 percent of the dividend is paid to shareholders, 10 percent of the total distributed to shareholders and employees can be added in the other legal reserve. Under the TCC, the legal reserves can be used only to offset losses for the going concern of the company or to prevent unemployment as long as the amount does not exceed 50 percent of the paid-in capital.

As of 31 December 2019, The Group's restricted reserves set aside from profit comprises legal reserves. The total of the Group's legal reserves are TL 276.827 (31 December 2018: TL 172.687).

Retained Earnings

Accumulated profits apart from net profit for the year and extraordinary reserves which is accumulated profit by nature are shown under retained earnings. As of 31 December 2019 the extraordinary reserves balance presented in retained earnings is TL 2.987.028 (31 December 2018: TL 1.435.063). According to the statutory records, the Company's profit for the period is TL 3.686.183 (31 December 2018: TL 1.829.121) and its other funds available for profit distribution is TL 3.034.425 (31 December 2018: TL 1.481.866) and the details are as followings.

Profit distribution

Publicly traded companies perform dividend distribution in accordance with Capital Markets Board's Communique Serial II No: 19.1 "Share of Profit", effective as of 1 February 2014.

Shareholders, distribute dividend with general assembly decision, within the context of profit distribution policies set by general assembly and related regulations. As part of the communique, no specific minimum distribution ratio is indicated. Companies pay dividend as defined in their articles of association or dividend distribution policies.

On 26 April 2019, in accordance with the consolidated financial statements, the General Assembly of the Company has decided to allocate legal reserve amounting to TL 103.156 of the TL 2.318.198 which is based on the profit distribution, and to distribute TL 174.000 in cash to shareholders for dividend payment and the remaining TL 2.041.042 to be within the Group. Thus, the cash gross dividend amount for TL 1 nominal value per share is Kuruş 15,26 net (31 December 2018: Kuruş 7,42 net).

Within 2019, dividend amounting to TL 174.000 in gross, 15,26 Kuruş per share of TL 1 (net profit amounting to TL 147.900, 12,97 Kuruş per share of TL 1) will be paid to shareholders. (31 December 2018: TL 84.600 in gross, 7,42 Kuruş per share of TL 1 (TL 71.910 in net, 6,31 Kuruş per share of TL 1) was paid).

On 1 March 2019, General Assembly of ASELSANNET has decided to distribute TL 10.000 as dividend payments to shareholders and reserve TL 984 as retained earnings from net profit of the year 2018. Remaining TL 12.497 is decided to be allocated as extraordinary reserves (31 December 2018: 5.000).

The dividend which amounted TL 174.000 has been allocated to shareholders.

20. REVENUE AND COST OF SALES

	1 January-	1 January-
	31 December	31 December
a) Revenue	2019	2018
Domestic sales	11.503.350	8.140.207
Export sales	1.573.783	888.955
Other revenues	20.746	7.033
Sales returns (-)	(82.069)	(24.179)
Sales discounts (-)	(3.259)	(3.315)
Other discounts (-)		(185)
	13.012.551	9.008.516
	1 January -	1 January -
	31 December	31 December
Revenue Recognized Regarding Performance Obligation	2019	2018
Over time	8.852.909	5.634.134
Point in time	4.159.642	3.374.382
	13.012.551	9.008.516

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

20. REVENUE AND COST OF SALES (continued)

	1 January-	1 January-
	31 December	31 December
b) Cost of sales (-)	2019	2018
Cost of raw materials and supplies	7.475.716	5.202.636
Cost of merchandise goods sold	91.917	171.551
Cost of services sold	1.702.925	1.201.580
Cost of other sales	370.260	221.657
	9.640.818	6.797.424

21. GENERAL ADMINISTRATIVE EXPENSES, MARKETING EXPENSES, RESEARCH AND DEVELOPMENT EXPENSES

	1 January - 31 December	1 January - 31 December	
	2019	2018	
General administrative expenses (-)	343.456	221.719	
Marketing expenses (-)	204.118	150.760	
Research and development expenses (-)	211.565	114.408	
	759.139	486.887	

	1 January -	1 January -
a)General administrative expenses (-)	31 December 2019	31 December 2018
Personnel expenses	202.003	135.236
Depreciation and amortization expenses	36.819	29.495
Expertise and consultancy expenses	8.261	7.257
Electricity expenses	7.119	5.188
Insurance expenses	6.628	1.420
Travel expenses	6.508	3.036
Rent expenses	5.491	2.820
Legal expenses	4.409	3.850
Personnel meal expenses	3.743	2.682
Personnel transportation expenses	2.765	2.564
Property and environmental cleaning tax	2.055	1.778
Course and seminar expenses	1.641	879
Water expenses	658	929
Other	55.356	24.585
	343.456	221.719

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

21. GENERAL ADMINISTRATIVE EXPENSES, MARKETING EXPENSES, RESEARCH AND DEVELOPMENT EXPENSES (continued)

	1 January- 31 December	1 January- 31 December
b) Marketing expenses (-)	2019	2018
Subcontractor service expenses	40.335	12.233
Exhibition expenses	37.794	27.406
Personnel expenses	34.498	20.582
Commission expenses	27.834	44.494
Shipping and delivery expenses	11.550	5.700
Travel expenses	10.576	7.378
Advertising expenses	7.316	3.743
Expertise and Consultancy expenses	5.288	7.246
Packaging expenses	4.592	3.876
Samples expenses	4.586	2.585
Stamp duty expenses	3.382	9.788
Representation expenses	1.442	2.191
Depreciation and amortization expenses	1.013	665
Other	13.912	2.873
	204.118	150.760

	1 January- 31 December	1 January- 31 December
c) Research and development expenses (-)	2019	2018
Personnel expenses	75.061	49.778
Depreciation and amortization expenses	49.831	37.338
Equipment costs	33.760	14.718
Other	52.913	12.574
	211.565	114.408

22. OTHER OPERATING INCOME AND EXPENSES

a) Other operating income

	1 January-	1 January-
	31 December	31 December
	2019	2018
Foreign currency exchange gains	3.650.791	5.590.625
Rediscounted interest income	63.436	19.495
Free of charge investment income ¹⁷	43.225	22.362
Other income	60.918	21.685
	3.818.370	5.654.167

¹⁷ Free of charge investment income comprises of fixed assets donated by public bodies and utilized within the scope of research projects conducted with universities. Subsequent to the completion of these projects, the subject matter fixed assets have been incorporated to the Group without any charge.

b) Other operating expenses (-)

	1 January- 31 December 2019	1 January- 31 December 2018
Foreign currency exchange losses	3.175.862	5.075.934
Rediscounted interest expense	48.902	61.378
Other expense and losses	28.938	15.964
	3.253.702	5.153.276

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

23. INCOME FROM INVESTING ACTIVITIES

	1 January- 31 December	1 January- 31 December
	2019	2018
Gain/(loss) on sales profit of marketable securities	1.243	
Dividend income	4.618	5.222
Gain/(loss) on sales profit of fixed assets	518	(433)
	6.379	4.789

24. FINANCIAL INCOME

	1 January- 31 December	(Restated) 1 January- 31 December
	2019	2018
Interest income	259.744	366.285
TFRS 15 financial component effect	472.563	271.472
Foreign currency exchange gains on bank loans	246.553	238.722
Gain/(loss) on derivative instruments (forward)	6.347	
	985.207	876.479

25. FINANCIAL EXPENSES

	1 January- 31 December	1 January- 31 December
	2019	2018
Foreign currency exchange losses from bank loans (-)	387.879	350.329
TFRS 15 financial component effect (-)	380.510	474.279
Interest cost related with employee benefits (-)	6.100	4.795
Rediscount expenses at bank loans (-)		1.102
Interest cost of borrowings (-)	88.153	25.142
	862.642	855.647

26. ANALYSIS OF OTHER COMPREHENSIVE INCOME ITEMS

31 December	31 December
2019	2018
933.298	729.612
207.431	207.431
35.442	25.507
(32.354)	(18.073)
1.143.817	944.477
1 January-	1 January-
31 December	31 December
2019	2018
729.612	535.444
214.406	204.387
(10.720)	(10.219)
933.298	729.612
	2019 933.298 207.431 35.442 (32.354) 1.143.817 1 January- 31 December 2019 729.612 214.406 (10.720)

Gain on revaluation or reclassification of available for sale financial assets arises due to revaluation of financial investments. When available for sale financial assets are sold, any related amount included in revaluation reserve is transferred to profit or loss.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

26. ANALYSIS OF OTHER COMPREHENSIVE INCOME ITEMS (continued)

	1 January- 31 December	1 January- 31 December
Revaluation of property	2019	2018
Opening balance (Previously reported)	207.431	207.431
Increase arising from revaluation of property		
Deferred tax on revaluation ¹⁸		
Current period value increase deferred tax effect		
Closing balance	207.431	207.431

¹⁸ 75 percent of the income derived by entities from the sale of participation shares and real estates (immovable property) preferential rights, founders' shares and redeemed shares which are carried in assets at least for two years is exempt from corporate tax as of 31 December 2017. However, according to the amendments by Law numbered 7061, this rate is educed from 75 percent to 50 percent with regard to immovable properties and tax declarations starting from 2018 will be calculated using 50 percent for immovable properties.

Revaluation of property increase arises from revaluation of the lands. On the subsequent sale or retirement of a revalued property, the attributable revaluation surplus remaining in the properties revaluation reserve is transferred directly to retained earnings.

The fair value of the lands owned by the Group is revalued on 11 December 2017 by Metrik Gayrimenkul Değerleme Danışmanlık Anonim Şirketi ("Metrik Değerleme"), an independent appraisal company.

	1 January-	1 January-
	31 December	31 December
Foreign currency exchange differences:	2019	2018
Opening balance	25.507	5.246
Currency differences from net asset currency translation investent in foreign operations	9.935	20.261
Closing balance	35.442	25.507
	1 January-	1 January-
	31 December	31 December
Gain/Loss on remeasurement of defined benefit plans	2019	2018

2019	2010
(18.073)	1.656
(17.851)	(24.662)
3.570	4.933
(32.354)	(18.073)
	(17.851) 3.570

27. INCOME TAXES

Corporate tax liabilities:	31 December 2019	31 December 2018
Current corporate tax provision	14.868	11.022
Less: Prepaid taxes and funds	(2.021)	(8.186)
	12.847	2.836
	1 January-	1 January-

	i January-	i january-
	31 December	31 December
Tax income:	2019	2018
Current corporate tax expense	(14.868)	(11.022)
Deferred tax income	59.010	88.603
	44.142	77.581

	1 January-31 December 2019		
_	Amount		
Tax effects related to components of other comprehensive income	before tax	Tax income/expense	Net of tax amount
Defined benefit plan revaluation gains/losses	(17.851)	3.570	(14.281)
Cumulative Currency Translation Adjustments	9.935		9.935
Gain on revaluation of available for sale financial assets gains/			
losses	214.406	(10.720)	203.686
Other comprehensive income in the period	206.490	(7.150)	199.340

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

27. INCOME TAXES (continued)

	1 Ja	anuary-31 December 2018	
	Amount		
Tax effects related to components of other comprehensive income	before tax	Tax income/expense	Net of tax amount
Defined benefit plan revaluation gains/losses	(24.662)	4.933	(19.729)
Cumulative Translation Adjustments	20.261		20.261
Gain on revaluation of available for sale financial assets gains/			
losses	204.387	(10.219)	194.168
Other comprehensive income in the period	199.986	(5.286)	194.700
Tax recognized directly in equity		1 January-	1 January-
		31 December	31 December
		2019	2018
Deferred tax:			
- Revaluation of property			
- Gain on revaluation of available for sale financial assets		(10.720)	(10.219)
- Actuarial gain/loss		3.570	4.933
Deferred tax recognized directly in equity		(7.150)	(5.286)

Corporate tax

The Group is subject to Turkish corporate taxes. The corporate income tax is declared until the relevant accounting period-end's following fourth month, twenty-fifth day's evening and it is batch paid until the end of the related month. In accordance with the tax legislation, quarterly 22 percent (31 December 2018: 22 percent) on profits of advance tax is being calculated and paid. The amounts paid in this way are deducted by the tax on annual earning.

In accordance with the tax legislation in Turkey, financial losses could be carried forward for a maximum of five years that the year they appeared. Besides, tax returns and the related accounting records may be reviewed within five years by the tax administration.

Provision is made in the accompanying consolidated financial statements for the estimated change based on the Group's results for the year. 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 bases.

Corporate tax rate that will be accrued based on rate able profit of the company is calculated on a basis by including disallowed deductions written of as expense when determining commercial profit with excluding tax-exempt profits and other discounts (also previous year losses and investments allowances used, if preferred)

The tax rate in 2019 is 22 percent (31 December 2018: 20 percent).

Deferred Tax

The Group recognizes deferred tax assets and liabilities based upon temporary differences arising from its financial statements as reported for TFRS purposes 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 the differences are given below.

In Turkey, corporate tax rate is 22 percent as of 31 December 2019 (2018: 22 percent). However, according to the Article 91 of the Law numbered 7061 "Legislation on Amendment of Certain Tax Legislation and Other Certain Legislation" which was published on the Official Gazette numbered 30261 on 5 December 2017 and according to the provisional clause 10 added to the Corporate Tax Law numbered 5520; corporate tax rate for the taxation periods of 2018, 2019 and 2020 is amended to be 22 percent, which would later be applied as 20 percent at the end of these periods.

In Turkey, the tax legislation does not permit a parent company and its subsidiaries to file a consolidated tax return. Therefore, provision for taxes, as reflected in the consolidated financial statements, has been calculated on a separate-entity basis.

The dividend income (excluding the participation certificates of investment funds and profit shares derived from the share certificates of investment trusts) derived by entities from the participation in the capital of another resident entity is exempt from corporate tax. Furthermore, 75 percent of the income derived by entities from the sale of participation shares and real estates (immovable property) preferential rights, founders' shares and redeemed shares which are carried in assets at least for two years is exempt from corporate tax as of 31 December 2018. However, according to the amendments by Law numbered 7061, this rate is reduced from 75 percent to 50 percent with regard to immovable properties and tax declarations starting from 2018 will be calculated using 50 percent for immovable properties. In order to be able to benefit from the exemption, the relevant income should be kept under a fund account in the liabilities and should not be withdrawn from the enterprise for 5 years. The sales amount should be collected by the end of the second calendar year following the year of sale.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

27 INCOME TAXES (continued)

Deferred Tax (continued)

The details of deferred tax assets and liabilities of the Group are as follows:

Deferred Tax Assets:	31 December 2019	31 December 2018
Discount on receivables	10.394	13.343
Adjustment to costs and provision for expected losses of construction contracts	1.656.545	1.382.112
Allowance for impairment on inventories	1.878	1.646
Provision for delay penalties	22.112	9.109
Provision for warranties	161.501	97.848
Provision for severance pay	41.187	36.938
Provision for retirement bonus pay	3.931	2.836
Provision for annual leave	16.020	10.864
Provision for legal cases	326	28
Provision for doubtful receivables	990	288
Accumulated research and development incentive	849.723	912.673
Deferred Tax Liabilities:	31 December 2019	31 December 2018
Discount on payables	(2.664)	(2.614)
Adjustment of progress payments for long- term construction projects	(1.854.233)	(1.623.722)
Depreciation of fixed assets/amortization of intangible assets	(49.540)	(45.818)
Fixed assets revaluation fund	(23.039)	(23.039)
Gain on revaluation of available for sale financial assets	(49.121)	(38.400)
Other	(59)	
Deferred tax assets	2.764.607	2.467.685
Deferred tax liabilities	(1.978.656)	(1.733.593)
Deferred tax assets – net	785.951	734.092

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

27. INCOME TAXES (continued)

Deferred tax (continued)

		1 January- 31 December 2019		1 January- 31 December 2018
Movement of deferred tax assets/(liabilities): Opening balance as of 1 January		734.092		650.775
Charged to statement of profit or loss		59.010		88.603
Charged to equity		(7.150)		(5.286)
		785.951		734.092
	Effective Tax Rate	1 January- 31 December	Effective Tax Rate	1 January- 31 December
Tax reconciliations:	(%)	2019	(%)	2018
Profit before tax from continuing operations Income tax rate		3.308.531 22%		2.241.766 22%
Tax at the domestic income tax rate	22	727.877	22	493.188
Tax effects of:				
- revenue that is exempt from taxation - expenses that are not deductible in determining taxable	(1)	(32.452)	(28)	(635.254)
profit	1	39.091	28	637.293
- R&D incentives and other income exempt from taxation - Change effect of determining statutory tax rate as 20	(23)	(750.333)	(24)	(542.019)
percent to 22 percent for 3 years - Subsidiaries and associates revenue that is exempt from	(1)	(22.085)	(1)	(32.185)
taxation				1.312
- effect of other adjustments		(6.240)		84
Tax income recognized in profit or loss	(1)	(44.142)	(3)	(77.581)

28. EARNINGS PER SHARE

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 period. The Group does not have diluted shares.

For the years ended 31 December 2019 and 2018, earnings per share calculations are as follows:

	1 January-	1 January-
	31 December	31 December
	2019	2018
Number of shares outstanding (in thousands)	1.140.000	1.079.781
Net profit – TL	3.340.447	2.318.197
Earnings per 100 shares	293,02	214,69
Diluted earnings per 100 shares	293,02	214,69

29. FINANCIAL INVESTMENTS

Financial Investments

Short-term Financial Investments

	31 December 2019	31 December 2018
Realization of derivative instruments (forward)	6.039	
	6.039	
Non-Current Financial Investments		

	31 December 2019	31 December 2018
a) Available for sale financial investments	987.560	773.154
b) Financial investments valued at cost that do not have a quoted market value	904	5.511
	988.464	778.665

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

29. FINANCIAL INVESTMENTS (continued)

a) Available for sale financial investments (continued)

Financial Investments (continued)

a) Fair Value Difference Reflect in Other Comprehensive income

	31 December 2019	31 December 2018
Fair value difference reflect in other comprehensive income that are not traded in an		
active market	988.464	778.665
	988 464	778 665

ROKETSAN which is Group's equity investment is revalued and stated at fair value. As of 31 December 2019, the revaluation was performed by Oyak Yatırım Menkul Değerler Anonim Şirketi which is an independent valuation company. The fair value was determined according to "Discounted Cash Flow", "Similar Company Comparison" and "Realized Company Mergers and Acquisitions" methodologies. Discount ratio used in "Discounted Cash Flow" method is 19 percent (31 December 2018: 21 percent).

Company Name	Ratio (%)	31 December 2019	Ratio (%)	31 December 2018
ROKETSAN	14,897	987.560	14,897	773.154

Roketsan shares, shown under available for sale financial investments, are reported on the third level in the fair value hierarchy (Note 32).

b) Financial investments valued at cost that do not have a quoted market value

The Group's equity investment and participation rate and the amount shown in financial investments are as follows:

Company Name	Ratio (%)	31 December 2019	Ratio (%)	31 December 2018
ULAK	51			5.100
ASPİLSAN	1	904	1	411
		904		5.511

The above available-for-sale equity investment amounting to TL 904 (31 December 2018: TL 5.511) does not have a quoted market value and the fair value cannot be reliably measured due to a wide range of reasonable fair value estimates is significant and the probabilities of the various estimates cannot be reasonably assessed. For this reason they are stated at cost less provision for diminution in value, if any.

30 FINANCIAL LIABILITIES

Financial Liabilities

		31 December 2019	31 December 2018
Short-term financial liabilities	Unsecured loan	1.522.010	675.715
Other short-term financial liabilities	Unsecured loan	90.311	22.811
Current portion of long-term financial liabilities	Secured loan	611.198	67.277
Total short-term financial liabilities		2.223.519	765.803
Other long-term financial liabilities	Secured loan	9.098	20.234
Total long-term financial liabilities		9.098	20.234
Total financial liabilities		2.232.617	786.037

As of 31 December 2019, TL 475.216 of the short term financial borrowings are USD Rediscount Credits, which have maturity dates due between January 2020 -April 2020 and interest rates between 2,73 – 4,99 percent. Short term borrowings in terms of EUR, which have maturity dates due between January 2020 -July 2020 amounting to TL 1.046.794 which has interest rate between 0,65-1,60 percent. Current portions of long-term financial liabilities are EUR and "Ivme" Credit which have amounted to TL 506.198 and TL 105.000, respectively. They have interest rates between 2,75-10,55 and maturity dates between July 2020- November 2020.

The TL 6.045 amounted portion of short term and long term financial liabilities have consisted of loans for supplier payments with 12 month maturity and interest rate of 11,50 percent. The rest of the short term other financial liabilities consist of loans borrowed for social security payments with 45 days maturity and interest rate of 1 percent from Ziraat Bank.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

30 FINANCIAL LIABILITIES (continued)

Financial Liabilities (continued)

As of 31 December 2018, TL 675.715 in the short term financial liabilities consist of USD Discount Currency Loans in which instalment payments maturity dates are between January-July 2019 and interest rate between 3,16-3,54. In the long term financial liabilities, current portion of all short term liabilities consist of instalment payments of the principal equal to USD 12.790 that belongs to credits that are taken from Presidency of Defense Industries with the interest rate of 2,1 percent and 3,5 percent respectively and maturity date is August 2019. Also, there are TL 22.811 financial liability in order to pay Social Security payments.

As of 31 December 2018, all long term financial liabilities consist of loans amounting to USD 3.846 with interest rates of 2,1 percent and 3,5 percent from Presidency of Defense Industries and maturity date is October 2020. A letter of guarantee amounting to USD 16.636 was given for the loan.

Bank Loans

		31 December 20)19
	Weighted average		
Currency	interest rate (%)	Short-term	Long-term
Euro	1,02	1.551.585	
TL	10,55	196.718	9.098
USD	3,79	475.216	
		2.223.519	9.098
		31 December 20)18
	Weighted average		
Currency	interest rate (%)	Short-term	Long-term
TL	-	22.811	
USD	3,17	742.992	20.234
		765.803	20.234

The breakdown of the loan repayments with respect to their maturities is as follows:

	31 December 2019	31 December 2018
Within 1 year	2.223.519	765.803
Between 1-2 years	9.098	20.234
	2.232.617	786.037

31 NATURE AND LEVEL OF RISKS RELATED TO FINANCIAL INSTRUMENTS

a) Capital risk management

The Group manages its capital to ensure that entities in the Group will be able to continue as a going concern while maximizing the return through the optimization of the debt and equity balance.

The capital structure of the Group consists of debt, which includes the borrowings as explained Note 30, cash and cash equivalents and equity attributable to equity holders of the parent, comprising issued capital, reserves and retained earnings.

The Group's board of directors review capital structure regularly in the meetings. The risks that are associated with every equity item together with the Group's cost of capital are evaluated by the board of directors. Based on the recommendations of the board, the Group aims to balance its overall capital structure through the payment of dividends.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

31 NATURE AND LEVEL OF RISKS RELATED TO FINANCIAL INSTRUMENTS (continued)

Net debt and share capital as of 31 December 2019 and 2018 is as follows:

	31 December	31 December
	2019	2018
Total liabilities	2.232.617	786.037
Less: Cash and cash equivalents	(3.513.842)	(3.115.691)
Net debt (asset)	(1.281.225)	(2.329.653)
Total equity	13.568.899	10.177.021

b) Financial Risk Factors:

It refers to the risks arising from the financial structure and financial preferences of the Group. Exchange rate, liquidity and interest rate risks are some risks under this heading. The Group's overall risk management program focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on the Group's financial performance.

ASELSAN's Enterprise Risk Management Policy aims; to take proper actions against uncertainties that threaten the existence of the Company and to protect corporate identity and stakeholders' interest at all conditions. Risk management is an integrated element of Corporate Management. The information gathered within the scope of risk management activities in ASELSAN is integrated into decision making mechanisms.

The "top-down" and "bottom-up" approach is being applied into Enterprise Risk Management activities together. Risks, which are significant enough to affect ASELSAN's achievement of its targets, are identified, evaluated, monitored and reported along with the risk responses and precautions to be taken. At ASELSAN; The Enterprise Risk Management process is regularly reviewed and improved. ASELSAN's employees and business processes are at the center of the Enterprise Risk Management System.

Group's finance department identifies and evaluates financial risks and use tools to reduce risks by working in cooperation with the group's operating units.

Credit Risk

Credit risk refers to the risk that counterparty will default on its contractual obligations resulting in financial loss to the Group. The Group is mainly working with public sector and obtaining advance payments where appropriate, both from public sector and private sector entities. The Group management does not foresee significant credit risk. Additionally, receivables are monitored regularly to minimize the collection risk.

Carrying values of the financial assets reflect the maximum exposure to credit risk. The credit risks as of reporting date is as follows:

		Receiv	ables			
	Trade Ree	eivables	Other Receivables		-	
	Related	Third	Related	Third	Bank	
31 December 2019	party	party	party	party	Deposits	Other
Maximum net credit risk as of the reporting date (A+B+C+D) ¹⁹	5.384.727	4.085.105	1.150	380.468	3.559.515	10.053
- The part of maximum risk under guarantee with collateral etc. ²⁰		6.450				
A. Net book value of financial assets that are neither past due nor						
impaired	5.384.727	2.727.841	1.150	380.468	3.559.515	10.053
B. Net book value of financial assets that are past due but not			·			
impaired		1.357.264				
C. Net book value of impaired assets						
- Overdue (gross carrying amount)		58.960				
- Impairment (-)						
- The part of net value under guarantee with collateral etc.		(58.960)				
- Undue (gross carrying amount)						
- Impairment (-)						
- The part of net value under guarantee with collateral etc.						
D. Factors that include off balance sheet credit risks						

19 While determining the amount, components which provide increase on credit reliability, like guarantees received are not taken into consideration.

²⁰ The guarantees consist of the letters of guarantees, collaterals, checks and mortgages.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

31 NATURE AND LEVEL OF RISKS RELATED TO FINANCIAL INSTRUMENTS (continued)

Credit risk (continued)

Carrying values of the financial assets reflect the maximum exposure to credit risk. The credit risks as of reporting date is as follows:

		Receiv	ables			
	Trade Rec	eivables	Other Receivables		-	
	Related	Third	Related	Third	Bank	
31 December 2018	party	party	party	party	Deposits	Other
Maximum net credit risk as of the reporting date (A+B+C+D) ²¹	2.749.390	3.149.662	24	204.857	3.187.487	2.320
- The part of maximum risk under guarantee with collateral etc. ²²		4.901				
A. Net book value of financial assets that are neither past due nor						
impaired	2.749.390	2.317.500	24	204.857	3.187.487	2.320
B. Net book value of financial assets that are past due but not			·			
impaired		832.162				
C. Net book value of impaired assets						
- Overdue (gross carrying amount)		2.218				
- Impairment (-)		(2.218)				
- The part of net value under guarantee with collateral etc.						
- Undue (gross carrying amount)						
- Impairment (-)						
- The part of net value under guarantee with collateral etc.						
D. Factors that include off balance sheet credit risks						

²¹ While determining the amount, components which provide increase on credit reliability, like guarantees received are not taken into consideration. ²² The guarantees consist of the letters of guarantees, collaterals, checks and mortgages.

The aging of the overdue receivables is as follows:

	31 December 2019	31 December 2018
Overdue by 1-30 days	74.658	189.827
Overdue by 1-3 months	76.222	178.415
Overdue by 3-12 months	481.981	245.265
Overdue by 12 months	724.403	218.655
Total receivables	1.357.264	832.162

No collateral has been received for the overdue receivables.

Management has assessed its aged receivables and does not expect any collection problem arising from its aged receivables.

Liquidity risk

Board of directors has built an appropriate liquidity risk management framework for the management of the Group's short, medium and longterm funding and liquidity management requirements. ASELSAN eliminates the liquidity risk, which is known as the risk arising from default and inability to fund the assets, it monitors forecasted and actual cash flows regularly and ensures the continuity of adequate funds and credit lines by matching the maturity of financial assets and liabilities. In order to manage the interest rate risk arising from changes in assets and/or liabilities as a result of fluctuations in interest rates in the future, it conducts transactions with fixed interest rates and uses financial derivative instruments when necessary.

The following tables detail the Group's remaining contractual maturity for its non-derivative financial liabilities. The tables have been drawn up based on the undiscounted cash flows of non-derivative financial liabilities based on the earliest payment date. The table includes both interest and principal cash flows. When receivables and payables are not constant, amounts are determined in accordance with interest rates generated from return rates as of the reporting date.

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(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

31 NATURE AND LEVEL OF RISKS RELATED TO FINANCIAL INSTRUMENTS (continued)

Liquidity Risk (continued)

The maturities of the financial liabilities determined with respect to the contracts including the expected interest payments as of 31 December 2019 is as follows:

Contractual Maturity Analysis	Carrying value	Total cash outflow according to contract (I+II+III+IV)	Less than 3 Months (I)	3-12 Months (II)	1-5 Years (III)	More than 5 Years (IV)
Non-derivative financial instruments						
Financial liabilities	2.232.617	2.232.617	775.358	1.448.161	9.098	-
Expected Maturity	Carrying value	Total cash outflow according to contract (I+II+III+IV)	Less than 3 Months (I)	3-12 Months (II)	1-5 Years (III)	More than 5 Years (IV)
Non-derivative financial instruments						
Trade payables	5.468.161	5.481.171	3.375.866	240.182	1.865.123	-
Other payables	63.429	63,429	58,500		4.929	

The maturities of the financial liabilities determined with respect to the contracts including the expected interest payments as of 31 December 2018 is as follows:

Contractual Maturity Analysis	Carrying value	Total cash outflow according to contract (I+II+III+IV)	Less than 3 Months (I)	3-12 Months (II)	1-5 Years (III)	More than 5 Years (IV)
Non-derivative financial instruments						
Financial liabilities	786.037	788.537	380.949	386.823	20.765	-
		Total cash outflow according to contract	Less than 3	3-12		More than 5
Expected Maturity	Carrying value	(I+II+III+IV)	Months (I)	Months (II)	1-5 Years (III)	Years (IV)
Non-derivative financial instruments						
Trade payables	4.316.866	4.328.746	645.481	1.914.982	1.768.283	-
Other payables	2.838	2.838	2.732		106	

Market risk management

The Group's activities, as detailed below, expose primarily to the financial risks from changes in foreign currency exchange rates and interest rates.

Market risk exposures are evaluated by sensitivity analysis, and stress scenario analysis.

There has been no change to the Group's exposure to market risks or the manner in which it manages and measures the risk in the current year compared to prior year.

Foreign currency risk management

The exchange rate risk, which is any kind of change that may occur in assets and/or liabilities as a result of exchange rate fluctuations in the future, ASELSAN aims to minimize the effect of exchange rate fluctuations by keeping the long and short foreign exchange position at a minimum level. The balance sheet methods have been used in managing the exchange rate risk. Implementations such as; making use of foreign exchange denominated loans in line with the company's export volume, matching the contract currency with the currency of the costs of the project, and signing the subcontractor contracts in line with the main contract currency are used.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

31 NATURE AND LEVEL OF RISKS RELATED TO FINANCIAL INSTRUMENTS (continued)

FOREIGN EXCHANGE POSITION										
	TL Equivalent		TL equivalent		TL equivalent					
	(Functional		by using		by using					
31 December 2019	currency)	USD	closing rates	EURO	closing rates	Other ²³				
1. Trade receivables	3.205.720	267.003	1.586.053	242.283	1.611.329	8.338				
2a. Monetary financial assets (including										
cash, bank)	1.028.481	47.173	280.219	112.018	744.984	3.278				
2b. Non- monetary financial assets	448.065	58.665	348.484	24.294	161.569	52.714				
3. Other	6.435	254	1.511	735	4.891	33				
4. Current assets (1+2+3)	4.688.701	373.095	2.216.267	379.330	2.522.773	64.363				
5. Trade receivables	4.018.835	547.674	3.253.291	115.109	765.544					
6a. Monetary trade receivables										
6b. Non-monetary trade receivables	315.941	13.765	81.766	93.322	620.649	10.020				
7. Other	14.357	979	5.814	1.199	7.970	573				
8. Long-term assets (5+6+7)	4.349.133	562.418	3.340.871	209.630	1.394.163	10.593				
9. Total assets (4+8)	9.037.834	935.513	5.557.138	588.960	3.916.936	74.956				
10. Trade payables	1.783.658	149.765	889.633	123.348	820.340	73.685				
11. Financial liabilities	2.026.801	80.000	475.216	233.300	1.551.585					
12a. Other monetary financial liabilities	715	111	659	8	56					
12b. Other non-monetary financial liabilities	326.504	87.643	520.619	69.829	464.398					
13. Current liabilities (10+11+12)	4.137.678	317.519	1.886.127	426.485	2.836.379	73.685				
14. Trade payables	1.634.038	220.533	1.310.011	48.721	324.027					
15. Financial liabilities										
16a. Other monetary financial liabilities	1.038	171	1.018	3	20					
16b. Other non-monetary financial liabilities	666.536	207.284	1.231.304	163.548	1.087.692					
17. Non-current liabilities (14+15+16)	2.301.612	427.988	2.542.333	212.272	1.411.739					

²³ Comprises of the currencies CAD, CHF, GBP, JPY, AUD, DKK, ZAR, AED, PHP, SAR.

	FOREIGN	I EXCHANGE PO	SITION				
	TL Equivalent		TL equivalent		TL equivalent		
	(Functional		by using		by using		
31 December 2019	currency)	USD	closing rates	EURO	closing rates	Other	
18. Total liabilities (13+17)	6.439.290	745.507	4.428.460	638.757	4.248.118	73.685	
19. Net asset/liability position of off-balance							
sheet derivative financial instruments (19a-19b)							
19a. Hedged total financial assets							
19b. Hedged total financial liabilities							
20. Net foreign currency asset/liability (9-							
18+19)	2.598.544	190.006	1.128.678	(49.797)	(331.182)	1.271	
21. Net foreign currency asset/liability position							
of monetary items (1+2a+5+6a-10-11-12a-14-							
15-16a)	2.806.786	411.270	2.443.026	64.030	425.829	(62.069)	
22. Fair value of derivative financial instruments							
used in foreign currency hedge							
23. Hedged foreign currency assets							
24. Hedged foreign currency liabilities							
25. Exports	1.573.783	258.181	1.533.613	4.983	34.149		
26. Imports	3.543.961	405.543	2.409.006	134.467	894.286	240.669	

Accompanying foreign exchange position which was prepared in accordance with TAS is different from the foreign exchange position of the financial statement which is prepared according to General Communiqué on Accounting System Application (GCASA). The difference is mainly due to the adjustments and classifications which are related with TFRS 15.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

31 NATURE AND LEVEL OF RISKS RELATED TO FINANCIAL INSTRUMENTS (continued)

"For TL functional currency" calculations regarding "Other non-monetary assets" and "Other non-monetary liabilities" presented under foreign currency position, advances received are considered with regard to historic values therefore "TL equivalent of currency as at balance sheet date" differentiate.

	FOREIGN EX	CHANGE POSITI	ON			
			TLequivalent		TLequivalent	
	TL Equivalent		by using		by using	
	(Functional		closing		closing	
31 December 2018	currency)	USD	rates	EURO	rates	Other ²⁴
1. Trade receivables	2.323.205	271.510	1.428.380	147.264	887.703	7.122
2a. Monetary financial assets (including cash,						
bank)	167.822	28.774	151.379	2.276	13.720	2.723
2b. Non- monetary financial assets	468.137	57.449	302.234	36.284	218.720	51.360
3. Other	7.281	9	50	1.180	7.115	116
4. Current assets (1+2+3)	2.966.445	357.742	1.882.043	187.004	1.127.258	61.321
5. Trade receivables	2.056.596	308.410	1.622.516	72.011	434.080	
6a. Monetary trade receivables						
6b. Non-monetary trade receivables	259.803	15.969	84.014	86.722	522.762	7.571
7. Other	23.116	1.938	10.193	2.031	12.242	681
8. Long-term assets (5+6+7)	2.339.515	326.317	1.716.723	160.764	969.084	8.252
9. Total assets (4+8)	5.305.960	684.059	3.598.766	347.768	2.096.342	69.573
10. Trade payables	1.116.287	136.214	716.609	54.992	331.486	68.192
11. Financial liabilities	742.992	141.229	742.992			
12a. Other monetary financial liabilities	645	116	608	6	37	
12b. Other non-monetary financial liabilities	129.158	90.890	478.162	9.575	57.721	
13. Current liabilities (10+11+12)	1.989.082	368.449	1.938.371	64.573	389.244	68.192
14. Trade payables	1.712.258	209.557	1.102.459	101.161	609.799	
15. Financial liabilities	20.234	3.846	20.234			
16a. Other monetary financial liabilities	52	6	34	3	18	
16b. Other non-monetary financial liabilities	1.577.348	132.773	698.504	284.949	1.717.669	
17. Non-current liabilities (14+15+16)	3.309.892	346.182	1.821.231	386.113	2.327.486	

²⁴ Comprises of the currencies CAD, CHF, GBP, JPY, AUD, DKK, ZAR, AED, PHP, SAR.

	FOREIC	GN EXCHANGE P	OSITION			
	TL Equivalent		TL equivalent by using		TL equivalent by using	
	(Functional		closing		closing	
31 December 2018	currency)	USD	rates	EURO	rates	Other
18. Total liabilities (13+17)	5.298.974	714.631	3.759.602	450.686	2.716.730	68.192
19. Net asset/liability position of off-balance						
sheet derivative financial instruments						
(19a-19b)						
19a. Hedged total financial assets						
19b. Hedged total financial liabilities						
20. Net foreign currency asset/liability (9-						
18+19)	6.986	(30.572)	(160.836)	(102.918)	(620.388)	1.381
21. Net foreign currency asset/liability position						
of monetary items (1+2a+5+6a-10-11-12a-14-						
15-16a)	955.155	117.726	619.339	65.389	394.163	(58.347)
22. Fair value of derivative financial instruments						
used in foreign currency hedge						
23. Hedged foreign currency assets						
24. Hedged foreign currency liabilities						
25. Exports	888.955	163.712	797.410	16.390	91.545	
26. Imports	3.111.856	376.008	1.978.139	148.001	892.148	241.569

Accompanying foreign exchange position which was prepared in accordance with TAS is different from the foreign exchange position of the financial statement which is prepared according to General Communiqué on Accounting System Application (GCASA). The difference is mainly due to the adjustments and classifications which are related with TFRS 15.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

31 NATURE AND LEVEL OF RISKS RELATED TO FINANCIAL INSTRUMENTS (continued)

Foreign currency sensitivity

The Group is exposed to foreign currency risk with respect to USD and EURO. As of 31 December 2019, USD 1: TL 5,9402 (31 December 2018: TL 5,2609), EURO 1: TL 6,6506 (31 December 2018: TL 6,0280).

The following table details the Group's sensitivity to a 10 percent increase and decrease in foreign exchange rates. 10 percent is the sensitivity rate used when reporting foreign currency risk internally to key management personnel and represents management's assessment of the possible change in foreign exchange rates. The sensitivity analysis includes only outstanding foreign currency denominated monetary items and present 10 percent change in foreign currency rates. This analysis does not include Group companies' balance sheet items which have functional currency other than TL. The effects of 10 percent changes in foreign currency rate on financial statements is as follows;

Fo	reign currency sensitiv	vity table			
	31 December 201	9			
	Profit/	'Loss	Equit	ty ²⁵	
			Appreciation of		
	Appreciation of	Depreciation of	foreign	Depreciation of	
	foreign currency	foreign currency	currency	foreign currency	
Ch	ange of USD against TI	Lby 10%:		i	
1- USD denominated net assets/(liabilities)	244.303	(244.303)	244.303	(244.303)	
2- Hedged amount against USD risk (-)					
3- Net effect of USD (1+2)	244.303	(244.303)	244.303	(244.303)	
Cha	ange of EURO against T	°L by 10%:			
4- EURO denominated net assets/(liabilities)	42.583	(42.583)	42.583	(42.583)	
5- Hedged amount against EURO risk (-)					
6- Net effect of EURO (4+5)	42.583	(42.583)	42.583	(42.583)	
Change	of other currencies aga	iinst TL by 10%:			
7- Other currencies denominated net assets/(liabilities)	(6.207)	6.207	(6.207)	6.207	
8- Hedged amount against other currencies risk (-)					
9- Net effect of other currencies (7+8)	(6.207)	6.207	(6.207)	6.207	

²⁵ Comprises of profit/loss effect.

For	eign currency sensiti	vity table		
	31 December 201	8		
	Profit/	/Loss	Equit	y ²⁶
			Appreciation of	
	Appreciation of	Depreciation of	foreign	Depreciation of
	foreign currency	foreign currency	currency	foreign currency
Cha	inge of USD against T	Lby 10%:		
1- USD denominated net assets/(liabilities)	61.934	(61.934)	61.934	(61.934)
2- Hedged amount against USD risk (-)				
3- Net effect of USD (1+2)	61.934	(61.934)	61.934	(61.934)
Cha	nge of EURO against 1	"L by 10%:		
4- EURO denominated net assets/(liabilities)	39.416	(39.416)	39.416	(39.416)
5- Hedged amount against EURO risk (-)				
6- Net effect of EURO (4+5)	39.416	(39.416)	39.416	(39.416)
Change of	f other currencies aga	ainst TL by 10%:		
7- Other currencies denominated net assets/(liabilities)	(5.835)	5.835	(5.835)	5.835
8- Hedged amount against other currencies risk (-)				
9- Net effect of other currencies (7+8)	(5.835)	5.835	(5.835)	5.835

²⁶ Comprises of profit/loss effect.

Interest rate risk management

As of 31 December 2019 and 31 December 2018, since all of the loans obtained by the Group are fixed-rate loans, the Group is not exposed to significant interest rate risk.

As of 31 December 2019, the Group does not have interest bearing financial assets, therefore there is no exposure to interest risk (31 December 2018: None).

Price risk

The Group usually enters into fixed price contracts, therefore, is not exposed to any major price risk.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

31 NATURE AND LEVEL OF RISKS RELATED TO FINANCIAL INSTRUMENTS (continued)

Hierarchy of fair value

As of 31 December 2019 and 31 December 2018, the Group's financial assets at their fair values are as in the following page:

32 FINANCIAL INSTRUMENTS FAIR VALUE DISCLOSURES AND EXPLANATIONS ON HEDGE ACCOUNTING

	assets at fair	Financial assets at amortized	Financial assets at fair value through	Financial liabilities at		
31 December 2019	value P/L	cost	OCI	amortized cost	Carrying value	Note
Financial assets						
Cash and cash equivalents		3.513.842			3.513.842	3
Blocked deposits		49.949			49.949	18
Financial investments	6.943		987.560		994.503	29
Equity accounted investments	121.769				121.769	8
Trade receivables		9.469.832			9.469.832	6
Financial liabilities						
Borrowings				2.232.617	2.232.617	30
Trade payables				5.468.161	5.468.161	6
Other payables				63.429	63.429	7

31 December 2018	Financial assets at fair value P/L	Financial assets at amortized cost	Financial assets at fair value through OCI	Financial liabilities at amortized cost	Carrying value	Note
Financial assets						
Cash and cash equivalents		3.115.691			3.115.691	3
Blocked deposits		74.269			74.269	18
Financial investments	5.511		773.154		778.665	29
Equity accounted investments	93.586				93.586	8
Trade receivables		5.899.052			5.899.052	6
Financial liabilities						
Borrowings				786.037	786.037	30
Trade payables				4.316.866	4.316.866	6
Other payables				2.838	2.838	7

The Group's management assesses that the carrying value reflects the fair value of financial instruments. Related financial assets are presented at cost after deducting impairment allowance if any.

The fair values of financial assets and financial liabilities are determined 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 are determined in accordance with data which can be observed by directly or indirectly and which excludes the registered prices described in Level 1; and
- Level 3: The fair value of the financial assets and financial liabilities are determined where there is no observable market data.

(Amounts are expressed in thousands of Turkish Lira ("TL") and in thousands of "Foreign Currency" unless otherwise stated.)

32 FINANCIAL INSTRUMENTS FAIR VALUE DISCLOSURES AND EXPLANATIONS ON HEDGE ACCOUNTING (continued)

Fair value hierarchy of financial assets that are measured at fair value:

ROKETSAN has presented under Group's available for sale financial asset and measured at fair value as of 31 December 2019. The fair value of ROKETSAN as of 31 December 2019 is TL 987.560 and was determined according to "Discounted Cash Flow", "Similar Company Comparison" and "Realized Company Mergers and Acquisitions" methodologies and its fair value hierarchy is Level 3.

Reconciliation of the Group's assets and liabilities that are measured at Level 3 fair value are presented as follow:

Available for sale financial assets		31 December 2019	31 December 2018		
		Marketable	Marketable		
		Equity Shares	Equity Shares		
Opening balance		773.154	568.767		
Total gain/loss					
- transferred to other comprehensive income		214.406	204.387		
Closing balance	_	987.560	773.154		
31 December 2019	Fair value level as of reporting date				
_	Level 1	Level 2	Level 3		
	TL	TL	TL		
			987.560		
-			987.560		

31 December 2018	Fair value le	vel as of reporting date	
	Level 1	Level 2	Level 3
	TL	TL	TL
Financial Investments			773.154
			773.154

The movement of the fair value level as of 31 December 2019 is as follows:

	Fair value le	Fair value level as of reporting date				
	Level 1	Level 2	Level 3			
	TL	TL	TL			
1 January 2019			773.154			
Additions			214.406			
31 December 2019			987.560			

33. EXPLANATIONS RELATED TO THE STATEMENT OF CASH FLOW

Reconciliation of the movements related to cash flows from financing activities and liabilities

			Non-cash movements			
	31 December	Cash		Exchange rate	Other non-cash	31 December
	2018	Movements	Additions	change	movements	2019
Financial Liabilities (Note 30)	786.037	1.303.253	1.407	141.920		2.232.617
Total liabilities arising from financing						
activities	786.037	1.303.253	1.407	141.920		2.232.617

The table above represents the changes in the cash amounts related to "Proceeds from Borrowings" and "Repayments from Borrowings" which are presented under cash flows from financing activities.

34. EVENTS AFTER THE REPORTING PERIOD

There has been no related events after the reporting period.





To the Board of Directors Aselsan Elektronik Sanayi ve Ticaret Anonim Şirketi

A. Audit of the Consolidated Financial Statements

Opinion

We have audited the consolidated financial statements of Aselsan Elektronik Sanayi ve Ticaret Anonim Şirketi ("the Company") and its subsidiaries ("the Group"), which comprise the consolidated statement of financial position as at December 31, 2019, and the consolidated statement 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 December 31, 2019, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with Turkish Accounting Standards ("TAS").

Basis for Opinion

We conducted our audit in accordance with standards on auditing issued by the Capital Markets Board of Turkey and the Auditing Standards published by the Public Oversight Accounting and Auditing Standards Authority. 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 are independent of the Group in accordance with the Code of Ethics published by the Public Oversight Accounting and Auditing. We have fulfilled our other ethical responsibilities in accordance with the Code of Ethics. 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.





Key Audit Matters

Revenue - Accounting of Revenue Recognised Over Time

An important part of Group's revenue is generated from construction contracts which are recognised over time. Revenue recognised over time is mainly due to contracts made with the Presidency of Defense Cross-check of the amounts subject to revenue calculation with Industry. The Group recognises revenue over-time if any of the following conditions is met:

a) The customer simultaneously receives and consumes the benefits as the entity performs

b) The customer controls the asset as the entity creates or enhances it, c) Group's performance does not create an asset for which the entity has an use; and alternative there is a right to payment for performance to date

Due to the fact that over-time revenue is one of the Group's core business volume and size indicators, implementation of related accounting standards is complex and includes management estimates and judgements, this issue has been considered to be a key audit matter. Accounting policies and amounts of the revenue detailed in Note 2.5 and Note 20 respectively

How the Matter is Handled

Our audit procedures included, in addition to others, the following: Controlling the terms of the contract in accordance with the criteria of over time accounting

contracts,

Controlling monthly changes of variables that directly affect revenue such as profitability on project basis,

Analytical review of the accuracy of expected loss provision, Performing control tests and test of details for contract cost,

Performing test of details for financing components

Questioning the annual changes of over-time revenue and related costs.

Key Audit Matters

Capitalization of Development Cost

The Group capitalizes development costs which are related with Examinations of nature of capitalized development costs related to development activities and approved by the management.

Capitalized development costs amount to a net book value of TRL 1.192.759 as 31 December 2019 in the accompanying consolidated financial statements.

Capitalized development costs on the consolidated financial statements as of 31 December 2019 is significant for our audit due to variety of nature of costs, management judgments involved in the capitalization process and projects contract costs.

Explanations about intangible assets including the capitalized development costs have been disclosed in Note 12.

How the Matter is Handled Our audit procedures included, amongst others, the following;

each project, Examinations of the suitability of management assessments for projects

at development phase

Performing test of details for development costs,

Assessment of Group's management approval process,

Additionally, inquiries have been perfored with project engineers and executives involved in research and development activities in related division of the Group.,





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 TAS, 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

In independent audit, the responsibilities of us as independent auditors 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 the Auditing Standards published by the Public Oversight Accounting and Auditing Standards Authority 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 Auditing Standards published by the Public Oversight Accounting and Auditing Standards Authority, we exercise professional judgment and maintain professional skepticism throughout the audit.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements (continued)

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 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.

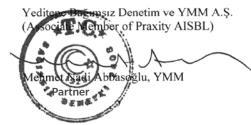
B) Reports on Independent Auditor's Responsibilities Arising from Other Regulatory Requirements

1) Pursuant to Article 398 of the Turkish Commercial Code ("TCC") no. 6102, the auditor's report on early detection of risk system and the authorized committee is submitted to the Company's Board of Directors on 11 February 2020.

2) Pursuant to subparagraph 4, Article 402 of "TCC", no significant matter has come to our attention that causes us to believe that the Company's bookkeeping activities for the period 1 January – 31 December 2019 is not in compliance with the code and provisions of the Parent Company's articles of association in relation to financial reporting.

3) Pursuant to subparagraph 4, Article 402 of "TCC", the Board of Directors submitted to us the necessary explanations and provided required documents within the context of audit.

Mehmet Nadi Abbasoğlu is the auditor responsible for conducting and finalizing this independent audit.



İstanbul, 11 February 2020

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8. COMPLIANCE REPORT ON CORPORATE GOVERNANCE PRINCIPLES

9. INFORMATION REGARDING THE LAWSUITS OF THE GROUP

10. INFORMATION REGARDING THE TRANSACTIONS MADE WITHIN THE REPORTING PERIOD

i. Changes in the Articles of Association

ii. Collective Agreement Implementations, Rights and Benefits Provided to the Personnel and Workers

iii. If it is an affiliate company, the legal transactions carried out in favor of the parent company or its affiliate with the parent company, with an affiliate company connected to the parent company with the direction of the parent company and all other measures taken or avoided to be taken in favor of the parent company or its affiliate in the previous activity year
iv. If it is an affiliate company, whether any counter performance was realized for each legal transaction according to the known status and conditions at the time the legal transaction mentioned in article iii was realized or at the time the measures were taken or avoided to be taken and whether the company incurred losses due to the taken or avoided measure and if the company incurred losses to observe whether this was equalized or not
v. Information Regarding the Donations and Social Responsibility

11. EVENTS AFTER THE REPORTING PERIOD

12. APPENDIX-1 - STATEMENT FOR COMPLIANCE WITH CORPORATE GOVERNANCE PRINCIPLES

1. PRINCIPLES OF PREPARATION

The report of the Board of Directors is prepared on the basis of Communiqué Series II, No: 14.1 "Principles of Financial Reporting in Capital Markets" dated 13 June 2013.

The report comprises the events took place during the period 1 January – 31 December 2019. The title of the main shareholder in the report is ASELSAN Elektronik Sanayi ve Ticaret A.Ş.

2. COMPANY INFORMATION AND ORGANIZATIONAL STRUCTURE

The Company is a leading defense industry establishment developing advanced technology system solutions within land, air, naval and aerospace platforms.

The Company, being an establishment of Turkish Armed Forces Foundation ("TSKGV"), stands in a position of a technology center within the fields of design, development, manufacturing, system integration, modernization and after sales services of military and civil communication systems, avionics systems, electronic warfare and intelligence systems, radar systems, command and control systems, naval warfare systems, security systems, transportation systems, energy systems, traffic and automation systems, electro-optic systems and products.

The Company has been restructured under five Vice Presidencies that will carry the production and engineering tasks, which are; Communication and Information Technologies ("HBT"), Microelectronics, Guidance and Electro-Optics ("MGEO"), Defense Systems Technologies ("SST"), Radar, Electronic Warfare and Intelligence Systems ("REHIS") and Transportation, Security, Energy and Automation Systems ("UGES").

In order for General Management to fulfill planning at strategic level, pursuing and assessing functions in a more efficient way, four different Vice Presidencies have been constituted as Financial Management Vice Presidency, Corporate Management Vice Presidency, Technology and Strategy Vice Presidency and Business Development and Marketing Vice Presidency; in addition to these Vice Presidencies there are also Legal Affairs and Office Of The Private Secretary.

The Internal Audit Department and Board of Directors Planning and Coordination Management have been established under the Board of Directors.

The Company maintains production and engineering operations in Ankara, METU Teknokent and Teknopark Ankara, production and engineering operations in Macunköy, Akyurt and Gölbaşı settlements. General Management is located in Ankara Macunköy settlement. Furthermore, the Company maintains engineering operations in Istanbul Teknopark.

Rankings of Company's international, country-wide, sectorial rating systems are shown below;

Companylian	Desservels / Structure	Related	Ran	Ranking		
Corporation	Research / Study	Period	Current	Prior		
International Rankings						
Defense News Magazine	Defense News Top 100	2019	52	55		
SIPRI	SIPRI Top 100	2019	54	62		
European Commission	Industrial R&D Investment Scoreboard Top 2500	2019	1.356	1.111		
National Rankings						
	ICI 500 Top Industry Companies	2019	15	20		
Istanbul Chamber of Industry	ICI 500 - Private Companies	2019	15	19		
Fortune Magazine	Top 500 Companies	2019	32	38		
Capital Magazine	Top 500 Private Companies	2019	42	47		
	Sustainability Index	2019	No Ra	inking		
	Corporate Management Index	2019	No Ra	nking		
BIST (Borsa Istanbul)	BIST Top 30 Index	2019	No Ranking			
	BIST Top 30 Market Value Sequence	2019	12	4		
TEA (Turkish Exporters Assembly)	Top 1000 Exporters	2019	108	68		
Turkish Time Journal	Research and Development Expenditures Turkey Top 100	2019	1	1		
Deloitte	Technology Fast 50 / Big Star Category	2019	No Ra	inking		
Brand Finance	Most Valuable Firms (100 Brands)	2019	33	28		
Bloomberg Businessweek	Top 50 Firms (Between Universities)	2019	7	3		
Universum	Ideal Employers (Engineering and IT)- 100 Companies)	2019	1	1		
CDP (Carbon Disclosure Project)	Firms Which Have Well Management of Climate Changes and Highest Greenhouse Gas Emission Performance (Turkey)	2019	Our Company h the first 3 com Turkey L	panies in "CDP		

Commercial title and trade registration number of the company and contact information pertaining to its headquarters, branches and its website addresses are shown below;

Company	Туре	Country/City	Trade Register No	Address	Telephone/Fax	Web site
ASELSAN Elektronik Sanayi ve Ticaret A.Ş.	Headquarters	Turkey /Ankara	31177	Mehmet Akif Ersoy Mahallesi 296. Cad. No: 16 06370 Yenimahalle/Ankara	Tel: +90 (312) 592 1000 Fax: +90 (312) 354 1302	www.aselsan.com.tr
ASELSAN South Africa Branch	Branch	Republic of South Africa/ Pretoria		Building 4, Room 005 CSIR Campus, Meiring Naude Drive, Pretoria Gauteng, 0001, South Africa	Tel: +27 (0) 12 349 2613 Fax: +27 (0) 12 349 2544	
ASELSAN Macedonia Branch	Branch	Macedonia/ Skopje		Ankarska 29A, 1000 Skopje/ Macedonia		
ASELSAN Cyprus Advanced Technology Research Center	Branch	TRNC/ Güzelyurt		Orta Doğu Teknik Üniversitesi Kuzey Kıbrıs Kampüsü ODTÜ KALTEV AR- GE Binası No: E-19 99738 Kalkanlı/Güzelyurt/Turkish Republic of Northern Cyprus		www.aselsan.com.tr
Saudi Arabia Contact Office	Project Office	Saudi Arabia/ Riyadh		A. Building 17B, 1 st Floor, The Business Gate, Riyadh, 11422, Saudi Arabia	Tel: +966 11 211 1111 Fax: +966 11 268 1111	
ASELSAN Qatar Office	Project Office	Qatar/ Doha		The Gate Tower II 7 th Floor - Office 725 West Bay, Maysaloun Street P.O. Box 14023 Doha / QATAR	Tel: +974 402 06000 Fax: +974 402 06006	

The BAE Project Office was closed in 2019.

3. THE COMPANY'S SHAREHOLDER STRUCTURE

Registered capital ceiling of the Company is TL 2.000.000.000 (TL two billion). The nominal capital of the Company is TL 1.140.000.000 (TL one billion, one hundred and forty million) and is divided into 1.140.000.000 (one billion, one hundred and forty million) shares, each having a nominal value of 1 TL.

605.454.545 (six hundred and five million, four hundred and fifty four thousand, five hundred and forty five) of the shares are Group A shares and 534.545.455 (five hundred and thirty four million, five hundred and forty five thousand, four hundred and fifty five) of the shares are Group B Shares. All shares are in the name of the holder.

Group A shares are nominative preferred shares and 6 of the Members of the Board of Directors are elected among the Group A preferred shareholders or among the candidates presented by them.

The share distribution table of the Shareholders is presented as below.

Partners	Share (%)	31 December 2019 (TL Thousand)	Share (%)	31 December 2018 (TL Thousand)
Turkish Armed Forces Foundation (TSKGV)	74,20	845.826	74,20	845.826
Quoted on BIST (Free float)	25,80	294.174	25,70	293.019
Axa Sigorta Anonim Şirketi ¹			0,10	1.155
Paid-in capital	100	1.140.000	100	1.140.000
Inflation adjusted capital		1.238.621		1.238.621

a. Members of the Board of Directors and Senior Executives

Within the framework of the provisions of the Company's Articles of Association, the Board of Directors consists of total 9 members comprising of 6 members to be elected from privileged shareholders or candidates nominated by group A and 3 independent members to be elected under Capital Markets Board (CMB) regulations.

INFORMATION REGARDING THE MEMBERS OF THE BOARD OF DIRECTORS AS OF PUBLISHING DATE OF THE REPORT ARE AS FOLLOWS: MEMBER OF THE BOARD OF DIRECTORS

List No	Name and Surname	Position	Positions In Other Company's	Date of First Assignment
1.	Haluk GÖRGÜN	Chairman / Executive Member / CEO	Member of the Board of Directors of IGG ASELSAN Integrated Systems LLC, Member of the Board of Directors of SASAD, Deputy Chairman of the Board of Directors of Saudi Arabian Defense and Electronics Company LLC, Member of the Board of Directors of BARQ	15 March 2017
2.	Mustafa Murat ŞEKER	Vice Chairman / Executive Member	Vice President at Presidency of Defence Industries	15 May 2013
8.	Mehmet ARIK	Independent Member	Professor at Özyeğin University Mechanical Engineering Department	2 April 2018
l.	Ercümend ARVAS	Independent Member	Professor at İstanbul Medipol University Electrical Engineering Department, Member of Defense Industries Steering Committee	31 March 2016
5.	Mehmet Fatih KACIR	Member	Deputy Minister of Republic of Turkey Ministry of Industry and Technology, Member of Board of Trustees of Turkey Technology Team Foundation, Member of the Board of Directors of E-Sports Federation	26 April 2019
5.	Alparslan KAVAKOĞLU	Member	Deputy Minister of Ministry of Defense, Member of the Board of Directors of Turkish Parliamentarians Union	26 April 2019
7.	Salih KUL	Member	Member of the Board of Directors of Devrem 84 Social Assistance and Solidarity Association (Treasurer)	26 April 2019
3.	İbrahim ÖZKOL	Independent Member	Professor at İstanbul Technical University Department of Aeronautical Engineering, Member of the Board of Directors of SAHA, TUBİTAK Istanbul European Region Projects Coordinator, ARC Center Director, ITU Aviation Institute Founding President	15 March 2017
Э.	Celal Sami TÜFEKCİ	Member	Vice President at Presidency of Defence Industries, Member of the Board of Directors of TEKNOHAB Teknoloji Geliştirme Bölgesi Yönetici A.Ş., Chairman of the Board of Directors of STM, Chairman of the Board of Directors of ULAK A.Ş., Chairman of the Board of Ankara Aerospace and Aerospace Organized Industrial Zone, Member of the Board of Directors of METU MEMS	2 April 2018
10.	Mehmet Fatih GÜÇLÜ ^(*)	Vice General Manager (Financial Managemet)	Member of the Board of Directors of Saudi Arabian Defense and Electronics Company LLC, Member of Board of Directors of Bites Savunma Havacılık Ve Uzay Teknolojileri Yazılım Elektronik Ticaret A.Ş.	1 October 2019

⁽¹⁾ Due to the retirement of our Company's CFO, Okan TURAN, our Accounting and Financial Affairs Director Mehmet Fatih GÜÇLÜ is assigned as the CFO of ASELSAN starting from 01 October 2019 onwards.

MEMBER OF THE BOARD OF DIRECTORS

List No	Name and Surname	Position	Positions In Other Company's	Date of First Assignment
1.	Bayram GENÇCAN	Vice General Manager (HBT Sector President)	-	15 March 2017
12.	Sezai ELAGÖZ	Vice General Manager (MGEO Sector President)	Vice Chairman of ASELSAN Middle East Psc LTD., Member of the Board of Directors of ASELSAN Bilkent Mikro Nano A.Ş., Chairman of the Board of Directors of ASELSAN Hasas Optik A.Ş., Member of the Board of Directors of TÜBİTAK R&D Support and Process Management Services Group, Member of the Board of Directors TÜYAR A.Ş. (TÜYAR A.Ş.)	18 July 2018
3.	Mustafa KAVAL	Vice General Manager (SST Sector President)	Member of the Board of Directors of IGG ASELSAN Integrated Systems LLC, Member of the Board of Directors of Kazakhstan ASELSAN Engineering LLP, Member of the Board of Directors of Defence And Aerospace Ministry Exporters' Association, Chairman of the Board of the Directors of ASELSAN Konya Silah Sistemleri Anonim Şirketi, Member of the Board of Directors of BARQ	1 September 2014
4.	Oğuz ŞENER	Vice General Manager (REHİS Sector President)	Vice Chairman of ASELSAN Bilkent Mikro Nano A.Ş., Chairman of the Board of Managers of Mikroelektronik	1 September 2014
15.	Mehmet ÇELİK	Vice General Manager (Technology & Strategy Management)	Member Of CoHE, Professor at KTO Karatay University Mechanical Engineering Department, Member of the Board of Directors of SSTEK A.Ş., Member of Presidency of Science, Technology and Innovation Technology Policy Board, Member of the Board of the Directors of ASELSAN Konya Silah Sistemleri Anonim Şirketi, Member of Board of Directors of TR Eğitim Ve Teknoloji A.Ş.	14 May 2017
6.	İbrahim BEKAR	Vice General Manager (UGES Sector President)	Member of the Board of Managers of ASELSANNET, Member of the Board of Directors of ASELSAN Hassas Optik A.Ş., Advisory Board Member of Özyeğin University Mechanical Engineering Department, Advisory Board Member of Medipol University Faculty of Engineering and Natural Sciences Department Of Biomedical Engineering	12 February 2018
7.	Hakan KARATAŞ	Vice General Manager (Corporate Management)	Associate Professor In UAK, Industry And Technology, Member of the Board of Directors of Teknohab Teknoloji Geliştirme Bölgesi Yönetici A.Ş.	2 July 2018
8.	Osman Devrim FİDANCI	Vice General Manager (Business Development and Marketing)	Deputy Chairman of the Board of Directors Of Ulak A.Ş., Chairman of ASELSAN Global Dış Ticaret Ve Pazarlama A.Ş., Member of the Board of Directors of ASELSAN Middle East Psc LTD	1 February 2019
9.	Abdülkadir GÖKTAŞ	Internal Audit President	-	1 September 2014

⁽¹⁾ Due to the retirement of our Company's CFO, Okan TURAN, our Accounting and Financial Affairs Director Mehmet Fatih GÜÇLÜ is assigned as the CFO of ASELSAN starting from 01 October 2019 onwards.

The Members of the Board of Directors are entitled with the authorizations stipulated in the Turkish Code of Commerce (TCC) and in article 13 of the Articles of Association of the Company.

Entitled shareholders, members of the board of directors, senior executives and to their spouses as well as relatives up to second degree are not authorized to perform transactions which may cause conflict of interest or competition with the Company and/or subsidiaries. There is not any ban on trading for board members with the Company, which they performed on their own or on behalf of a third party. There is no operation regarding the non-compete obligation by the members of the board.

The controls are carried out by the Internal Audit Presidency (IAP) and Audit Committee within the parent company in order to minimize the substantial error risk on the financial statements of the Group. IAP and Audit Committee carry out their duties independent from each other but within the guidance of common objectives and targets, with the aim of maintaining an internal control system, which provides required controls in matters such as the reliability of the financial reporting system, the efficiency of the activities in order to eliminate the operational risks and compliance with the law. Furthermore, the efficiency and sufficiency of the internal control are supported with the directives in effect.

Changes of Members of the Board of Directors during the Period 1 January - 31 December 2019:

In the Ordinary General Assembly Meeting held on 26 April 2019, Haluk GÖRGÜN, Mustafa Murat ŞEKER, Mehmet Fatih KACIR, Alpaslan KAVAKLIOĞLU, Salih KUL, Celal Sami TÜFEKCİ were elected as Member of Board of Directors until the next Generally Assembly Meeting and İbrahim ÖZKOL, Mehmet ARIK and Ercümend ARVAS were elected as Independent Member of Board of Directors until the next General Assembly Meeting.

Total Amount of the Financial Benefits Given To Senior Executives:

The total amount of the remuneration and similar benefits paid to the senior executives by the Company as for the period that ended on 31 December 2019 is TL 21.333 Thousand.

The annual gross total amount of the wages paid to the members of the Company's Main Shareholder Board of Directors and the interests of private health insurance are given below;

Total amount of domestic and foreign allowances, travel, accommodation and representation expenses and financial benefits in kind and total amounts of insurances granted to the senior executives and members of the Board of Directors of the Group for the period ended by 31 December 2019 is TL 1.496 Thousand.

b. Information on Business Partnerships, Associates, Subsidiaries, Joint Ventures and Branches

The Company's consolidated subsidiaries are ASELSAN Baku ("ASELSAN Baku"), Mikroelektronik Ar-Ge Tasarım ve Ticaret Ltd. Co. ("Mikro AR-GE"), ASELSANNET Elektronik ve Haberleşme Sistemleri Sanayi Ticaret İnşaat ve Taahhüt Ltd. Co. ("ASELSANNET"), ASELSAN Malaysia Sdn. Bhd. ("ASELSAN Malaysia"), Aselsan Konya Silah Sistemleri Anonim Şirketi ("ASELSAN Konya"), BITES Savunma Havacılık ve Uzay Teknolojileri Yazılım A.Ş. ("BITES"), ASELSAN Global A.Ş. ("GLOBAL") and ULAK Haberleşme A.Ş. ("ULAK"). They are collectively referred as the "Group" in the accompanying notes. Three branch offices; Aselsan Elektronik Sanayi ve Ticaret Anonim Şirketi EP Co. ("ASELSAN South Africa"), ASELSAN Makedonya Corridor-10 Highway Toll Collection System Project ("ASELSAN Macedonia") and ASELSAN Kıbrıs İleri Teknolojiler Araştırma Merkezi ("ASELSAN Kıbrıs") located in South Africa, Macedonia and Turkish Republic of Northern Cyprus ("KKTC"), respectively.

The Company has three branch offices; Aselsan Elektronik Sanayi ve Ticaret Anonim Şirketi EP Co. ("ASELSAN South Africa"), ASELSAN Makedonya Corridor-10 Highway Toll Collection System Project ("ASELSAN Macedonia") and ASELSAN Kıbrıs İleri Teknolojiler Araştırma Merkezi ("ASELSAN Kıbrıs") located in South Africa, Macedonia and Turkish Republic of Northern Cyprus ("KKTC"), respectively. The branches are included in the consolidated financial statements.

ASELSAN Hassas Optik Sanayi ve Ticaret A.Ş. ("ASELSAN Optik"), ASELSAN Bilkent Mikro Nano Teknolojileri Sanayi ve Ticaret A.Ş. ("ASELSAN Bilkent"), IGG ASELSAN Integrated Systems LLC ("IGG ASELSAN"), Kazakhstan ASELSAN Engineering LLP ("ASELSAN Kazakhstan"), ASELSAN Middle East PSC LTD ("ASELSAN Jordan"), Saudi Arabian Defense Electronics Corporation LLC ("SADEC LLC"), TÜYAR Mikroelektronik Sanayi ve Ticaret A.Ş. ("TÜYAR A.Ş."), Teknohab Teknoloji Geliştirme Bölgesi Yönetici A.Ş. ("TEKNOHAB"), and EHSİM Elektronik Harp Sistemleri Müh. Tic. A.Ş.("EHSİM") are consolidated by the equity method.

DOMESTIC ASSOCIATES AND SUBSIDIARIES

Domestic and Foreign subsidiaries information by maps is shown below;



1- MIKROELEKTRONIK

Ownership: 85% Partner: İTÜ ETA Participation: 2010 (Founded in 2004) Assets: \$6,2 million

2-TÜYAR A.Ş.

Ownership: 51% Partner: TÜBİTAK, SSM Founded: 2017 Assets: \$2,7 million

3-ASELSAN KONYA SİLAH SİST. A.Ş.

Ownership: 51% Partner: Konya Defence Industry Founded: 2018 Assets: \$17,8 million

4-ASPİLSAN A.Ş.

Ownership: 1% Partner: TSKGV Founded: 1981 Assets: \$10,3 million ^(*)

5-ASELSAN GLOBALA.Ş.

Ownership: 100% Founded in 2019 Assets: \$9 K

6- ROKETSAN A.Ş.

Ownership: 15% Partner: TAFF Founded: 1988 Assets: \$1,2 B*

7- ASELSAN HASSAS OPTİK A.Ş.

Ownership: 50% Partner: Sivas Optik Founded: 2014 Assets: \$26,1 million

8-ULAK A.Ş.

Ownership: 51% Partner: SSTEK A.Ş. Founded: 2017 Assets: \$16,9 million

9- ASELSANNET

Ownership: 100% Founded in 2004 Assets: \$236 million

10- BİTES A.Ş.

Ownership: 51% Partner: Uğur Çoşkun Participation: 2019 Founded: 2001 Assets: \$2,9 million

11-ASELSAN BİLKENT MİKRO NANO

Ownership: 50% Partner: Bilkent University Founded: 2014 Assets: \$31,9 million

12-TEKNOHABA.Ş.

Ownership: 30% Partner: HAB, TUSAŞ, Gazi University Founded: 2018 Assets: \$3,3 million

13-TR EĞİTİM VE TEKNOLOJİ A.Ş.

Ownership: 50% Partner: TUSAŞ Participation: 2019 (Founded in 2018) Assets: \$0,20 million

14- EHSİM A.Ş.

Ownership: 51% Partner: HAVELSAN, SSTEK Participation: 2019 Founded in 1998 Assets: \$14,4 million



1- MAKEMACEDONIA BRANCH

Ownership: 100% Foundation: 2014 Assets: \$3,8 million

2-ASELSAN BAKU (AZERJAIBAN)

Ownership: 100% Foundation: 1998 Assets: \$1,7 million

3- KAZAKHSTAN ASELSAN ENGINEERING (KAZAKHSTAN)

Ownership: 49% Partner: Kazakhstan Engineering Foundation: 2011 Assets: \$37,9 million

4- ASELSAN MIDDLE EAST (JORDAN)

Ownership: 49% Partner: KADDB Investment Group Foundation: 2012 Assets: \$19,7 million

5-BARQ QSTP LLC (QATAR)

Ownership: 48% Partner: Barzan Holding, Foundation: 2018 Assets: \$0,3 million

6- SADEC (SAUDI ARABIA)

Ownership: 50% Partner: TAQNIA DST Foundation: 2016 Assets: \$1,1 million*

7- SOUTH AFRICA BRANCH

Ownership: 100% Partner: KADDB Investment Group Foundation: 2012 Assets: \$1,4 million

8 - GG ASELSAN INTEGRATED SYSTEMS (UAE)

Ownership: 49% Partner: IGG Foundation: 2011 Assets: \$2,1 million

9- ASELSAN MALAYSIA

The business partnerships and affiliates of the Group recorded as financial investments and investments valued by equity method, with their participation ratios and amounts are as follows;

Company	Main Activity Area	Share (%)	31 December 2019 (TL Thousand)
ROKETSAN – Roket Sanayi ve Ticaret A.Ş.	All kinds of missiles, rockets, guided ammunition and their launch systems and propulsion systems and rocket fuels, guidance and control systems, algorithms and softwares related to these systems, warheads and other parts of these systems, all kinds of plugs and all kinds of ballistic protection (armor) system	14,9	987.560
ASELSAN Kazakhstan	Manufacture, sale and technical service of electronic and electro- optical devices and systems	49	45.613
ASELSAN Jordan	Marketing sales and joint production of group products	49	17.018
SADEC LLC	Manufacture and sale of radar, electronic warfare and electrooptic products	50	2.043
ASELSAN Bilkent	Manufacture of micro and nano-sized devices containing semiconductors and similar technological materials	50	14.831
ASELSAN Optik	Precision optic technology	50	14.180
GG ASELSAN	Production, integration, sales and technical service of high technology products	49	8.803
TÜYAR A.Ş.	Production of micro and nano-sized devices containing semi- conductor and similar technological materials	51	8.177
ASPİLSAN Enerji Sanayi ve Ticaret A.Ş.	Manufacture and sale of Ni-Cd, Ni-MH, Li-Ion battery / battery blocks and aircraft battery systems	1	904
BARQ QSTP LLC	Command and control systems, thermal and night vision camera, crypto, remote-controlled weapon systems	48	834
TEKNOHAB	To create investment opportunities in technology intensive areas, provide job opportunities to researchers and skilled people, help technology transfers and facilitate foreign capital to enter our country that will enable high technology	30	2.306
ЕНЅІ́М	Electronic Warfare and Tactical Command Systems	50	6.964
TR Eğitim ve Teknolojileri	Realizing Human Resources studies, Consultancy with respect to HR studies, acreditation services and trainings for every level, educational, cultural, art, sports, fair organizations and digital marketing operations.	50	1.000

4. MAIN FACTORS THAT AFFECT THE PERFORMANCE, INVESTMENT AND DIVIDEND POLICY OF THE COMPANY

The Company carries on its business interests mainly in defense industry as well as in non-defence industry.

According to the latest data, world defense expenditures has increased by 2,6% to 1,8 Trillion USD and the ratio of expenditures to GDP has decreased to 2,1%, the lowest level of last 4 years. The top five countries that spent 60% of world total in 2018 were listed as the USA, China, Saudi Arabia, India, and France. In 2018, US defense expenditures increased for the first time in last 7 years reaching USD 649 Billion, while China increased by 5% to USD 250 billion, Saudi Arabia decreased by 7% to USD 68 Billion, India increased by 3% to USD 67 Billon and France increased by 1% to USD 64 Billion.

Regionally, while there is growth in America, Europe and Asia; it is observed that there is a contraction in Africa and Middle East regions.

As of 2018, Turkey's annual defense expenditures increased by 24% to 19 Billion USD compared to last year. In 2018, Turkey listed as the 5th fastest growing country in the world in terms of defense spending. The ratio of defense spending to GDP tended to increase steadily over the years, reaching the highest level of 9 years with a rate of 2.5%.

As of 2018, the defense and aviation industry turnover, including the Company, was realized as 8,8 billion USD with an increase of 31% annually, and the industry's exports reached 2 billion USD with an increase of 17%.

Due to the industry's nature, defense projects spread over years, furthermore a system project lasts approximately 4 to 5 years from its start to its delivery. As of 31 December 2019 long term plans which have been accordingly signed as contracts spread over years amounts to USD 9,7 Billion. The determination of target regions/countries and focusing on these markets for marketing and direct sales as well as engaging in joint productions, transfer of technology to/from international platform producers and strategic initiatives for sales to third countries are concurrent to our sustainable growth objectives. Our structure coincides with our objective to operate in civilian electronic fields which require high technology.

The Company's profit distribution policy is posted on <u>www.aselsan.com.tr</u> website under Investor Relations/ Corporate Governance/Policies. According to the policy, at least 10% of the net profit is planning to be distributed.

- At the Ordinary General Assembly Meeting held in 26 April 2019; in accordance with Article 519/(1) of the Turkish Commercial Code, TL 91.456.032,50 to be allocated as General Legal Reserves from the remaining distributable profit obtained after subtracting taxes and statutory obligation from Company's operating profit in 2018. Net distributable profit to the shareholders for the period, calculated in the framework of the profit distribution regulations and decisions of the Capital Markets Board is proposed as Gross profit, TL 174.000.000 (Kuruş 15,26 per share of TL 1 and 15,26 % on the basis of the capital) (net profit TL 147.900.000 Kuruş 12,97 per share of TL 1 and 12,97 % on the basis of the capital) as in the form of cash,
- In accordance with Article 519/(2) of the Turkish Commercial Code, TL 11.700.000 to be allocated as General Legal Reserves,
- Remaining profit is to be allocated as Extraordinary Legal Reserves and distribution of the dividends to the shareholders are distributed in three equal installments on the dates of 19 June 2019, 18 September 2019 and 18 December 2019, were decided.

The first installment payment of the dividends was made on 19 June 2019, the second installment payment was made on 18 September 2019 and the third installment payment was made on 18 December 2019.

5. ENTERPRISE RISK MANAGEMENT

ASELSAN's Enterprise Risk Management Policy aims; to take proper actions against uncertainties that threaten the existence of the Company and to protect corporate identity and stakeholders' interest at all conditions. Risk management is an integrated element of Corporate Management. The information gathered within the scope of risk management activities in ASELSAN is integrated into decision making mechanisms.

The "top-down" and "bottom-up" approach is being applied into Enterprise Risk Management activities together. Risks, which are significant enough to affect ASELSAN's achievement of its targets, are identified, evaluated, monitored and reported along with the risk responses and precautions to be taken. At ASELSAN; The Enterprise Risk Management process is regularly reviewed and improved. ASELSAN's employees and business processes are at the center of the Enterprise Risk Management System.

At ASELSAN, enterprise risks are followed under four main categories.

a. Main Risk Categories

Strategic Risks: Risks that may prevent ASELSAN from reaching its targets in short, medium or long terms are classified under this heading. Risks under this heading include factors such as; growth and continuity, changing customer expectations, technological changes and market share.

While ASELSAN manages its strategic risks effectively; it aims to increase its backlog, increase exports and to take part in sustainable works. In order to increase ASELSAN's market share and offer new products / services, ASELSAN seizes company mergers / acquisition opportunities both at home and abroad. ASELSAN also conducts business development activities successfully. ASELSAN increases its research and development activities in order to meet changing customer expectations and changes in technology, and realizes the necessary infrastructure and technological investments. ASELSAN diversifies the geographical regions in sales, customer portfolio and the sectors in order to maintain its growth and continuity in the medium and long term.

Operational Risks: It is defined as the risks arising from errors and negligence that may occur while performing the operational activities of the company. Risks under this section include factors such as; production, supply chain, human resources, information technologies, natural disaster and terrorist attacks.

In order to ensure the continuity of the processes, in-house directives and functors have been prepared and necessary updates are being made when needed. Within the scope of the Internal Audit plan and work schedule prepared in ASELSAN, business processes are being audited and process improvements are made in line with the audit outputs.

Quality is not compromised in production processes involving both internal operations and suppliers; subcontractor and supplier development activities are carried on unabated. In terms of managing Human Resources and increasing employee motivation; activities were made with the participation of employees from every level and process improvements were made. Security policies are sustained at the highest level in Information Technology applications. In this area, internal and external audits are carried out periodically and precautions are taken against probable cyber-attacks and in the field of Information Technologies, business continuity in-house is provided. Regarding risks, such as natural disasters, terrorist attacks, necessary precautions are taken, - primarily insurances have been made, and drills are carried out.

Financial Risks: It refers to the risks arising from the financial structure and financial preferences of the company.

Exchange rate, liquidity and interest rate risks are some risks under this heading.

The exchange rate risk, which is any kind of change that may occur in assets and / or liabilities as a result of exchange rate fluctuations in the future, ASELSAN aims to minimize the effect of exchange rate fluctuations by keeping the long and short foreign exchange position at a minimum level. The balance sheet methods have been used in managing the exchange rate risk. Implementations such as; making use of foreign exchange denominated loans in line with the company's export volume, matching the contract currency with the currency of the costs of the project, and signing the subcontractor contracts in line with the main contract currency are used.

ASELSAN eliminates the liquidity risk, which is known as the risk arising from default and inability to fund the assets, it monitors forecasted and actual cash flows regularly and ensures the continuity of adequate funds and credit lines by matching the maturity of financial assets and liabilities. In order to manage the interest rate risk arising from changes in assets and / or liabilities as a result of fluctuations in interest rates in the future, it conducts transactions with fixed interest rates and uses financial derivative instruments when necessary.

Compliance Risks: It refers to the risks associated with the Company's financial losses and / or loss of reputation as a result of the company's activities or the attitudes and behaviors of the company employees that are not in compliance with the legislation, regulations and standards. While conducting its activities, ASELSAN closely follows national and international standards with the best practices in the sector, and compliance with legislation and regulations is ensured at the highest level. In addition, by Internal Audit Presidency; the effectiveness of controls, compliance with legislation and ASELSAN regulations, compliance with ethical principles and controls to eliminate risks are being evaluated.

b. Early Detection and Management of Risk Committee Works

The Early Detection and Management of Risk Committee, which consists of the members of the Board of Directors, has been operating at ASELSAN since 2012 in order to ensure early detection of risks that may endanger the existence, development and continuity of the Company, to take necessary measures related to the identified risks and to manage the risks. The Chairman of the Committee is an Independent Board Member.

Committee; has conducted 6 meetings in 2019, in order to follow the works on early detection and management of risks and to make evaluations about this issue. The reports containing the works of the Committee were being submitted to the Board of Directors periodically.

Committee; carries out its own activities in full compliance with the regulations of the Capital Markets Board and all the related legislation, especially article 378 of the Turkish Commercial Code No. 6102. In addition, the Early Detection of Risk System and Committee, established by ASELSAN, is subjected to independent audits annually and the Auditor Report stating that the activities performed is sufficient, is submitted to the Board of Directors.

6. FINANCIAL INFORMATION OF THE COMPANY

The forecasts under the normal conditions regarding the Group's consolidated financial results for the 2019 year are presented below;

Financial Targets 2020	Financial Targets 2020 (Ratio/Amount)
Consolidated Revenue Growth (TL)	40% - 50%
EBITDA Margin (Consolidated and Adjusted without Foreign Exchange Rate Differences)	20% - 22%
Consolidated Capital Expenditures	1.500 Million TL

These expectations are based on the yearly average of USD/TL parity to be 6,18 and EURO/TL parity to be 6,98.

The Company, which has been in the most prestigious Defense Industry list since 2008, "Defense News Top 100", published by "Defense News" magazine, aims to increase its ranking in the list in following years. In 2018, the Company raised its ranking to 52nd in the list of 2019 with a USD 1,79 Million defense sales.

44th Ordinary General Assembly Meeting held on 26 April 2019.

In order to achieve the sustainable growth:

- The quality and technological perspectives of the cooperation formed with the universities have been increased.
- ASELSAN employees are provided with the opportunity to study in the work environment with the initiation of ASELSAN Academy
 Postgraduate Training Program. The program serves the purpose of having the necessary technologies and developing existing technologies.
- The efforts to form an eco-system with the sub-industry companies and SME's have continued.
- · Company is continuing its operations in civil electronic areas which reguires high technology.
- Inorganic growth will be also evaluated as well as organic growth.

a. Financial Resources of the Company

The most substantial financial resources of the Company comprise the advance and interim payments taken within the scope of the contracts signed and profits generated by the main activities.

During 1 January - 31 December 2019 period, the cash requirements were met with the available cash, cash inflows from other operations and use of Türk Eximbank export discounted foreign currency loan due to low cost. Within the scope of the Eximbank Loan Program, during 1 January - 31 December 2019 period, "Discounted Foreign Currency Loan" was used as USD 160 Million with 240-360 days of maturity and EUR 167,2 Million with 240-360 days of maturity. Moreover, from Commercial Banks, USD 40 Million and EUR 75 Million worth of loan has been used. In total, as of 31 December 2019, there is a loan balance equivalent to USD 359 Million consisting of USD 102 Million from Commercial Banks and USD 257 Million from Eximbank.

In the period ended on 31 March 2019, the remaining balance of loan obtained from Defense Industry Support Fund (SSDF) was closed by offsetting from receivables.

Planned Measures To Improve the Financial Structure of the Company

As for the annual budgets and implementations for the period 2018-2020, the Group has adopted the principles as the basis to take care of savings in all kinds of expenditures, to follow up the advances and receivables closely, to pay attention to the proportion of the term and currency in purchasing and sales agreements and the risk status of the domestic/foreign suppliers and sub-contractors.

b. Research and Development Activities

The Group, as a leading defense industry establishment, develops advanced technology system solutions on land, air, naval and aerospace platforms, places great importance to Research and Development activities and technological gains since it was founded.

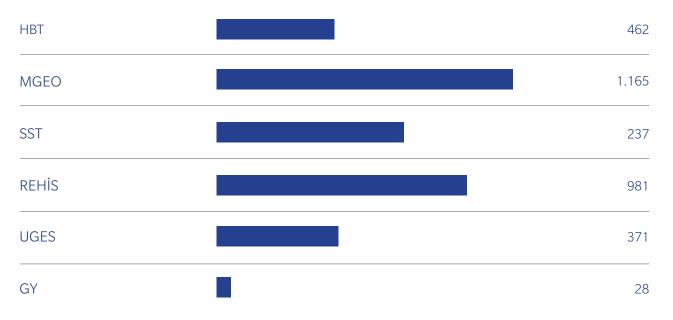
By following up on all kinds of technological developments pertaining to land, air, naval and aerospace platform product/system technologies, the Company not only applies technology but also designs, develops and produces product/system technologies in order to share or sell with/to national and international collaborations.

Projects are striving at maximum level in order to benefit from the technological opportunities existing in the country aiming to increase the national contribution share. For this purpose, cooperation is made with universities and various R&D organizations and importance is given to the use of local suppliers and subcontractors.

As for the projects carried out within the Group, Research and Development center application pursuant to the Law regarding the support of Research and Development activities numbered 5746 is being implemented. As for non-public R&D projects, the approval of TEYDEB (Technology and Innovation Support Programs Directorate) and ARDEB (Research Support Programs Presidency) are received and supported by the institutions.

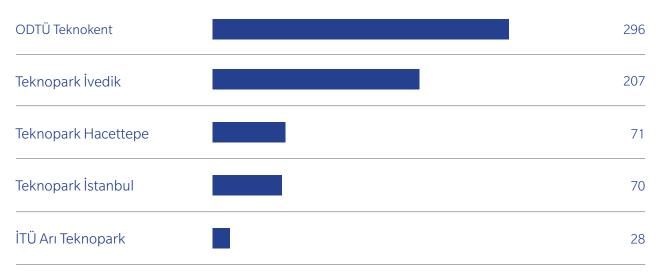
Within the Company, there are 6 Research and Development centers within the scope of Defense System Technologies (SST), Radar Electronic Warfare and Intelligence Systems (REHIS), Microelectronics, Guidance and Electro-optics (MGEO), Communication and Information Technologies (HBT), Transportation, Security, Energy & Automation Systems (UGES) Vice Presidencies as well as ASELSAN Research Center of Vice Presidency of Technology and Strategy Management. Currently, 3.744 staff are employed at the Group's Research and Development centers.

The Number of Personnel Employed at R&D Centers (3.744)



The Company also carries on its activities in Teknokent facility within Middle East Technical University and İstanbul Technology Development Area Teknopark within the scope of the Law numbered 4691 on Technology Development Regions.¹ Group employed 672 staff within this region.

The Number of Personnel Employed at Technopark (672)



¹ The company has started to operate in Teknopark Ankara for engineering purposes as of 1 April 2019.

c. Progress in Investments and Degree of Incentive Utilization

i. Investments

Directing the Company's resources to profitable, high value added fields, where advanced technology is used, is anticipated in the first place by considering the global tendencies, technological developments and the actual and prospective requirements of all customers, particularly Turkish Armed Forces. The investments within the Company are carried out after detailed consideration of the technological plans, strategic plans and project requirements.

During the current period, the investments, which will meet the needs of substructure and equipment in order to be used in research and development project have been sustained in compliance with the investment scheme in accordance with the policy of efficient use of resource.

ii. Incentives

Income tax withholding incentive, insurance premium support, stamp tax exemption and Research and Development incentive are utilized within the scope of the Law numbered 5746. In accordance to the Law regarding the Incentive of Research and Development Activities numbered 6676 published on Official Gazettes numbered 29636 on 26 February 2016 and The Law Regarding the Amendments on Delegated Legislation, the content of the law and incentives has been broadened and additional exceptions has been given. Income tax withholding incentive, insurance premium support and stamp tax exemption is utilized by being calculated over the salaries of the Research and Development personnel and not being paid to the relevant institution and the Research and Development discount is utilized by means of applying a discount on the corporate tax return. Aforesaid law is valid until the date of 31 December 2023.

Within the scope of the Teknokent Law numbered 4691, incentive on withholding income tax, insurance premium support and stamp tax exemption is applied. These are utilized by making calculations on Research and Development and software personnel wages and not being paid to the related institution. The gain obtained with reference to the execution of Technology Development Zones Law numbered 4691 is exempted from the corporate tax of 31 December 2023.

Between the period 1 January – 31 December 2019 because of having Research and Development centers, TL 185.131 Thousand within the scope of income tax withholding incentive, promotion of insurance premium, stamp duty exception; as a result of being active at ODTÜ Teknokent, İstanbul Technology Development Area Technopark and ITU Arı Technopark TL 36.750 Thousand incentives have been used.

Within the scope of the Research and Development Law No 5746 and Teknokent Law No 4691, TL 832.335 Thousand Corporate Tax advantage has been gained as of 1 January - 31 December 2019 period.

At the periods when Group's Research and Development expenses, which is subject of Research and Development discount, is higher than the principal amount of Research and Development discount which is indicated at corporate tax return, Corporate Tax ratio is 22% for the years 2018 - 2020 and 20% for the next years of distinction amount is evaluated as deferred tax income at financial tables.

The 1501 Industrial Research and Development Projects Support Programme has been established in order to encourage the Research and Development operations of the companies creating added values at company level and to contribute to the enhancement of the Research and Development ability of the Turkish industry by this means. Projects within the scope of 1511-Prioritized fields' research technologies development and innovation programme came into force as of 2013. The support process of the projects have been initiated as of July 2010 by 1509 EUREKA-International Industrial Research and Development Projects Support Program where market oriented projects for developing products and processes to be commercialized in short term are supported the Group have benefited from the incentives. In addition to these, TÜBİTAK 1003 Research Support programs were implemented within the scope of the projects entered into implementation in 2019 and the Company benefited from the incentives (TL 513 Thousand).

1505 - Within the scope of Support Programme aimed at supporting the postgraduate and/or doctorate thesis works which shall contribute to increasing the competitiveness in international markets by means of commercializing the scientific studies at the universities and institutionalizing the University – Industry cooperation, 2 Projects are ongoing.

Market research, fair, and library support provided by the Support and Price Stabilization Fundy were obtained (TL 510 Thousand).

The 1007 Public Institutions Research and Development Project Support Program has been formed in order to meet the requirements of the Public Institutions with Research and Development or to support the projects aimed at solving their problems. In scope of this support 12 Research and Development projects are still ongoing.

2232 The International Fellowship for Outstanding Researchers Program aims to support qualified researchers with leading scientific and/or technological achievements and international work experience to conduct their research in leading academic, industrial or public institutions to contribute in areas that are strategic value to Turkey. 1 personnel is assigned to this program.

Within the context of "Taxes and Funds Exemption Certificate" received from Republic of Turkey Ministry of Trade in order to increase exports and gain competitiveness in international markets, stamp duty and fee exemptions are used in export sales and deliveries and foreign exchange gain activities. (TL 88.426 Thousand)

Within the Decision Regarding the Governmental Grant in Investments, there are 5 Investment Incentive Certificates taken from the Turkish Republic Prime Ministry for Economy Treasury General Directorate of Incentives and Implementation. With such incentive certificates, VAT exemption and customs tax exclusion are utilized (TL 36.644 Thousand).

VAT exemption is applied in domestic and foreign purchases and customs tax exemption is used in foreign purchases (TL 336.990 Thousand).

The sources, amounts and types of the incentives utilized are summarized in the table below collectively;

The Source of Incentives	Type of Advantage	31 December 2019 Amount (TL Thousand)
Research and Development Promotion Law numbered 5746 and Teknopark Law numbered 4691	Corporate Income Tax	832.335
VAT Law numbered 3065	VAT Return	336.990
Research and Development Promotion Law numbered 5746	Income tax withholding, Insurance Premium, Stamp Tax	185.131
Export Promotion Practices (Taxes and Funds Exemption Certificate)	Stamp Duty Exemptions	88.426
Teknopark Law numbered 4691	Income tax withholding, Insurance Premium, Stamp Tax	36.750
Ministry of Industry Incentive	VAT and Customs Duty Exemptions	36.644
Support Programme (TUBITAK 1003, 1501, 1511, 1509)	Cash Support	513
The Support and Price Stabilization Fund	Cash Support	510
TOTAL		1.517.299

d. Production and Capacity

The Company can conduct complicated projects through its own integrated system architecture by means of knowledge, highly developed R&D infrastructure, well-equipped production lines and facilities.

Works in order to perform distinctive business development and marketing activities in global markets to increase efficiency in international markets and exports have been continued.

Revenue (TLThousand)	31 December 2019	31 December 2018	۵%
Domestic sales	11.438.768	8.119.561	41%
Exports	1.573.783	888.955	77%
TOTAL	13.012.551	9.008.516	44%

Substantial part of production has been realized based on orders. All related processes are being managed efficiently since product requirements, quantities and prices are different.

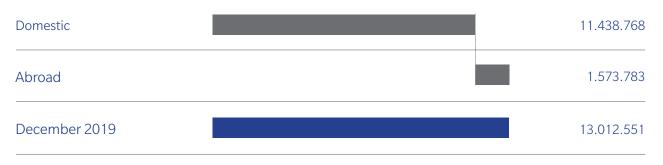
e. Revenue

The Company carries out its operations in the basic fields of: "Communication and Information Technologies", "Defense System Technologies", "Radar, Electronic Warfare and Intelligence Systems", "Microelectronics Guidance and Electro-Optics" and "Transportation, Security, Energy and Automation".

According to the relevant sales agreement terms and conditions, the Company's revenue from projects contains order based production, mass production product sales, services, commodities and progress billing sales. Sales terms and conditions are subject to change as for the respective agreements.

As for the consolidated amount of the Group's realized net sales during the period 1 January - 31 December 2019, TL 11.438.768 Thousand of this realized as domestic sales and TL 1.573.768 Thousand of it realized as foreign sales.

Sales (TLThousand) 13.012.551



f. Financial Ratios

As of 31 December 2019, the Group's financial statements prepared in accordance with the Communiqué Series II, No: 14.1 "Communiqué on Capital Market Financial Reporting Standards" issued by Capital Markets Board, Gross Margin is 26%, Operating Profit Margin (EBIT) is 20%, Adjusted EBITDA Margin is 22% and Net Profit Margin is 26%. At the end of the 4rd Quarter, Return on Equity (ROE) is 28%, Average Net Working Capital / Net Sales is 38% and Return on Assets (ROA) is 15%.

Financial Ratios Consolidated Financial Position	31 December 2019	31 December 2018	
Current Ratio	1,80	2,48	
Liquidity Ratio	1,00	1,36	
Short Term Current Liabilities / Total Financial Liabilities	99%	97%	
Total Financial Liabilities / Total Assets	9%	4%	

Financial Ratios Consolidated Income Statement	31 December 2019	31 December 2018	
Gross Profit Margin	26%	25%	
Operating Profit Margin (EBIT)	20%	19%	
Adjusted EBITDA Margin (*)	22%	21%	
Net Profit Margin	26%	26%	
Return On Equity (ROE)	28%	31%	
Net Working Capital / Net Sales	38%	51%	
Return on Assets (ROA)	15%	15%	

The liabilities of the Group are mainly consist of the short and long term order advances received.

⁽¹⁾ General administrative expenses, marketing expenses and research and development expenses are substracted from and current period's depreciation and amortization expenses are added to the gross profit in calculation of EBITDA value. Other operating income and other operating expenses are not included in the calculation.

7. CHANGES IN THE LEGISLATION WHICH WOULD HAVE SIGNIFICANT IMPACT ON THE ACTIVITIES OF THE COMPANY

There are no change made in the Legislation within the reporting period.

8. COMPLIANCE REPORT ON CORPORATE GOVERNANCE PRINCIPLES

Corporate Governance Updates Information Note has been updated on www.kap.org.tr with respect to the 44th Ordinary General Assembly held in 26 April 2019. Corporate Governance Updates Information Note and Compliance Report will be announced in the year-end BOD Report.

9. INFORMATION REGARDING THE LAWSUITS OF THE GROUP

The lawsuits and execution proceedings filed by or against the Group as of 31 December 2019 are summarized below;

Description	31 December 2019	
	(TLThousand)	
Ongoing lawsuits filed by the Group	70.374	
Execution proceedings carried on by the Group	193.568	
Lawsuits proceedings carried against the Group	24.501	
Execution proceedings carried against the Group	485	
Lawsuits finalized in favor of the Group within the period	1.975	
Lawsuits finalized against the Group within the period	1.505	

There has not been any final judicial decision against the Group due to the violation of employee rights or the responsibility related with work accidents within 2019.

10, INFORMATION REGARDING THE TRANSACTIONS MADE WITHIN THE REPORTING PERIOD

i. Changes in the Articles of Association

There are no changes in the Articles of Association within the reporting period.

ii. Collective Agreement Implementations, Rights and Benefits Provided to the Personnel and Workers

The Group recruited a total number of 1.397 people (322 with fixed term contract) as the personnel including fixed-term contracted personnel, disabled and terror-stricken personnel during the period 1 January - 31 December 2019 and the number of people quit for the same period is 355 (15 with fixed-term contracted).

The rights and benefits provided to the personnel by the Company are bonus payments, meal allowances, marriage benefits, maternity benefits, death allowances, transportation, private health insurance, childcare and kindergarten benefits. The average number of personnel employed by the Group as of 31 December 2019 is 6.797.

iii. If it is an affiliate company, the legal transactions carried out in favor of the parent company or its affiliate with the parent company, with an affiliate company connected to the parent company with the direction of the parent company and all other measures taken or avoided to be taken in favor of the parent company or its affiliate in the previous activity year

There has not been such an event within the period.

iv. If it is an affiliate company, whether any counter performance was realized for each legal transaction according to the known status and conditions at the time the legal transaction mentioned in article iii was realized or at the time the measures were taken or avoided to be taken and whether the company incurred losses due to the taken or avoided measure and if the company incurred losses to observe whether this was equalized or not

There has not been any material event that affects the Company's financial statements within the period.

v. Information Regarding the Donations and Social Responsibility

Within the period of 1 January 2019 - 31 December 2019, the donations made by the Group are as below.

Foundation	31 December 2019 (Thousand TL)
ASİL Derneği	350
Jandarma Asayiş Vakfı	200
TOTAL	550

11. EVENTS AFTER THE REPORTING PERIOD

None.

APPENDIX-1

CHAPTER I - STATEMENT FOR COMPLIANCE WITH CORPORATE GOVERNANCE PRINCIPLES

ASELSAN, in scope of the Corporate Governance Principles which has been implemented by Capital Markets Board (CMB) since 2003, has been making efforts to work in compliance with the principles under the titles shareholders, public disclosure and transparency, stakeholders and Board of Directors.

ASELSAN, adopting the corporate governance understanding as a principle, was rated with a grade of 8,77 out of 10 as the result of the corporate rating studies carried out by SAHA Corporate Governance and Credit Rating Services Inc (SAHA) first in 2012 and therefore was included in the Borsa İstanbul Corporate Governance Index. According to the report of SAHA, which was published on 12.12.2019, ASELSAN's corporate governance rating grade, which was 9,20 in 2018, was updated as 9,29 out of 10 points.

Corporate governance rating grade shows to what extent the companies comply with the corporate governance principles set out by the CMB. The Company's compliance level with the principles is defined with a methodology measuring under the main titles Shareholders, Public Disclosure and Transparency, Stakeholders and Board of Directors. Within this context, the methodology that is based on the "Corporate Governance Principles" published by CMB in January 2014, was used in the rating made by SAHA.

As a result of the activities of ASELSAN within the concept of corporate governance throughout 2019, ASELSAN's corporate governance rating was updated to 9,29 over 10 on 12.12.2019 by SAHA A.S.

The ratings of 2018 and 2019 and the subtitles are given below:

2018 Rating Distribution	2019 Rating Distribution
Shareholders: 83,63/ 100	Shareholders: 89,57/100
Public Disclosure and Transparency: 98,70 / 100	Public Disclosure and Transparency: 99,01 / 100
Stakeholders: 98,09 / 100	Stakeholders: 98,13 / 100
Board of Directors: 90,70 / 100	Board of Directors: 88,67 / 100
Average 9,20 / 10,00	Average 9,29 / 10,00

ASELSAN Corporate Governance Rating Reports published by SAHA can be accessed at the company website: www.aselsan.com.tr

ASELSAN is in full compliance with all the mandatory principles of Corporate Governance Principles. There are no conflicts of interest arising because of the arbitrary principles where compliance has not been achieved. The titles regarding the arbitrary principles, where compliance has not been achieved yet, are given below and are explained in detail through the Compliance Report.

- · No recognition of minority rights to those who own less than twentieth of the capital indicated in the Articles of Association,
- · Group A shares having the privileges on Board nominations and the transfer of those shares being subject to permission,
- The fact that although the mechanisms enabling the participation of stakeholders in the management of the company are built, they are not included in the Articles of Association.
- Non-existence of a judgement in the Articles of Association; declaring that shareholders may individually demand special audit of certain incidents from the General Assembly even if it is not on the meeting agenda, under the condition that the right to ask to obtain information and to examine has been used before and if the exercise of shareholders rights is necessary,
- The article "Group A shares shall not be sold or transferred without the consent of the Board of Directors because of the Company's operations in security and defence industry; in the event that these shares are transferred or sold to third parties partially or completely without the consent of the Board of Directors, the Board of Directors is entitled to abstain from recording this sale in the records" in the Articles of Association of the Company,
- Non-existence of a female member in the Board of Directors, the fact that a target, where the ratio of the female members should not be less than 25%, was not set and that there is not a written company policy on that issue,
- The Chairman of the Board and the Chief Executive Officer being the same person and the lack of material event disclosure through Public Disclosure Platform (PDP) explaining the situation with the reasoning behind it.
- Not disclosing the renumeration of executive managers or the benefits provided to them per each individual.

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 PDP. In accordance with this decision, our Company filled the relevant templates in PDP and added the templates to the end of the report as Appendix-1.

Corporate Governance Committee will carry on the necessary efforts in order to achieve full compliance with Corporate Governance Principles.

E. Arus

Prof. Dr. Ercümend ARVAS Independent Member of Board of Directors Corporate Governance Committee Chairman

Salih KUL Member of Board of Directors Member of Corporate Governance Committee

Mant

Dr. Celal Sami TÜFEKCİ Member of Board of Directors Member of Corporate Governance Committee

Pınar ÇELEBİ Member of Corporate Governance Committee

CHAPTER I - SHAREHOLDERS

2.1. Investor Relations Department

The information regarding Investor Relations Department responsible for the relations with shareholders is given below.

Mehmet Fatih GÜÇLÜ: Chief Financial Officer/Vice PresidentNuh YILMAZ: Finance DirectorPınar ÇELEBİ: Investor Relations and Enterprise Risk ManagerBaşak YÜCEKAYALI: Investor Relations Department/Senior SpecialistGülru SELÇUK FİLİZ: Investor Relations Department/SpecialistContact Information: State Stat

Phone: 0850 828 1 828

e-mail: aselsan.ir@aselsan.com.tr

Investor Relations Department has submitted the report regarding the tasks carried during 2018, to Board of Directors on 17.01.2019.

Pinar ÇELEBİ, Investor Relations Manager, and Başak YÜCEKAYALI, Investor Relations Senior Specialist, have Capital Markets Transactions Level-3 and Corporate Governance Rating Expertise Licenses.

Main operations carried out by Investor Relations Department during 2019 are as follows:

- · Maintenance of the exercise of partnership rights of shareholders, updated and safe records regarding shareholders,
- · Coordination of public disclosure of material events,
- Answering the written inquiries of shareholders regarding the company, excluding the information considered as confidential, trade secret and which was not disclosed to public,
- Ensuring the execution of General Assembly meeting in compliance with the regulation in force, Articles of Association and other company regulations, records being kept regarding the ballots and the results being reported to shareholders,
- Monitoring of every issue regarding the public disclosure including the regulations and company policies on information,
- Execution of tasks assigned by Corporate Governance Committee,
- · Operation of transactions regarding dividend distribution and tasks regarding Corporate Governance Principles,
- Coordination of updating the list of people who have access to insider information; informing those people in purpose of protecting the insider information and making sure they follow the confidentiality rules until financial and operational results are disclosed to public,
- · Coordination of preparation and publishing of Sustainability Report in a more professional format compared to previous years with consultancy,
- Performing the tasks regarding the compensation of the beneficiaries with the capital market instruments, the property of which has been lapsed to the Investor Compensation Center (ICC) and have become valid again,
- Carry out the studies on the completion of the Investor Relations section on the new ASELSAN website which is prepared and launched with external support,
- · Complete the setup process of Voice Response System.

In 2019 a total of 87 meetings were held with corporate investors, where 33 of them were one-on-one interviews held in investor conferences and roadshows which are organized specially for our company, 32 of them were held by visiting corporate investors and portfolio management companies, 11 of them were teleconference calls and 11 of them were meetings held in ASELSAN facilities. In addition to the meetings with corporate investors held by means of investor conferences and teleconferences, approximately 800 retail shareholders' questions regarding secondary public offering, fluctuations in the stock price, exercising shareholder rights, material event disclosures made, financial tables, etc. were answered either written or verbally in 2019.

The information and explanations, which may affect the exercise of shareholders rights, are provided in the company website.

2.2. Exercising of Information Acquisition Rights of the Shareholders

Investor Relations Department has taken care of every written and verbal inquiry of all shareholders in 2019 with the most accurate and fastest way. It has paid attention to respond to all the information demands of shareholders with complete and comprehensible responses.

Investor Relations Department has been using Turkish and English website www.aselsan.com.tr_actively in order to inform ASELSAN's investors on a timely and accurate basis and has been updating the information given on the web constantly. The electronic platform on our website is being effectively used regarding the issues that may affect exercising of the shareholders rights. The material event disclosures made through Public Disclosure Platform incorporated under Borsa İstanbul are being disclosed both in Turkish and in English from 26.10.2015 onwards, the material event disclosure and other notifications are being published on our corporate website in Turkish and in English on the same day. In general, any changes occurred in the Company structure are immediately announced on our website and the investor presentations are constantly updated. Information on capital increases and dividend distribution is also submitted to our investors' knowledge on the website. In addition, notifications regarding the attendance of shareholders to the General Assembly and electronic general assembly principles within the context of the new Turkish Code of Commerce (TCC) are being made.

Full compliance of both Turkish and English chapters on "Investor Relations" of our company's website as per the regulations was achieved.

Within the context of regulations of CMB, in 2019;

- General Assembly documents within legal deadlines,
- · General Assembly minutes and participants list,
- 2018 Annual Report,
- The reports for the 1st quarter, 2^{ns} quarter' and 3rd quarter period for 2019,
- The investor presentations which are updated every 3 months,
- Disclosure of material events made in 2019,
- Our Company's consolidated financial statements and basic performance indicators for the last 5 years along with the Financial Report,
- Earnings Release has beed published,
- Investor Calendar updates,
- The updated 5 year strategic plan summary

were published on the website in Turkish and English.

A significant increase has been observed in the number of retail investors in ASELSAN stock since the beginning of 2017. This situation led to a significant increase in the number of individual investors make a too many calls to the Investor Relations Department.

This increasing phone density has sometimes reached the point that disrupts the department's daily routine. For this reason, it is evaluated that answering the phones from investors via the Voice Response System will be beneficial in terms of enabling time management for phone calls with investors and measuring and reporting the efficiency of these talks. The Voice Response System, which was completed in a short time using internal resources, was announced to the public on 07.11.2019 and put into use.

Due to the reason that a regulation is present within the TCC numbered 6102 according to which the shareholders will be able to request from the General Assembly the assignment of a special auditor for the inspection and disclosure of the financial status, and due to the reason that the law and the relevant legislation are considered for the issues not present in the Articles of Association of the Company, there is no respective provision with regard to this issue in the Articles of Association. There was no request of any shareholders with respect to the assignment of a special auditor in 2019.

2.3. General Assembly Meetings

The agenda and invitation related to the 44th Ordinary General Assembly Meeting dated 26.04.2019 with regard to 2018 operations realized at the Company headquarters were duly announced comprising all the necessary information in a daily newspaper published in Turkey and on the website and in the Turkish Trade Registry Gazette dated 25.03.2019. Furthermore, the invitation was sent to the main shareholders and the shareholders who attended the previous meeting via mail two weeks prior to the General Assembly. The General Assembly Meeting was held with the attendance of 302 shareholders, 12 physically, 290 electronically representing 914.929.925,364 shares (TL 914.929.925,364 nominal) of 1.140.000.000 total shares representing the TL 1.140.000.000 paid-in capital. Media members did not participate in the General Assembly Meeting, which was held simultaneously both physically and electronically.

In scope of the Communiqué on Corporate Governance numbered II.17-1 of CMB, three weeks before the Ordinary General Assembly on date 19.03.2019, the Ordinary General Assembly Document including the meeting agenda, place, time, copy of the power of attorney, total number of shares as of 19.03.2019 and the voting rights, the number of shares representing the privileged shares and their voting rights, the reasons for the changes in the members of Board of Directors, which is present in the agenda, the list of independent members of the Board of Directors, the proposal of the Board of Directors with respect to the year 2018 dividend distribution, the CVs of the independent members of the Board of Directors and their statements of independence and explanations regarding the agenda items were disclosed on Public Disclosure Platform and were published on our Company website. The annual report was made available for the review of the shareholders at the headquarters 15 days prior to the general assembly meeting and handed to the shareholders participating in the general assembly and to the ones who made requests.

For the facilitation of physical attendance to Ordinary General Assembly Meeting in 2019, transportation from central spots to our Akyurt facility was provided for our shareholders, and our shareholders who attended the general assembly had a site visit.

In the Ordinary General Assembly Meeting in 2019, the shareholders were informed regarding the presence of managing members, all the Board of Directors members and auditors at the meeting. No proposals were set forth by the shareholders during the meeting regarding the agenda. The shareholders exercised their rights to ask questions regarding the topics in the agenda and the answers to the questions took place in the General Assembly Meeting minutes.

There are no questions, which has not been answered in the Ordinary General Assembly Meeting and answered by the Investor Relations Department later on. Within the period, there have not been any transactions of which their resolutions were submitted to General Assembly because the confirmative vote of the majority of the independent board members are required where as they have voted negatively. The minutes of the General Assembly Meeting held in 2019 can be accessed from the website of our Company.

No Extraordinary General Assembly Meeting was held during the year 2019.

The shareholders were informed about donations and aids were made in 2018, with a seperate agenda item at the 44th Ordinary General Assembly Meeting.

2.4. Right to Vote and Minority Rights

In article 25 of the Articles of Association titled "Right to Vote", there is a provision stating that "the Shareholders and their representatives who are present at the Ordinary and Extraordinary General Assemblies shall have one right to vote for each share" and there is no privilege or no upper limit pertaining to the numbers of votes. The right to vote arises as soon as the share is acquired and there is no regulation setting forth that the vote shall be used when a certain time passes after the acquisition date of the share.

The regulations regarding the voting of the shareholders through their representatives are followed by; in the event of a legal representation, it is certified and the open proxy rule is applied.

Particular attention is paid in exercising the minority rights in our Company and the provisions of Turkish Code of Commerce and the relevant legislation regarding minority rights are applied as is. All shareholders are treated equally in our Company, including the minority and foreign shareholders.

There are no prevailing partners in our Company. In the Articles of Association, there is no provision with respect to the representation of the minority shares in the management and their accumulated casting of votes. Due to the voluntary implementation of this issue regarding the capital market legislation, provision with respect to the current General Assembly quorum is applied.

2.5. Dividend Rights

There are no privileges with respect to the participation in the profit gained by the Company. The dividend policy was last revised in 2016 and was submitted to following ordinary general assembly meeting. The dividend policy published on our website is given below.

"The dividend amounts which shall be calculated considering the sustainable growth rate, market capitalization, net working capital requirements, dividend yield and cash flows, equity ratio, with the relevant legislation and the provisions of the articles of association over the distributable profit amount calculated taking the period profit as the basis which is shown on the financial statements of our Company prepared pursuant to the existing legal regulations (after the compulsory legal reserves are reserved and the taxes, funds and financial liabilities and losses of the previous year, if any, are deducted and the donations are added), the profit distribution proposal which shall be prepared by the Board of Directors in order for the shares which shall be issued by means of adding the cash or the dividend on the capital on the date(s) determined pursuant to the regulations of the Capital Markets Board to be distributed targeting at least 10% of net profit in cash in the defined amounts or as bonus shares or partly in cash, partly as bonus shares in defined amounts, shall be submitted to the approval of the General Assembly. Following the approval of the General Assembly, the determined dividends are distributed to the shareholders within the legal periods on the date determined by the General Assembly.

There is no privilege to participate to the profit of our Company. The dividends are distributed equally regardless of all the existing shares and their issue and acquiring dates.

In case of a revision made on the Dividend Policy, the resolution of Board of Directors regarding this revision and the reason for revision shall be publicly announced with respect to the legislation of Capital Markets Board."

As per the decision taken in the General Assembly on date 26.04.2019 pursuant to the provisions of the Articles of Association and to the Capital Market Law and other legal regulations and within the legal periods, out of the profit gained from 2018 operations, the gross amount of 174.000.000 TL (15,26316 Kurus TL per 1 TL of share, gross 15,26316% over the capital) (net 147.900.000 TL – 12,97368 Kurus TL per 1 TL of share, net 12,97368% over the capital) was disclosed at PDP. 49.300.000,- TL of the dividend was distributed on 19.06.2019, 49.300.000,- TL of it was distributed on 18.09.2019 and 49.300.000,- TL of it was distributed on 18.12.2019 to our shareholders as cash dividend with 3 installments.

2.6. Transfer of Shares

The transfer of the nominated Group A shares representing majority part of the capital and which are not traded in Borsa İstanbul has been restricted with the provision of article 6 of the Articles of Association stating "As the company operates in security and defense sector; Group A shares shall not be sold or transferred without the consent of the Board of Directors; in the event that these shares are transferred or sold to third parties partially or completely without the consent of the Board of Directors, the Board of Directors is entitled to abstain from recording this sale in the records".

CHAPTER I II- PUBLIC DISCLOSURE AND TRANSPARENCY

3.1. Company Website and its Content

In order to inform our shareholders in a timely and accurate manner within the context of public disclosure and transparency; the website of the Company at the address www.aselsan.com.tr in Turkish and English is actively used and the information published on the web are updated regularly.

The section "Investor Relations" is included on our website also comprising the issues listed in article 2.1.1 of the corporate governance principles of Communiqué on Corporate Governance numbered II-17.1 issued by CMB on 03.01.2014.

Under "Investor Relations" section;

1. Corporate Governance

- 1.1 Shareholder Structure and Privileged Shares
- 1.2 Board of Directors
- 1.3 Key Resolutions of Board of Directors
- 1.4 Board Committees
- 1.5 Articles of Association
- 1.6 Company Profile and Trade Register Information
- 1.7 Policies
- 1.8 Ethical Principles
- 1.9 Corporate Governance Rating
- 1.10 General Assembly Meeting
- 1.11 Compliance with Corporate Governance Principles
- 1.12 Sustainability

2. Financial and Operational Data

- 2.1 Financial Reports
- 2.2 Financial Highlights
- 2.3 Investor Presentations
- 2.4 Board of Directors Reports
- 2.5 Earnings Release

3. Stock Info

- 3.1 Stock ID
- 3.2 Capital Increases
- 3.3 Analyst Coverage 3.4 Dividend Info
- 3.5 Investor Tools
- 4. BIST Disclosures
- 5. Annual Reports
- 6. Investor Calendar
- 7. FAQ
- 8. Contact

chapters exist. Necessary records and information are included under these titles. The information given on the Turkish website under "Investor Relations" section is included entirely on the English website.

3.2. Annual Report

The Board of Directors prepare the annual report in detail regarding the operations of the Company and enable the public to reach complete and accurate information that can be comprehensive. The 2018 annual report of our Company was prepared as per the Turkish Code of Commerce numbered 6102, the Regulation Regarding the Determination of the Minimum Content of the Annual Reports of Companies issued by the Ministry of Customs and Trade, the Communiqué Regarding the Principles Related to Financial Reporting in the Capital Market and the Communiqué Regarding the Determination of the Corporate Governance Principles, both issued by the CMB.

CHAPTER IV - STAKEHOLDERS

4.1. Informing the Stakeholders

The information requests of stakeholders are keenly handled and attention is paid in responding these accurately and in an understandable manner. Our employees are informed with an employee hand book and informative presentations over the intranet; continuous access to data and support is provided through help desk application over the intranet. Nonetheless, general and personal data that can be necessary outside the company are provided to access over the internet.

On the supplier side, ASELSAN Supplier Portal, which was already developed in order to provide efficient information transfer, dissemination facilities, are promoted. Besides supplier communication and improvement operations are combined into a supplier specific web-based platform, "Gücümüz Bir". The infrastructure is completed and the platform will be active in the first quarter of 2020. Products that are selected for localization process are shared and coordinated with our suppliers via informative brochures. Moreover, information is also shared by ASELSAN website, joint organizations/workshops and face to face meetings.

High quality standards and high technological solutions are offered for services or delivered products with regard to customer needs and expectations so as to meet customer satisfaction. Requirements of these quality standards are met and inspections, tests are applied through every process from projects' start till the delivery phases. Our all processes are administered by directives, quality plans, standards, audits and test instructions. Our processes have been certified by internationally accepted standards such as AS9100, ISO 9001, AQAP and CMMI so that our products and services are secured to protect quality standards. These certificates are renewed every year with the audits performed. Changes and improvements of international standards are being followed and our processes are developed accordingly. Customer satisfaction, which is the primary objective, is evaluated and reported for the access of related executives. In addition, results and trends are evaluated by the senior management on an annual basis and required improvement activites are planned.

It is possible to increase the quality of product and service correspondingly increasing customer satisfaction by supplying the materials used in products from the right and trusted sources. For this purpose, suppliers are subject to product and/or field of activity based selection and evaluation processes. These activities that target continuous improvement and high quality standards for suppliers are regarded as playing an important role in eventual product quality. In this direction, trainings, technology/equipment transfers, on the job trainings are for creating a high quality supplier portfolio. All information is shared within the context of confidentiality with our suppliers, who have the status of our business partners, and it is not permitted to share this information with unauthorized persons and third party firms. Through related directives, handling any kind of relations between ASELSAN and the suppliers within the scope of law and ethical values, minimizing the occurrence of unsuitable conditions for protecting parties and securing the justice and transparency.

ASELSAN Magazine, published in Turkish and English every 3 months and A Bülten published in Turkish every month, provide information regarding the activities, technical issues and up-to-date social events. Hard copies of ASELSAN Magazine is delivered to the end users of products, shareholders who participated to the General Assembly Meeting, company employees and other related parties. A Bülten is uploaded to the social media, Turkcell Dergilik application and the corporate website right after it is publication.

The Compensation Policy can be accessed from our Company's website under Corporate Governance title.

The members of the Board of Directors and the executives do not perform any activities that may cause shareholders to incur losses or may diminish the Company assets. The subject that no debt shall be given, no loans shall be granted or no pledges such as guarantees in favor thereof may be extended to any members of the Board of Directors or to any employees through the use of ASELSAN assets, is declared within the "ASELSAN Ethical Principles, Values and Conduct Rules Document", which is available on our Company's website.

The e-mail mechanism for the stakeholders to report their complaints regarding the transactions of the company, which are against the legislation or deemed unethical, is stated in the ASELSAN Ethical Principles Policy. The policy has been published on the Turkish and English web site following the approval of the policy. Within the context of the policy, the Ethics Committee is informing the Corporate Governance Committee.

4.2. Participation of Stakeholders in the Management

In the Articles of Association, there are no provisions regulating the participation of the stakeholders in the management. However, their participation to management shall be supported provided that it does not corrupt the Company activities.

The corporate governance structure of the Company gives the opportunity to all stakeholders including the employees and representatives to convey their worries with regard to transactions, which are inappropriate in terms of legality and ethics.

Within the scope of the workshops that started in 2018 and continued in 2019, our employees in different tracks came together. In each of these organizations where 2,665 employees from the engineering lane, 390 from the administrative and office jobs, and 359 from the technician lane, and our 193 managers, have attended; opinions of our employees on issues and areas of development were received in many topics related to performance, compensation and career management, loyalty, satisfaction, and ASELSAN working experience. The Chairman of the Board of Directors and Chief Executive Officer attended the meetings and listened to the opinions of the employees personally. During the meetings, the

rapporteurs in the halls noted every opinion, prepared detailed reports in line with the opinions, and presented to the Chairman of the Board of Directors and Chief Executive Officer. The Chairman of the Board of Directors shared his evaluations regarding the collected opinions, the actions taken and the planned activities based on the opinions with all ASELSAN employees. The data obtained as a result of the completion of all workshops were handled together with all the feedback mechanisms (satisfaction surveys, exit interviews, one-on-one interviews with employees)) used in ASELSAN, concrete solutions and action plans were produced and some of the projects were implemented. Therefore, the opinions of the employees have been turned into action plans.

In addition, our company has a Personnel Representation system. Our Personnel Representatives also work as one of the channels through which opinions and suggestions collected from our employees are transferred to the Senior Management.

4.3. Human Resources Policy

The human resources policy of our Company is to adopt an understanding which adds successful and dynamic talents to ASELSAN family required pursuant to the vision of ASELSAN, which contributes to the sustainable success of ASELSAN with employee oriented approaches, adds value and which takes side of its employee at all times.

Within this scope and pursuant to the vision, mission and the principles of the Company, regulations have been set out pertaining to the working conditions of the personnel, their qualifications, recruitment, promoting, remuneration, rewarding, dismissal, disciplinary treatments, rights, tasks and liabilities and other personal rights.

60% of our employees stand for the engineering group, 28% for the technician group, 7% for the administrative group, 3% for the office personnel and 2% of the worker group.

There were no complaints related to discrimination from the employees in 2019. Performance and rewarding policies are announced to all of our employees through Company directives.

4.4. Ethical Rules and Social Responsibility

4.4.1 Ethical Rules

The ethical rules of our Company have been written and were published on our website. Furthermore, in order to integrate and develop the ethical rules with the implementations, an Ethical Committee was established to meet the evaluation, direction, consulting and recommendation requirements and create shared knowledge.

"ASELSAN Ethical Principles Instruction" document is announced to all ASELSAN personnel with all its exhibits and the personnel makes a written commitment that s/he acknowledges the information and ethical values. When an amendment or an update is made on this document, the changes are made known to all the personnel and training programs about these changes are organized if deemed neccessary.

ASELSAN Ethical Principles Committee comprises of seven members, the chairmanship of the Committee is executed by the Vice President for Corporate Management and the secretariat is handled by Human Resources Directorate. Other members consist of the representatives of Legal Affairs Department, Industrialization and Procurement Department, Internal Audit Chairmanship, Human Resources Directorate who are assigned by the suggestion of the CEO, plus two personnel whereas one shall have at least 15 years and the other shall have 5-10 years of ASELSAN experience, chosen among the top 10 ranked nominees with the votes of ASELSAN personnel. None of the members should have any disciplinary penalty or ethical issues. If there are no changes in the organization, the Ethical Committee members serve at least for two years.

Ethical Committee meets as soon as possible when there is an application. However, Committee, Board of Directors, Corporate Governance Committee, CEO or the Chairman of the Ethical Committee can call a meeting. Beyond evaluating applications, Ethical Committee represents reason and conscience of ASELSAN and works to increase the awareness about ethical values in ASELSAN family.

When there is an application, ethical committee conducts the required assestment and submit a report to the CEO. At the end of this investigation, necessary steps are taken in accordance with relative law and ASELSAN regulations and directives. The applications for last one year and assessment result is reported to Board of Directors each year in January.

In 2019, Disciplinary Procedures and Practices and Ethical Principles Instructions were updated and announced to the employees through ASELSAN intranet system.

4.4.2. Social Responsibility

An independent British institution, Carbon Disclosure Project (CDP), which reports how the companies manage the risks of climate changes, has announced the 2018 results on January 2019. ASELSAN is placed in the A- list according to 2018 results, among the firms that most successfully manage climate change risks through production process and has the highest gas emission performance on the outcome of the research conducted by evaluating big firms including firms listed on Borsa İstanbul.

In ASELSAN, where decreasing carbon emission is one of the strategic goals, carbon emission has been monitored since 2009. Also, ASELSAN is the first and only company that is ranked with the highest initial score among Defence Industry firms in Turkey by participating in CDP survey.

Thanks to the Zero Waste Project launched in 2019, waste from the dining halls and offices across ASELSAN has been started to be collected separately to be recycled in a manner that will add value to the environment and the economy. The lunch leftovers are being shipped to animal shelters and used as organic waste composting and office waste is recycled. Garment and toy collection boxes were placed in the campus parking areas and delivered to those in need within the scope of social responsibility. With the help of vegetable waste oil cans placed in the parking lots, the vegetable waste oils brought by the personnel from their homes were sent for recycling.

ASELSAN has decreased carbon emission significantly through its efforts, and continues its operations by increasing momentum in the fields of increasing energy efficiency in production, giving priority to production technologies that decrease carbon emission, switching to use of energy that does not cause carbon emission.

Having certifications for ISO 14001: 2015 Environmental and ISO 45001: 2018 Occupational Health and Safety Integrated Management System; we will proceed to take part in pioneer applications through actualization of national and international initiatives. ASELSAN is one of the leading companies that has completed transition to ISO 45001: 2018 Occupational Health and Safety Management System Standard in 2019.

In November 2014, Borsa Istanbul (BIST) has launched Sustainability Index that display the performance of January-March 2014 time period for BIST-30 firms in the fields of financial, environmental, social issues and corporate governance. With respect to that, as of this date, ASELSAN started publishing sustainability reports. As a result of the evaluation of our Company on the ASELSAN Sustainability Report, published in Turkish and English for the first time before the Index assessments, ASELSAN was among the 15 firms that were approved to be included in BIST Sustainability Index. In November 2019, ASELSAN kept its place in the index as a consequence of the re-evaluation of ASELSAN Sustainability Report that was published in June 2019.

Sustainability reports that are published on our website (www.aselsan.com.tr) include the details of sustainable applications in the fields of strategic governance, corporate governance, ethical principles, internal audit, bribery and corruption, risk management, communication with stakeholders, supply chain, information systems, facility management, employee development, human rights, occupational health and safety, environmental management.

In the year 2019, our company supported the following events through sponsorship:

- Turkish Armed Forces Rehabilitation and Nursing Center's Handicapped Sports Club's sport activities held in 2019,
- 180th Foundation Anniversary Celebration of Gendarmerie General Command,
- The Young Eagles Week 2019 event performed by Turkish Air Force,
- Electro-Optic Workshop held by the Presidency of Defence Industries,
- TEKNOFEST 2018, İstanbul Aerospace and Technology Festival,
- 19th Submarine Commanders Conference,
- ROBOIK 2019 Unmanned and Autonomous Land Vehicles Development Competition Award Ceremony held by Presidency of Defence Industries,
- Sniper Competition held by Gendarmerie General Command.

CHAPTER IV - BOARD OF DIRECTORS

5.1. Structure and Formation of Board of Directors

In our Company, 3 members of 9 members of Board of Directors are independent members. The duties of Nomination Committee are executed by Corporate Governance Committee. The report regarding the evaluation of the list of Independent Members of Board of Directors prepared by Corporate Governance Committee on 21.01.2019 was presented to Board of Directors on 28.01.2019. Within the scope of CMB's Communiqué on Corporate Governance numbered II.17-1, CMB has not stated any adverse opinion on the nominee list and the evaluation report. The CVs and independence statements of the 4 nominees were announced to public on our website on 19.03.2019. As a result of the voting at the General Assembly Meeting on 26.04.2019, 3 nominees were elected as Independent Members of Board of Directors. There were no cases to eliminate the independency of the Independent Members of the Board of Directors in 2019.

The CVs of the Members of the Board of Directors are included in the annual report and the information with respect to their duty terms is provided in the table below.

Name Surname	Duty	Election Date
Haluk GÖRGÜN	Chairman / Managing Member / CEO	March 2017
Mustafa Murat ŞEKER	Vice Chairman / Managing Member	May 2013
Mehmet ARIK	Independent Member	April 2018
Ercümend ARVAS	Independent Member	March 2016
Mehmet Fatih KACIR	Member	April 2019
Alpaslan KAVAKLIOĞLU	Member	April 2019
Salih KUL	Member	April 2019
İbrahim ÖZKOL	Independent Member	March 2017
Celal Sami TÜFEKCİ	Member	April 2018

In article 13 of the Articles of Association titled "Duties and Authorization of the Board of Directors", the duties and authorization of the Board of Directors have been defined. Besides, the Board of Directors Working Directive also describes the Duties and Authorization of the Board of Directors. With the article 14 of the Articles of Association titled "Assignment of the Authorization to the CEO", the assignment of the authorization of the Board of Directives are described in the "Duties and Responsibilities Directive" formed within the Company.

The duties of the Members of the Board of Directors and of the CEO carried out outside the Company, information regarding the term of office and the statements of the board of members with respect to their independencies were given below.

- There is an executive member in the Board of Directors.
- The statements of independence of the Independent Members of the Board of Directors have been provided at the annex of the Compliance Report.
- The Members of the Board of Directors fulfill their duties without any interest or benefit and pursuant; to the liabilities and authorizations undertaken by the Board of Directors and to the regulations of the Turkish Code of Commerce and CMB.
- Members of the Board of Directors, in accordance with the Working Directive of Board of Directors, are liable not to enter into any commercial treatments directly or indirectly with the Company that coincides with the Company objectives, on their behalf or on behalf of others without the consent of the General Assembly.

5.2. Principles of Activity of Board of Directors

Board of Directors carries out its duties and responsibilities determined with reference to TCC, Capital Market Law and Articles of Association. In this context, the basis of duties and operations are indicated in details in ASELSAN Board of Directors Working Directives.

The agenda of the Board of Directors meetings is formed with the proposals of the Members of the Board of Directors and the committees and the CEO, it is afterwards evaluated by the Board of Directors Chairman and finalized. The subjects emerged as urgent and which are considered worthwhile to discuss may be added to the agenda during the Board of Directors meeting.

As per article 10 of the Articles of Association, the Board of Directors assemble when required and at least once a month. The number of Board of Directors Meetings in 2019 was 34, where 22 of the decisions in the meetings are interim decisions. 90% of the Members of the Board of Directors attended 91% of the meetings.

The place, date, time and agenda of the next meeting is decided at the Board of Directors Meetings. Documents pertaining to the meeting agenda are sent to the members of Board of Directors at least 3 work days before the meeting by the Presidency.

The Members of the Board of Directors attend the meetings and fulfill their duties as per their authorization and responsibilities. The members who do not attend the meetings submit their excuses.

Board Office is established under Board of Directors in order to coordinate necessary issues in the name of the Board, particularly the relationships with the Presidency and TAFF, to execute planning and support the Board of Directors' operations.

All members have one right to vote, including the chairman. If the numbers of votes are equal, the vote of the chairman does not change the result. Abstaining is not possible, either rejection or acceptance is voted. The vote of the abstaining member is considered as a rejecting vote. The member casting a reject vote states the ground for this in the meeting minutes and undersigns it. According to the article 11 of the Articles of Association titled "Quorum of Meeting and Decision Making"; "The provisions of the TCC, Capital Market Law, regulations of the Capital Markets Board in connection with corporate governance and other relevant legislation are taken into account with respect to the meetings and decision making quorums of the Board of Directors as well as with respect to any Board of Directors members assuming duties and positions outside the Company. Any action and resolutions taken by the Board of Directors without complying with the Corporate Governance Principles, which are made mandatory as to be complied by the Capital Markets Board, are invalid and considered as in contrary to the Articles of Association". In the operation year 2019, there were no related party transactions or any other significant issue, which had to be submitted to the approval of the general assembly since they were not approved by the Independent Members of the Board of Directors.

The signed decisions are made available to the follow up of the Members of the Board of Directors and Executive Committee Members in the electronic platform.

In accordance with the article 4.2.8 of Capital Markets Board Corporate Governance Communiqué; Executive Liability Insurance Policy was signed for Board of Directors members on 17.07.2019 with the total liability amount of USD 75.000.000,- which corresponds to more than 25% of the paid-in-capital of our Company, with a validity period of 1 year.

5.3. Number of Committees Formed in the Board of Directors with Their Structures and Independency

As per the title "Committees Formed in the Board of Directors" in the Communiqué Regarding Determination and Implementation of Corporate Governance Principles by the Capital Markets Board, our Company's Board of Directors, in the meeting dated 10.04.2012, formed an Audit Committee, Corporate Governance Committee and Early Detection and Management of Risk Committee and announced this to the public. There are no Nomination and Remuneration Committees within the Board of Directors and the duties of these are carried out by the Corporate Governance Committee.

The directives of Audit Committee, Corporate Governance Committee and Early Detection and Management of Risk Committee are made available at the website of our Company. The Independent Members of the Board of Directors have duties in more than one committee. This is because it is mandatory that all members of the Audit Committee and the chairman of the other committees should be Independent Members of the Board of Directors.

Boards of Directors have made the annual evaluation of the committees composed under its structure and the evaluation report is available in Annual Report.

AUDIT COMMITTEE

Committee Members (January – December 2019) İbrahim ÖZKOL: Chairman / Independent Member of Board of Directors Ercümend ARVAS: Member / Independent Member of Board of Directors Mehmet ARIK: Member / Independent Member of Board of Directors

The main duties of the Audit Committee that were set out in the "ASELSAN Audit Committee Work Directives" regulating the working principles of Audit Committee are as follows;

- To enable the disclosure of the financial data of ASELSAN, to pursue the operation and efficiency of the accounting system, independent audit, internal audit and internal control system of the company,
- To assemble at least every 3 months, to share the meeting minutes with the Board of Directors

Meetings were held by Audit Committee on dates 26.02.2019, 07.05.2019, 06.08.2019 and 05.11.2019 regarding the financial statements with the participation of the related independent audit company in 2019.

In order to increase the efficiency of internal audit, attention was paid to strengthen the cooperation with Internal Audit Presidency and to the supervision of internal audit activities, direct and continuous communication was established between Audit Committee and Internal Audit Presidency. A dimension of this communication; Audit Committee-Internal Audit Presidency coordination meetings in 2019, were held 8 times on dates 22.01.2019, 20.02.2019, 13.03.2019, 21.05.2019, 16.07.2019, 16.09.2019, 14.10.2019 and 19.12.2019.

The Committee was active in two main topics in 2019.

i. Independent Audit Activities and Works Regarding the Audited Financial Statements:

"Communiqué on Financial Reporting in Capital Markets" Serial: II, 14.1 regulated the preparation of financial reports and their basis, principles of presentation to the relevant parties. December 2017, March 2018, June 2018 and September 2018 financials and Board of Directors reports were prepared in accordance with the communiqué numbered II, 14.1, and submitted to Board of Directors by Audit Committee and presented to the public via Public Disclosure Platform.

The procurement process for independent audit services for the year 2019 as per the CMB'S communiqué numbered II-14: 1, was handled by the Industrialization and Procurement Directorate and the procurement proposal resolution of the Board of Directors regarding procurement of services from "YEDITEPE Bağımsız Denetim A.Ş." was submitted for approval on the General Assembly Meeting dated 26.04.2019 and was accepted.

ii. Internal Audit Presidency:

Within the scope of the internal audit activities of the Company, the relations between the Internal Audit Presidency and the Board of Directors have been carried out through Audit Committee. A direct and continuous contact between Audit Committee and Internal Audit Presidency is present.

CORPORATE GOVERNANCE COMMITTEE

Committee Members (January – April 2019) Ercümend ARVAS: Chairman / Independent Member of the Board of Directors Celal Sami TÜFEKCİ: Member / Member of the Board of Directors Murat ÜÇÜNCÜ: Member / Member of the Board of Directors Pınar ÇELEBİ: Member / Investor Relations Manager

Committee Members (April- December 2019) Ercümend ARVAS: Chairman / Independent Member of the Board of Directors Salih KUL: Member / Member of the Board of Directors Celal Sami TÜFEKCİ: Member / Member of the Board of Directors Pınar ÇELEBİ: Member / Investor Relations Manager

The main duties of the Corporate Governance Committee were set out in the "ASELSAN Corporate Governance Committee Work Directives" as follows:

- To carry out studies for the implementation of Corporate Governance Principles in the Company,
- To observe whether the Corporate Governance Principles have been implemented or not and if not implemented to determine the grounds for this and the conflicts of interest arising due to not complying with these principles and to make proposals for improving the status,
- To monitor the activities of the Investor Relations Department.
- Corporate Governance Committee assembles every 3 months and in every situation when necessary. The meeting minutes are submitted to the Board of Directors.

The Corporate Governance Committee assembled 4 times within the activity year 2019 on dates, 28.01.2019, 24.06.2019, 22.07.2019, and 12.12.2019. The meeting minutes of the Committee may be reached on our website. The committee was active in 3 respective tasks in 2019:

i. Operations of Investor Relations Department:

Investor Relations Department have attended all the meetings in 2019 and performed secretariat procedures of the committee with regard to "ASELSAN Corporate Governance Committee Working Directive". Information was provided to the committee about the activities of the Investor Relations Department in the Committee meetings.

In 2019, the subjects discussed and tasks carried by the Corporate Governance Committee within the context of the meetings are given below:

- Corporate Governance Committee Evaluation Report,
- · Preparation of ASELSAN Corporate Governance Principles Compliance Report and the submission of the report to Board of Directors,
- Independent Board Members selection process,
- Corporate Governance Rating,
- Preparation of Corporate Governance Committee Evaluation Report and the submission of the report to Board of Directors,
- Presentation regarding the compliance of ASELSAN Strategic Plan, Technology Roadmap and Master Plan by the Vice Presidency of Technology and Strategy Management,
- Discussing the proposed amendments in the ASELSAN Ethical Principles Directive,
- Discussing the amendment of the ASELSAN Disciplinary Procedures and Practices Functor as a directive and updating the "ASELSAN Allowance Directive" offered by the Vice Presidency of Corporate Governance as a functor.

ii. Corporate Governance Rating:

The evaluation of corporate governance rating performed by SAHA Corporate Governance and Credit Rating Services were concluded during the last quarter of 2019. According to the review, the score of 12.12.2018, 9,20 was updated as 9,29 out of 10 on 12.12.2019.

Our Company's share has been listed in the corporate governance index since the date 14.12.2012, which it first entered the index. Rating reports can be accessed on the company website.

iii. Election of Independent Board Members

As given by Corporate Governance Principles, the responsibility of evaluating and reporting the nominations and their independency status is given to the Nomination Committee, in companies where this committee is not formed because of the structure of the Board of Directors, the responsibility is given to Corporate Governance Committee. Within this context, the evaluation of nominations was carried on by the Committee and the resulting nominee list was presented at the Board of Directors meetings on date 28.01.2019.

CMB has not stated any opposing opinons regarding the nominees' list and evaluation report which was submitted by the Board of Directors. The final list was submitted to shareholders' voting on General Assembly Meeting on 26.04.2019 and as a result, Ercümend ARVAS, Mehmet ARIK and İbrahim ÖZKOL were elected as independent members to serve for 1 year.

EARLY DETECTION AND MANAGEMENT OF RISK COMMITTEE

ASELSAN Board of Directors established the "Early Detection and Management of Risk Committee" with the resolution dated 10.04.2012 and numbered 720/1. The Committee executes as per the directive numbered ASY-01-066.

Committee Members (January – April 2019) Mehmet ARIK: Chairman / Independent Member of the Board of Directors Bayram GENÇCAN: Member / Member of the Board of Directors

Committee Members (April – December 2019) Mehmet ARIK: Chairman / Independent Member of the Board of Directors

Salih KUL: Member / Member of the Board of Directors

In 2019 the Committee continued to identify the risks which prevent ASELSAN from reaching its goals; manage the risks in accordance with the company's risk-taking profile; report the risk activities; build risk aware decision mechanisms and internal control. Risks identified through risk management processes are prioritized depending on their probability and impact. It is ensured that important risks are monitored and reported. In this context, in 2018 the Committee held 6 meetings on 09.01.2019, 07.03.2019, 23.05.2019, 16.07.2019, 17.09.2019 and 26.11.2019.

Committee's activities are summarized below:

- "2018 Evaluation Report" was prepared and submitted to Board of Directors in January 2019.
- "Corporate Risk Evaluation Report" was prepared and submitted to Board of Directors in January 2019, March 2019, May 2019, July 2019, October 2019 and November 2019. In the reports;
- Important risks of ASELSAN were evaluated and monitored. The risk classification, explanation, rating, strategy, owner/responsible, current
 control operations and relevant indicators and mitigating actions were included in the report.
- Warning levels of benchmarks for risk indicators were determined and the risk indicators which divert from the benchmark and can signal the poor performance of a goal during the reporting period were also reported.
- Risk management chapters in the annual report and the other reports set by the legal authorities were prepared.

The secretariat formalities of the Committee were performed by Enterprise Risk and Process Management Department of Finance Directorate.

5.4. Risk Management and Internal Control Mechanism

In ASELSAN, the effectiveness of internal audit activities, corporate governance, risk management and internal control processes are improved and the Company contributes to the achievement of the Company's targets. The most important role of the internal audit activities, which is an important component of the internal control system, is the provision of assurance and consultancy services to the Audit Committee and the Board of Directors on the internal control system and enterprice risk management. The 3-year audit plan and work programs are prepared on a risk-based basis and the results of the audit are reported to the Audit Committee and regular meetings are held with the Committee. By the Internal Audit Department; compliance with legal regulations and company regulations, the application of ethical principles and the adequacy of controls to eliminate risks are evaluated.

5.5. Strategic Objectives of the Company

The Board of Directors is the top level body to make strategic decisions and to execute and represent. As per the Articles of Association of the Company, the Board of Directors is responsible to determine the strategic plans and control its implementations.

Strategic Management Process is a part of Corporate Governance and is managed by the Chairmand and CEO in the name of Board of Directors, following the approval of the Strategic Plan which is prepared with the coordination of Strategic Management Directorate. Reaching ASELSAN's long term goals and sustaining success can be achieved through environment friendly strategies.

ASELSAN's vision is to be a reliable, competitively preferred, environment-friendly and human conscious technology firm, which preserves its sustainable growth in the global market via the values created for stakeholders, as well as serving its establishment purposes. Within this concept, annually updated 5-year Strategic Plan and 3-year Budgets are prepared. With this methodology, short and medium term targets are specified by considering long term goals. The operations to be carried out for these targets are executed by Sector Presidencies/Vice Presidencies and performance evaluations are made based on Balanced Scorecard method, which is widely used in the world.

5.6. Financial Rights

Renumeration procedures for Board of Directors Members and Managers with Executive Responsibility, which are set in written form in accordance with the Corporate Governance Principles, are published on our Company's website.

The renumeration and all other benefits provided to board members are explained on an individual basis in the annual report.

Monthly remunerations provided to our Members of the Board of Directors are determined by the General Assembly and no other benefits are granted apart from the monthly remuneration. Pursuant to the resolution taken at the 44th Ordinary General Assembly held on 26.04.2019, the Members of the Board of Directors are paid TL 3.000,- per month. As for the determination of the financial rights of the board members, no reward system is applied to reflect the Company performance and which is based on the performance of the Members of the Board of Directors.

STATEMENT OF INDEPENDENCE

TO THE BOARD OF DIRECTORS OF ASELSAN ELEKTRONİK SANAYİ VE TİCARET A.Ş.

ANKARA

Date: 18.01.2019

With respect to the corporate governance principle numbered 4.3.6 of the Capital Markets Board's Communiqué on Corporate Governance numbered II-17.1, in order for me to be selected as an Independent Board Member of ASELSAN Elektronik Sanayi ve Ticaret (Company), I hereby agree, represent and undertake that I;

a) do not have a relationship in terms of employment at an administrative level to take upon significant duty and responsibilities within the last five years, do not own more than 5% of the capital or voting rights or privileged shares either jointly or solely or do not have established a significant commercial relation between the corporation, companies on which the corporation hold control of management or significant effect and shareholders who hold control of management of the corporation or have significant effect in the corporation and legal entities on which these shareholders hold control of management and myself, my spouse and my relatives by blood or marriage up to second degree,

b) have not been a shareholder (5% and more), an employee at an administrative level to take upon significant duty and responsibilities or member of board of directors within the last five years in companies that the corporation purchases or sells goods or service at a significant level within the framework of the contracts executed, especially on audit (including tax audit, statutory audit, internal audit), rating and consulting of the corporation, at the time period when the corporation purchases or sells services or goods,

c) have professional education, knowledge and experience in order to duly fulfill the duties assigned for being an independent board member,

d) will not be serving as a full time employee at public authorities and institutions after being elected, except being an academic member at university provided that is in compliance with the relevant legislation,

e) am residing in Turkey in accordance with the Income Tax Law (I.T.L) dated 31.12.1960 and numbered 193,

f) am capable to contribute positively to the operations of the corporation, to maintain my objectivity in conflicts of interests between the corporation and the shareholders, have strong ethical standards, professional reputation and experience to freely take decisions by considering the rights of the stakeholders,

g) am able to allocate time for the corporation's business in order to follow up the activities of the corporation and duly fulfill the allocated duties,

h) have not conducted membership of board of directors more than a term of six years in the last ten years,

i) am not the independent member of the board of directors in more than three of the corporations as such; the corporation or the controlling shareholders of the corporation who hold the control of management corporations and in more than five corporations in total which are admitted to the trading on the exchange,

j) have not been registered and announced as a board member representing a legal entity.

I hereby submit this to the knowledge of the Board of Directors, shareholders and all relevant parties.

Sincerely yours,



STATEMENT OF INDEPENDENCE

TO THE BOARD OF DIRECTORS OF ASELSAN ELEKTRONİK SANAYİ VE TİCARET A.Ş.

ANKARA

Date: 18.01.2019

With respect to the corporate governance principle numbered 4.3.6 of the Capital Markets Board's Communiqué on Corporate Governance numbered II-17.1, in order for me to be selected as an Independent Board Member of ASELSAN Elektronik Sanayi ve Ticaret (Company), I hereby agree, represent and undertake that I;

a) do not have a relationship in terms of employment at an administrative level to take upon significant duty and responsibilities within the last five years, do not own more than 5% of the capital or voting rights or privileged shares either jointly or solely or do not have established a significant commercial relation between the corporation, companies on which the corporation hold control of management or significant effect and shareholders who hold control of management of the corporation or have significant effect in the corporation and legal entities on which these shareholders hold control of management and myself, my spouse and my relatives by blood or marriage up to second degree,

b) have not been a shareholder (5% and more), an employee at an administrative level to take upon significant duty and responsibilities or member of board of directors within the last five years in companies that the corporation purchases or sells goods or service at a significant level within the framework of the contracts executed, especially on audit (including tax audit, statutory audit, internal audit), rating and consulting of the corporation, at the time period when the corporation purchases or sells services or goods,

c) have professional education, knowledge and experience in order to duly fulfill the duties assigned for being an independent board member,

d) will not be serving as a full time employee at public authorities and institutions after being elected, except being an academic member at university provided that is in compliance with the relevant legislation,

e) am residing in Turkey in accordance with the Income Tax Law (I.T.L) dated 31.12.1960 and numbered 193,

f) am capable to contribute positively to the operations of the corporation, to maintain my objectivity in conflicts of interests between the corporation and the shareholders, have strong ethical standards, professional reputation and experience to freely take decisions by considering the rights of the stakeholders,

g) am able to allocate time for the corporation's business in order to follow up the activities of the corporation and duly fulfill the allocated duties,

h) have not conducted membership of board of directors more than a term of six years in the last ten years,

i) am not the independent member of the board of directors in more than three of the corporations as such; the corporation or the controlling shareholders of the corporation who hold the control of management corporations and in more than five corporations in total which are admitted to the trading on the exchange,

j) have not been registered and announced as a board member representing a legal entity.

I hereby submit this to the knowledge of the Board of Directors, shareholders and all relevant parties.

Sincerely yours, İbrahim Özkol

STATEMENT OF INDEPENDENCE

TO THE BOARD OF DIRECTORS OF ASELSAN ELEKTRONİK SANAYİ VE TİCARET A.Ş.

ANKARA

Date: 18.01.2019

With respect to the corporate governance principle numbered 4.3.6 of the Capital Markets Board's Communiqué on Corporate Governance numbered II-17.1, in order for me to be selected as an Independent Board Member of ASELSAN Elektronik Sanayi ve Ticaret (Company), I hereby agree, represent and undertake that I;

a) do not have a relationship in terms of employment at an administrative level to take upon significant duty and responsibilities within the last five years, do not own more than 5% of the capital or voting rights or privileged shares either jointly or solely or do not have established a significant commercial relation between the corporation, companies on which the corporation hold control of management or significant effect and shareholders who hold control of management of the corporation or have significant effect in the corporation and legal entities on which these shareholders hold control of management and myself, my spouse and my relatives by blood or marriage up to second degree,

b) have not been a shareholder (5% and more), an employee at an administrative level to take upon significant duty and responsibilities or member of board of directors within the last five years in companies that the corporation purchases or sells goods or service at a significant level within the framework of the contracts executed, especially on audit (including tax audit, statutory audit, internal audit), rating and consulting of the corporation, at the time period when the corporation purchases or sells services or goods,

c) have professional education, knowledge and experience in order to duly fulfill the duties assigned for being an independent board member,

d) will not be serving as a full time employee at public authorities and institutions after being elected, except being an academic member at university provided that is in compliance with the relevant legislation,

e) am residing in Turkey in accordance with the Income Tax Law (I.T.L) dated 31.12.1960 and numbered 193,

f) am capable to contribute positively to the operations of the corporation, to maintain my objectivity in conflicts of interests between the corporation and the shareholders, have strong ethical standards, professional reputation and experience to freely take decisions by considering the rights of the stakeholders,

g) am able to allocate time for the corporation's business in order to follow up the activities of the corporation and duly fulfill the allocated duties,

h) have not conducted membership of board of directors more than a term of six years in the last ten years,

i) am not the independent member of the board of directors in more than three of the corporations as such; the corporation or the controlling shareholders of the corporation who hold the control of management corporations and in more than five corporations in total which are admitted to the trading on the exchange,

j) have not been registered and announced as a board member representing a legal entity.

I hereby submit this to the knowledge of the Board of Directors, shareholders and all relevant parties.

Sincerely yours, Mehmet Arık

APPENDIX-1

Compliance						
CORPORATE GOVERNANCE COMPLIANCE REPORT	Yes	Partial	No	Exempted	Not Applicable	Explanation
1.1. FACILITATING THE EXERCISE OF SHAREHOLDER RIGHTS						
1.1.2 - Up-to-date information and disclosures which may affect the exercise of shareholder rights are available to investors at the corporate website.	Х	-	-	-	-	
1.2. RIGHT TO OBTAIN AND REVIEW INFORMATION						
1.2.1 - Management did not enter into any transaction that would complicate the conduct of special audit.	Х	-	-	-	-	
1.3. GENERAL ASSEMBLY						
1.3.2 - The company ensures the clarity of the General Assembly agenda, and that an item on the agenda does not cover multiple topics.	Х	-	-	-	-	
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.	-	-	-	-	Х	
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.	Х	-	-	-	-	
1.3.10 - The agenda of the General Shareholders' Meeting included a separate item detailing the amounts and beneficiaries of all donations and contributions.	Х	-	-	-	-	
1.3.11 - The General Shareholders' Meeting was held open to the public, including the stakeholders, without having the right to speak.	-	Х	-	-	-	The General Assembly meeting is not open to the media.
1.4. VOTING RIGHTS						
1.4.1 - There is no restriction preventing shareholders from exercising their shareholder rights.	Х	-	-	-	-	
1.4.2 - The company does not have shares that carry privileged voting rights.	Х	-	-	-	-	
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.	-	-	-	-	Х	

Compliance						
CORPORATE GOVERNANCE COMPLIANCE REPORT	Yes	Partial	No	Exempted	Not Applicable	Explanation
1.5. MINORITY RIGHTS						
1.5.1 - The company pays maximum diligence to the exercise of minority rights.	Х	-	-	-	-	
1.5.2 - The Articles of Association extend the use of minority rights to those who own less than one twenthieth of the outstanding shares, and expand the scope of the minority rights.	-	-	Х	-	-	Utmost attention is paid for the execution of minority rights in our Company and the provisions of Turkish Code of Commerce and the relevant legislation regarding minority rights are applied as is.
1.6. DIVIDEND RIGHT						
1.6.1 - The dividend policy approved by the General Shareholders' Meeting is posted on the company website.	Х	-	-	-	-	
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.	Х	-	-	-	-	
1.6.3 - The reasons for retaining earnings, and their allocations, are stated in the relevant agenda item.	Х	-	-	-	-	
1.6.4 - The board reviewed whether the dividend policy balances the benefits of the shareholders and those of the company.	Х	-	-	-	-	
1.7. TRANSFER OF SHARES						
1.7.1 - There are no restrictions preventing shares from being transferred.	-	-	X	-	-	The transfer of the nominated Group A shares representing majority part of the capital and which are not traded in Borsa İstanbul has been restricted with the provision of article 6 of the Articles of Association stating "As the company operates in security and defense sector, Group A shares shall not be sold or transferred without the consent of the Board of Directors; in the event that these shares are transferred or sold to third parties partially or completely without the consent of the Board of Directors, the Board of Directors is entitled to abstain from recording this sale in the records".
2.1. CORPORATE WEBSITE				_		
2.1.1 The company website includes all elements listed in Corporate Governance Principle 2.1.1.	Х	-	-	-	-	
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.	Х	-	-	-	-	
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.	Х	-	-	-	-	

Compliance						
CORPORATE GOVERNANCE COMPLIANCE REPORT	Yes	Partial	No	Exempted	Not Applicable	Explanation
2.2. ANNUAL REPORT						
2.2.1 - The board of directors ensures that the annual report represents a true and complete view of the company's activities.	Х	-	-	-	-	
2.2.2 - The annual report includes all elements listed in Corporate Governance Principle 2.2.2.	Х	-	-	-	-	
3.1. CORPORATION'S POLICY ON STAKEHOLDERS						
3.1.1 - The rights of the stakeholders are protected pursuant to the relevant regulations, contracts and within the framework of bona fides principles.	Х	-	-	-	-	
3.1.3 - Policies or procedures addressing stakeholders' rights are published on the company's website.	Х	-	-	-	-	
3.1.4 - A whistleblowing programme is in place for reporting legal and ethical issues.	Х	-	-	-	-	
3.1.5 - The company addresses conflicts of interest among stakeholders in a balanced manner.	Х	-	-	-	-	
3.2. SUPPORTING THE PARTICIPATION OF THE STAKEHOLDERS	IN THE	CORPORA	TION	MANAGEME	NT	
3.2.1 - The Articles of Association, or the internal regulations (terms of reference/manuals), regulate the participation of employees in management.	-	Х	-	-	-	Although the mechanisms that enable the participation of stakeholders in the management of the company are built, they are not included in the Articles of Association.
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.	Х	-	-	-	-	
3.3. HUMAN RESOURCES POLICY						
3.3.1 - The company has adopted an employment policy ensuring equal opportunities, and a succession plan for all key managerial positions.	Х	-	-	-	-	
3.3.2 - Recruitment criteria are documented.	Х	-	-	-	-	
3.3.3 - The company has a policy on human resources development, and organises trainings for employees.	Х	-	-	-	-	
3.3.4 - Meetings have been organised to inform employees on the financial status of the company, remuneration, career planning, education and health.	Х	-	-	-	-	
3.3.5 - Employees, or their representatives, were notified of decisions impacting them. The opinion of the related trade unions was also taken.	-	Х	-	-	-	Although there is an employee representative practice in our company, there is no union organization.

Compliance						
CORPORATE GOVERNANCE COMPLIANCE REPORT	Yes	Partial	No	Exempted	Not Applicable	Explanation
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.	Х	-	-	-	-	
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.	Х	-	-	-	-	
3.3.8 - The company ensures freedom of association and supports the right for collective bargaining.	-	Х	-	-	-	Establishment of associations by employees about social responsibility, social activities, etc. is encouraged and there is no regulation regarding the recognition of the right to collective bargaining agreements.
3.3.9 - A safe working environment for employees is maintained.	Х	-	-	-	-	
3.4. RELATIONS WITH CUSTOMERS AND SUPPLIERS						
3.4.1 - The company measured its customer satisfaction, and operated to ensure full customer satisfaction.	Х	-	-	-	-	
3.4.2 - Customers are notified of any delays in handling their requests.	Х	-	-	-	-	
3.4.3 - The company complied with the quality standards with respect to its products and services.	Х	-	-	-	-	
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.	Х	-	-	-	-	
3.5. ETHICAL RULES AND SOCIAL RESPONSIBILITY						
3.5.1 - The Board of the corporation has adopted a code of ethics, disclosed on the corporate website.	Х	-	-	-	-	
3.5.2 - The company has been mindful of its social responsibility and has adopted measures to prevent corruption and bribery.	Х	-	-	-	-	
4.1. ROLE OF THE BOARD OF DIRECTORS						
4.1.1 - The Board of Directors has ensured strategy and risks do not threaten the long-term interests of the company, and that effective risk management is in place.	Х	-	-	-	-	
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.	Х	-	-	-	-	

Compliance						
CORPORATE GOVERNANCE COMPLIANCE REPORT	Yes	Partial	No	Exempted	Not Applicable	Explanation
4.2. ACTIVITIES OF THE BOARD OF DIRECTORS						
4.2.1 - The Board of Directors documented its meetings and reported its activities to the shareholders.	Х	-	-	-	-	
4.2.2 - Duties and authorities of the members of the Board of Directors are disclosed in the annual report.	Х	-	-	-	-	
4.2.3 - The Board has ensured the company has an internal control framework adequate for its activities, size and complexity.	Х	-	-	-	-	
4.2.4 - Information on the functioning and effectiveness of the internal control system is provided in the annual report.	Х	-	-	-	-	
4.2.5 - The roles of the Chairman and Chief Executive Officer are separated and defined.	Х	-	-	-	-	
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.	Х	-	-	-	-	
4.2.8 - The company has subscribed to a Directors and Officers liability insurance covering more than 25% of the capital.	Х	-	-	-	-	
4.3. STRUCTURE OF THE BOARD OF DIRECTORS						
4.3.9 - The board of directors has approved the policy on its own composition, setting a minimal target of 25% for female directors. The board annually evaluates its composition and nominates directors so as to be compliant with the policy.	-	-	Х	-	-	There are no female members in the Board of Directors, and a target was not set to keep the female member ratio at a minimum of 25%. There is no writter Company policy regarding this issue.
4.3.10 - At least one member of the audit committee has 5 years of experience in audit/accounting and finance.	Х	-	-	-	-	
4.4. BOARD MEETING PROCEDURES						
4.4.1 - Each board member attended the majority of the board meetings in person.	Х	-	-	-	-	
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.	Х	-	-	-	-	
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.	Х	-	-	-	-	

Compliance						
CORPORATE GOVERNANCE COMPLIANCE REPORT	Yes	Partial	No	Exempted	Not Applicable	Explanation
4.4.4 - Each member of the board has one vote.	Х	-	-	-	-	
4.4.5 - The Board has a charter/written internal rules defining the meeting procedures of the board.	Х	-	-	-	-	
4.4.6 - Board minutes document that all items on the agenda are discussed, and board resolutions include director's dissenting opinions if any.	Х	-	-	-	-	
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.	-	Х	-	-	-	There are no limitations for the members of the Board of Directors regarding them to carry duties outside the company, except the duties that are subject to prohibition of competition.
4.5. BOARD COMMITTEES						
4.5.5 - Board members serve in only one of the Board's committees.	-	-	Х	-	-	The independent members take part in more than one committee because the number of independent members is 3.
4.5.6 - Committees have invited persons to the meetings as deemed necessary to obtain their views.	Х	-	-	-	-	
4.5.7 - If external consultancy services are used, the independence of the provider is stated in the annual report.	-	-	-	-	Х	
4.5.8 - Minutes of all committee meetings are kept and reported to board members.	Х	-	-	-	-	
4.6. FINANCIAL RIGHTS						
4.6.1 - The board of directors has conducted a board oerformance evaluation to review whether it has discharged all its responsibilities effectively.	-	-	Х	-	-	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 ending 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.	Х	-	-	-	-	
4.6.5 - The individual remuneration of Board members and executives is disclosed in the annual report.	-	Х	-			The salaries of the Chairman and the members of the Board of Directors are given seperately in the Board of Directors Report and the annual report but the salarie of the CEO and vice presidents are given as a sum.

1. SHAREHOLDERS	
1.1. Facilitating the Exercise of Shareholders Rights	
The number of investor meetings (conference, seminar/etc.) organised by the company during the year	3
1.2. Right to Obtain and Examine Information	
The number of special audit request(s)	-
The number of special audit requests that were accepted at the General Shareholders' Meeting	-
1.3. General Assembly	
Link to the PDP announcement that demonstrates the information requested by Principle 1.3.1. (a-d)	https://www.kap.org.tr/en/Bildirim/748654
Whether the company provides materials for the General Shareholders' Meeting in English and Turkish at the same time	https://www.kap.org.tr/en/Bildirim/748654
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)	https://www.kap.org.tr/en/Bildirim/748654
The name of the section on the corporate website that demonstrates the donation policy of the company	Investor Relations > Corporate Governance > Policies
The relevant link to the PDP with minute of the General Shareholders' Meeting where the donation policy has been approved	https://www.kap.org.tr/en/Bildirim/758499
The number of the provisions of the articles of association that discuss the participation of stakeholders to the General Shareholders' Meeting	-
Identified stakeholder groups that participated in the General Shareholders' Meeting, if any	The representatives of the Independent Audit Company and the Corporate Governance Rating Company attended the general assembly meeting.
1.4. Voting Rights	
Whether the shares of the company have differential voting rights	No
In case that there are voting privileges, indicate the owner and percentage of the voting majority of shares.	-
The percentage of ownership of the largest shareholder	74,20%
1.5. Minority Rights	
Whether the scope of minority rights enlarged (in terms of content or the ratio) in the articles of the association	No
If yes, specify the relevant provision of the articles of association	-
1.6. Dividend Right	
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	-
PDP link to the related general shareholder meeting minutes in case the board of directors proposed to the general assembly not to distribute dividends	-

CORPORATE GOVERNANCE INFORMATION FILLINGS

General Assembly Meetings

General Meeting Date	The number of information requests received by the company regarding the clarification of the agenda of the General Shareholders' Meeting	Shareholder participation rate to the General Shareholders' Meeting	Percentage of shares directly present at the GSM	Percentage of shares represented by proxy	Specify the name of the page of the corporate website that contains the General Shareholders' Meeting minutes, and also indicates for each resolution the voting levels for or against	Specify the name of the page of the corporate website that contains all questions asked in the general assembly meeting and all responses to them	The number of the relevant item or paragraph of General Shareholders' Meeting minutes in relation to related party transactions	The number of declarations by insiders received by the board of directors	The link to the related PDP general shareholder meeting notification
26/04/2019	0	80,26%	0,03%	80,23%	Investor Relations > Corporate Governance > General Assembly	Investor Relations > Corporate Governance > General Assembly > General Assembly Documents	Article 12	7	https://www.kap.org.tr/en/ Bildirim/758499

2.1. Corporate Website	
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
2.2. Annual Report	
The page numbers and/or name of the sections in the Annual Report that demonstrate the info	rmation requested by principle 2.2.2.
a) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on the duties of the members of the Board of directors and executives conducted out of the company and declarations on independence of board members	The information on the duties of the members of the board of directors and executives conducted out of the company is under Article 3/a of the Report of Board of Directors. Declarations on independence of board members are end of the Annual Report > Corporate Governance Principles Compliance Report.
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	The information is in the Annual Report > Corporate Governance Principles Compliance Report > Number of Committees Formed in the Board of Directors with Their Structures and Independency title.
c) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on the number of board meetings in a year and the attendance of the members to these meetings	The information is in the Annual Report > Corporate Governance Principles Compliance Report > Principles of Activity of the Board of Directors title.
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	The information is under Article 7 of the Report of Board of Director.
d) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on significant lawsuits filed against the corporation and the possible results thereof	The information is under Financial Information Note 15 and at the same time under Article 9 of the Report of Board of Directors.
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 information is under Article 3/b of the Report of Board of Directors.
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	The information is in the Annual Report > Corporate Governance Principles Compliance Report > Ethical Rules and Social Responsibility title.

3.1. Corporation's Policy on Stakeholders	
The name of the section on the corporate website that demonstrates the employee remedy or severance policy	Investor Relations > Corporate Governance > Policies
The number of definitive convictions the company was subject to in relation to breach of employee rights	The information is under Article 9 of the Annual Report of Board of Directors.
The position of the person responsible for the alert mechanism (i.e. whistleblowing mechanism)	CEO
The contact detail of the company alert mechanism.	Chairman & CEO Prof. Dr. Haluk GÖRGÜN Phone Number: (0312) 592 60 00 Address: ASELSAN Elektronik Sanayi ve Ticaret A.Ş. Mehmet Akif Ersoy Mahallesi 296. Cadde No: 16 06370 Yenimahalle ANKARA, TURKEY
3.2. Supporting the Participation of the Stakeholders in the Corporation's Management	
Name of the section on the corporate website that demonstrates the internal regulation addressing the participation of employees on management bodies.	It was regulated by internal directives and it is not open to the public.
Corporate bodies where employees are actually represented	None.
3.3. Human Resources Policy	
The role of the board on developing and ensuring that the company has a succession plan for the key management positions	None.
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.	Career > Being Part of Our Team
Whether the company provides an employee stock ownership program	There isn't an employee stock ownership program.
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.	Career > Our Human Rights Policy
The number of definitive convictions the company is subject to in relation to health and safety measures	The information is under Article 9 of the Annual Report of Board of Directors.
3.5. Ethical Rules and Social Responsibility	
The name of the section on the corporate website that demonstrates the code of ethics	Investor Relations > Corporate Governance > Ethical Principles
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.	Investor Relations > Corporate Governance >Sustainability
Any measures combating any kind of corruption including embezzlement and bribery	Investor Relations > Corporate Governance > Policies

4. BOARD OF DIRECTORS-I	
4.2. Activity of the Board of Directors	
Date of the last board evaluation conducted	11/02/2020
Whether the board evaluation was externally facilitated	No
Whether all board members released from their duties at the GSM	Yes
Name(s) of the board member(s) with specific delegated duties and authorities, and descriptions of such duties	It was resolved at the meeting of the Board of Directors of our Company, held on 26.04.2019 that; Haluk GÖRGÜN shall be appointed as the Chairman of the Board of Directors, Mustafa Murat ŞEKER shall be appointed as the Vice Chairman and Haluk GÖRGÜN and Mustafa Murat ŞEKER shall be appointed as the Managing Members. The details regarding the context of the authorities are included in the articles of association.
Number of reports presented by internal auditors to the audit committee or any relevant committee to the board	15
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	The information is under Article 3/b of the Annual Report of Board of Directors.
Name of the Chairman	Prof. Dr. Haluk GÖRGÜN
Name of the CEO	Prof. Dr. Haluk GÖRGÜN
If the CEO and Chair functions are combined: provide the link to the relevant PDP announcement providing the rationale for such combined roles	None.
Link to the PDP notification stating that any damage that may be caused by the members of the board of directors during the discharge of their duties is insured for an amount exceeding 25% of the company's capital	https://www.kap.org.tr/en/Bildirim/775680
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

CORPORATE GOVERNANCE INFORMATION FILLINGS

Composition of Board of Directors

Name, Surname of Board Member	Whether Executive Director Or Not	Whether Independent Director Or Not	The First Election Date To Board	Link to PDP Notification That Includes The Independency Declaration	Whether the Independent Director Considered By The Nomination Committee	Whether She/He is the Director Who Ceased to Satisfy The Independence or Not	Whether The Director Has At Least 5 Years' Experience On Audit, Accounting And/Or Finance Or Not
Haluk GÖRGÜN	Executive	Not independent	15/03/2017	-	Not considered	No	Yes
Mustafa Murat ŞEKER	Non-executive	Not independent	15/05/2013	-	Not considered	No	Yes
Mehmet ARIK	Non-executive	Independent	02/04/2018	https://www.kap.org. tr/en/Bildirim/748654	Considered	No	Yes
Ercümend ARVAS	Non-executive	Independent	31/03/2016	https://www.kap.org. tr/en/Bildirim/748654	Considered	No	Yes
Mehmet Fatih KACIR	Non-executive	Not independent	26/04/2019	-	Not considered	No	Yes
Alpaslan KAVAKLIOĞLI	Non-executive	Not independent	26/04/2019	2	Not considered	No	Yes
Salih KUL	Non-executive	Not independent	26/04/2019	-	Not considered	No	Yes
İbrahim ÖZKOL	Non-executive	Independent	15/03/2017	https://www. kap.org.tr/en/ Bildirim/7486540	Considered	No	Yes
Celal Sami TÜFEKCİ	Non-executive	Not independent	02/04/2018	-	Not considered	No	Yes

4.4. Meeting Procedures of the Board of Directors	
Number of physical board meetings in the reporting period (meetings in person)	34
Director average attendance rate at board meetings	91%
Whether the board uses an electronic portal to support its work or not	Yes
Number of minimum days ahead of the board meeting to provide information to directors, as per the board charter	3
The name of the section on the corporate website that demonstrates information about the board charter	It was regulated by internal directives and it is not open to the public.
Number of maximum external commitments for board members as per the policy covering the number of external duties held by directors	There are no limitations for the members of the Board of Directors regarding them to carry duties outside the company, except the duties that are subject to prohibition of competition.
4.5. Board Committees	
Page numbers or section names of the annual report where information about the board committees are presented.	The information is in the Annual Report > Corporate Governance Principles Compliance Report > Number of Committees Formed in the Board of Directors with Their Structures and Independency title.
Link(s) to the PDP announcement(s) with the board committee charters	The working principles of the committees are not disclosed on PDP, yet they are presented at the end of the Annual Report.

CORPORATE GOVERNANCE INFORMATION FILLINGS

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
Audit Committee	-	İbrahim ÖZKOL	Yes	Board member
Audit Committee	-	Ercümend ARVAS	No	Board member
Audit Committee	-	Mehmet ARIK	No	Board member
Corporate Governance Committee	-	Ercümend ARVAS	Yes	Board member
Corporate Governance Committee	-	Celal Sami TÜFEKCİ	No	Board member
Corporate Governance Committee	-	Salih KUL	No	Board member
Corporate Governance Committee	-	Pınar ÇELEBİ	No	Not board member
Committee of Early Detection of Risk	-	Mehmet ARIK	Yes	Board member
Committee of Early Detection of Risk	-	Salih KUL	No	Board member

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)	The information is in the Annual Report > Corporate Governance Principles Compliance Report > Number of Committees Formed in the Board of Directors with Their Structures and Independency title.
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)	The information is in the Annual Report > Corporate Governance Principles Compliance Report > Number of Committees Formed in the Board of Directors with Their Structures and Independency title.
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)	The information is in the Annual Report > Corporate Governance Principles Compliance Report > Number of Committees Formed in the Board of Directors with Their Structures and Independency title.
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 is carried by the Corporate Governance Committee.
4.6. Financial Rights	
Specify where the operational and financial targets and their achievement are presented in your annual report (Page number or section name in the annual report)	The information is given under Article 6 of the Report of Board of Directors.
Specify the section of website where remuneration policy for executive and non-executive directors are presented.	Investor Relations > Corporate Governance > Policies title.
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)	The information is given under Article 3/a of the Report of Board of Directors.

CORPORATE GOVERNANCE INFORMATION FILLINGS

Composition of Board Committees-II

Names Of The Board Committees	Name Of Committees Defined As "Other" In The First Column	The Percentage Of Non-executive Directors	The Percentage Of Independent Directors In The Committee	The Number Of Meetings Held In Person	The Number of Reports on its Activities Submitted to the Board
Audit Committee	-	100%	100%	4	7
Corporate Governance Committee	-	75%	25%	4	3
Committee of Early Detection of Risk	-	100%	50%	6	7

ASELSAN ELEKTRONİK SANAYİ VE TİCARET A.Ş. SIGNATURE SECTION OF ANNUAL REPORT OF THE BOARD OF DIRECTORS FOR THE PERIOD BETWEEN 1 JANUARY – 31 DECEMBER 2019

Prof. Dr. Haluk GÖRGÜN Chairman of the Board of Directors and CEO

(He did not attend the meeting.)

Prof. Dr. Mehmet ARIK Member of the Board of Directors

Prof. Dr. İbrahim ÖZKOL Member of the Board of Directors

E.Ar

Prof. Dr. Ercümend ARVAS Member of the Board of Directors

Alpaslan KAVAKLIOĞLU Member of the Board of Directors

Salih KUL Member of the Board of Directors



Mustafa Murat \$EKER Vice Chairman of the Board of Directors

IMAN

Mehmet Fatih KACIR Member of the Board of Directors

M

Dr. Celal Sami TÜFEKCİ Member of the Board of Directors

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TO THE BOARD OF DIRECTORS ASELSAN ELEKTRONİK SANAYİ VE TİCARET ANONİM ŞİRKETİ

Opinion

We have audited the annual report of Aselsan Elektronik Sanayi ve Ticaret Anonim Şirketi ("the Company") and its subsidiaries ("the Group") for the period of 1 January 2019 – 31 December 2019.

In our opinion, the consolidated financial information provided in the annual report of the Board of Directors and the discussions made by the Board of Directors on the situation of the Group are presented fairly and consistent, in all material respects, with the audited full set consolidated financial statements and the information we obtained during the audit.

Basis for Opinion

We conducted our audit in accordance with standards on auditing as issued by the Capital Markets Board of Turkey and Independent Auditing Standards which are part of the Turkish Auditing Standards as issued by the Public Oversight Accounting and Auditing Standards Authority of Turkey (POA). Our responsibilities under those standards are further described in the Auditors Responsibilities for the Audit of the Annual Report section of our report. We are independent of the Group in accordance with the Code of Ethics for Independent Auditors (Code of Ethics) as issued by the POA, and we have fulfi lled our other ethical responsibilities in accordance with the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our Auditor's Opinion on the Full Set Consolidated Financial Statements

We have expressed an unqualified opinion in our auditor's report dated February 11, 2020 on the full set consolidated financial statements of the Group for the period of 1 January 2019 – 31 December 2019.

The Responsibility of the Board of Directors on the Annual Report

In accordance with Articles 514 and 516 of the Turkish Commercial Code 6102 ("TCC") and the provisions of the Communiqué II-14.1 on the Principles of Financial Reporting in Capital Markets" ("the Communiqué") of the Capital Market Board ("CMB"), the management of the Group is responsible for the following items:

a) Preparation of the annual report within the first three months following the balance sheet date and submission of the annual report to the general assembly.

b) Preparation and fair presentation of the annual report; refl ecting the operations of the Group for the year, along with its financial position in a correct, complete, straightforward, true and honest manner. In this report, the financial position is assessed according to the consolidated financial statements. The development of the Group and the potential risks to be encountered are also noted in the report. The evaluation of the board of directors is also included in this report.

c) The annual report also includes the matters below:

- Subsequent events occurred after the end of the fiscal year which have signifi cance,
- The research and development activities of the Group,

• Financial benefits such as salaries and bonuses paid to the board members and to those charged governance, allowances, travel. accommodation and representation expenses, financial aids and aids in kind, insurances and similar deposits.

When preparing the annual report, the board of directors takes into account the secondary legislative arrangements published by the Ministry of Customs and Trade and related institutions.

Auditor's Responsibilities for the Audit of the Annual Report

Our aim is to express an opinion, based on the independent audit we have performed on the annual report in accordance with provisions of the Turkish Commercial Code and the Communiqué, on whether the consolidated financial information provided in this annual report and the discussions of the Board of Directors are presented fairly and consistent with the Group's audited consolidated financial statements and to prepare a report including our opinion. The independent audit we have performed is conducted in accordance with the standards on auditing as issued by the Capital Markets Board of Turkey. These standards require compliance with ethical provisions and the independent audit to be planned and performed ta obtain reasonable assurance on whether the consolidated financial information provided in the annual report and the discussions of the Board of Directors are free from material misstatement and consistent with the consolidated financial statements.

The name of the engagement partner who supervised and concluded this audit is Mehmet Nadi Abbasoğlu

Yeditepe Bağımsız Denetim ve YMM A.Ş. (Associate Member of Praxity AISBL)

Mehmet Nadi Abbasoğlu Partner

STATEMENT OF RESPONSIBILITY

İstanbul, 11 February 2020BORSA İSTANBUL A.Ş. Date: 11/02/2020 34467-Emirgan-İSTANBUL No: AS011-2020-0003

ASELSAN ELEKTRONİK SANAYİ VE TİCARET A.Ş.

BOARD OF DIRECTORS MEETING ON APPROVAL OF FINANCIAL TABLES AND ANNUAL REPORTS

DATE OF RESOLUTION: 11/02/2020 RESOLUTION NUMBER: 1067 STATEMENT OF RESPONSIBILITY AS PER SECTION TWO, ARTICLE 9 OF THE CAPITAL MARKETS BOARD COMMUNIQUÉ SERIAL NUMBERED II, NUMBERED 14.1

We hereby declare that;

a) We have examined the consolidated balance sheet dated 31 December 2018 and comparative consolidated balance sheet dated 31 December 2019, consolidated income statement issued for the period 1 January 2018 - 31 December 2018 and comparative consolidated income statement issued for the period 1 January 2019, consolidated additional financial tables, all audited independently, notes dated 31 December 2019 and annual report of the Board of Directors issued for the period ending on 31 December 2019,

b) As per the information we obtained in line with our duties and responsibilities at the company, the financial tables and annual report of the Board of Directors do not include any comments which materially misrepresent the facts and any missing data which might be misleading as of the announcement date,

c) As per the information we obtained in line with our duties and responsibilities at the Company, the consolidated financial statements prepared in accordance with the CMB Communiqué Serial II, No: 14.1, accurately represents the assets, liabilities, financial position and profit or loss information of the Company and the companies in the scope of consolidation; the annual report accurately represents the development and performance of the business, the financial position of the Company and the companies in the scope of consolidation and the significant risks and uncertainties which may company faces.

Regards,

Prof. Dr. İbrahim ÖZKOL Audit Comittee Chairman

E. Arus

Prof. Dr. Ercümend ARVAS Audit Comittee Member

(He did not attend the meeting.)

Prof. Dr. Mehmet ARIK Audit Comittee Member

Mehmet Fatih GÜÇLÜ Chief Financial Officer Vice President

ASELSAN BOARD of DIRECTORS ASSESSMENT REPORT REGARDING COMMITTEE ACTIVITIES IN 2019

In accordance with the title "Committees Formed within the Structure of Board of Directors" of Capital Markets Board's (CMB) "Communiqué on Determination and Application of Corporate Governance Principles"; Audit Committee, Corporate Governance Committee and Early Detection and Management of Risk Committee were formed and disclosed to public in our Company's Board of Directors meeting held on 26.04.2019. There are no Nomination and Remuneration Committees within the formation of Board of Directors and in accordance with the Communiqué the duties of these are carried out by the Corporate Governance Committee.

At our Company's Board of Directors meeting held on 26.04.2019 following the Ordinary General Assembly Meeting; in accordance with the Communiqué of CMB it was resolved that;

- Independent Member of Board of Directors İbrahim ÖZKOL shall be assigned as the chairman and Independent Member of Board of Directors Ercümend ARVAS and Independent Member of Board of Directors Mehmet ARIK shall be assigned as members of the Audit Committee,
- Independent Member of Board of Directors Ercümend ARVAS shall be assigned as the chairman and Celal Sami TÜFEKCİ, Salih KUL and pursuant to Capital Markets Board's Communique on Corporate Governance numbered II-17.1, Investor Relations Manager Pinar ÇELEBİ, shall be assigned as the members of Corporate Governance Committee,
- Independent Member of Board of Directors Mehmet ARIK shall be assigned as the chairman and Salih KUL shall be assigned as the member of the Early Detection and Management of Risk Committee.

While resolving on the forming of committees, Board of Directors paid attention for the members of the Audit Committee; the chairmen of Corporate Governance Committee and Early Detection and Management of Risk Committee to be chosen among the independent members of the Board of Directors and Investor Relations Department executive is a member of the Corporate Governance Committee within the framework of Capital Markets Board regulation.

The work directives, which regulate the field of activities and working principles of the committees, are approved by the Board of Directors and are submitted to public information on our Company website.

In 2019, each Board of Directors Committee fulfilled its duties and responsibilities and worked efficiently, with regard to Corporate Governance Principles and their own work directives.

Audit Committee assembled 4 times with the participation of authorities from the financial audit company within the year 2019 on dates 26.02.2019, 07.05.2019, 06.08.2019 and 05.11.2019. The issues submitted to the information and assessment of Audit Committee and the tasks carried out within the scope of the meetings held, are summarized below:

- The discussion of financial tables dated 31.12.2018, 31.03.2019, 30.06.2019 and 30.09.2019 and their submission to Board of Directors.
- The discussion of 2018 dividend distribution proposal.
- Assessments regarding the election of the independent audit company which will carry the audit task in year 2019 and its submission to Board of Directors.

ASELSAN BOARD of DIRECTORS ASSESSMENT REPORT REGARDING COMMITTEE ACTIVITIES IN 2019

In order to maintain the efficiency of internal audit, coordination meetings were held with the Internal Audit Presidency to strengthen the communication and establish direct and continuous communication between Audit Committee and Internal Audit Presidency. Audit Committee-Internal Audit Presidency coordination meetings are the most important factor in communicating between Audit Committee and Internal Audit Presidency and in this direction, 8 meetings were conducted on dates 22.01.2019, 20.02.2019, 13.03.2019, 21.05.2019, 16.07.2019, 16.09.2019, 14.10.2019 and 19.12.2019 within the year 2019.

Corporate Governance Committee assembled 4 times within the year 2019 on dates 28.01.2019, 24.06.2019, 22.07.2019 and 12.12.2019. The issues submitted to the information and assessment of Corporate Governance Committee and the tasks carried out within the scope of the meetings held, are summarized below:

- · Corporate Governance Committee Evaluation Report,
- Preparation of ASELSAN Corporate Governance Principles Compliance Report and the submission of the report to Board of Directors,
- · Independent Board Members selection process,
- Corporate Governance Rating,
- · Preparation of Corporate Governance Committee Evaluation Report and the submission of the report to Board of Directors,
- · Presentation regarding the compliance of ASELSAN Strategic Plan, Technology Roadmap and Master Plan by the Vice Presidency of Technology and Strategy Management,
- · Discussing the proposed amendments in the ASELSAN Ethical Principles Directive,
- · Discussing the amendment of the ASELSAN Disciplinary Procedures and Practices Functor as a directive and updating the "ASELSAN Allowance Directive" offered by the Vice Presidency of Corporate Governance as a functor.

Corporate Governance Committee, which was formed in order to monitor our Company's compliance to Corporate Governance Principles, to conduct studies about the enhancement of compliance and to propose suggestions to the Board of Directors; have detected whether Corporate Governance Principles are applied in our Company or not, and if not, the reason for it along with the conflicts occurring because of not complying fully to these principles; have submitted proposals for improvement of Corporate Governance practices to the Board of Directors and monitored the activities of Investor Relations Department.

Early Detection and Management Risk of Committee has the duties of identifying and assessing the risks that may affect ASELSAN from reaching its goals; managing these risks in conformity with our company's risk taking profile, reporting them, include them in the decision mechanisms and in this direction, auditing and executing the activities for establishing internal control systems. For this reason, Early Detection and Management of Risk Committee assembled 6 times within the year 2019 on dates 09.01.2019, 07.03.2019, 23.05.2019, 16.07.2019, 17.09.2019 and 26.11.2019. The tasks carried out by Early Detection and Management of Risk Committee and assessment of Early Detection and Management of Risk Committee are summarized below:

- "2018 Evaluation Report" was prepared and submitted to Board of Directors in January 2019.
- "Corporate Risk Evaluation Report" was prepared and submitted to Board of Directors in January 2019, March 2019, May 2019, July 2019, October 2019 and November 2019. In the reports;
 - Important risks of ASELSAN are evaluated and monitored. In order to track risk related events, risk indicators, risk classification, explanations, ratings, risk reactions, owner/responsible, and preventive/reducing actions are included.
 - Risk indicators and the risks that have higher levels than the warning level are included at the end of the report in order to draw the attention of Board of Directors.
- · Risk management chapters were prepared and included in the company annual report and the other reports prepared according to legislation.

AUDIT COMMITTEE WORK DIRECTIVES

1. PURPOSE

The purpose of These Directives is to determine duties, authorities, responsibilities and work principles of the Audit Committee.

2. SCOPE

These Directives cover the works and activities to be performed by the Audit Committee as per the related regulations.

3. DEFINITIONS

3.1 Independent Auditing Firm (IAF): Firms meeting the requirements of the Capital Markets Board Communiqué and granted with the authority of independent audit on the capital market as per Article 22, 4/c of the Act.

3.2 Auditor: Auditor titles of any seniority and rank assigned to make audits by the Independent Auditing Firms.

3.3 Audit Committee: Committee appointed among the company's Board of Directors as per Capital Markets Board Communiqué Serial numbered X, numbered 22.

3.4 Audit Committee Secretariat: ASELSAN personnel arranging operations and meetings of Audit Committee, archiving correspondences and coordinating communication between the members.

3.5 Financial Tables: Balance sheets and incomes statements issued as interim and annual documents, including the footnotes, and tables enclosed to such documents.

3.6 Financial Reports: Reports including financial tables, Board of Directors activity reports and states of responsibility.

3.7 Internal Auditor: Personnel assigned for internal auditing activities.

3.8 Internal Audit Department (IAD): ASELSAN Department in charge of internal audit activities.

3.9 Executives: Persons having titles such as under Financial Managment Vice Presidency, Vice President, Director and Managers that are authorized to represent and bind the company.

3.10 Stakeholders: In achieving the objectives of the Company or with an interest in the activities of employees, creditors, customers, suppliers, various non-governmental organizations as well as individuals, institutions or interest groups.

4. RELATED REFERENCE DOCUMENTS

4.1 Capital Markets Board Communiqué on Independent Audit on Capital Market dated 12.06.2006, Serial numbered X and numbered 22.

4.2 Capital Markets Board Communiqué on Determination and Practice of Corporate Governance Principles dated 03.01.2014, Serial numbered II and numbered 17.

4.3 ASELSAN Board of Directors Work Directives numbered ASY-01-060.

4.4 Turkish Commercial Code (TCC).

5. DUTIES AND RESPONSIBILITIES

5.1. BOARD OF DIRECTORS' DUTIES AND RESPONSIBILITIES REGARDING THE AUDIT COMMITTEE

5.1.1. Appointing Audit Committee members,

5.1.2. Authorizing Committee Members,

5.1.3. Making separate Board of Directors Resolution for approving interim and annual financial tables and reports evaluated by the Committee and ubmitted to the Board of Directors,

5.1.1.4. Taking necessary actions for facilitating operations of Audit Committee members.

5.2. DUTIES, AUTHORITIES AND RESPONSIBILITIES OF THE AUDIT COMMITTEE

5.2.1. GENERAL DUTIES AND RESPONSIBILITIES OF THE AUDIT COMMITTEE

5.2.1.1. The Audit Committee shall ensure; company's accounting system, public disclosure of financial information, independent audit of the Company's internal control and makes supervision of the operation and effectiveness of the internal control system. Selection of independent audit company, prepared independent audit contracts and the initiation of the audit process and the independent auditors' work in each stage is carried out under the supervision of Audit Committee.

5.2.1.2. The Audit Committee notify, their duties and responsibilities identified in the field and their evaluations and recommendations on the subject immediately to the Board of Directors.

AUDIT COMMITTEE WORK DIRECTIVES

5.2.1.3. The Audit Committee's duties include reviewing, settling the complaints forwarded to the Company about ASELSAN's accounting, internal audit system and independent audit; determining the methods and criteria to be practiced on assessing company personnel's statements on company's accounting and independent audit as per the confidentiality principles are determined by Audit Committee.

5.2.1.4. The Audit Committee might seek assistance of independent consultants on matters required for its operations provided that the costs shall be covered by ASELSAN. But in this case the person who received services / organizations with information about these people / organizations of any relationship with the company on the issue of whether information is given in the annual report.

5.2.1.5. The duties and responsibilities of the Audit Committee shall not relive Board of Directors from its responsibilities imposed by the Turkish Commercial Code.

5.2.2. DUTIES AND RESPONSIBILITIES OF THE AUDIT COMMITTEE REGARDING INDEPENDENT AUDIT OF ASELSAN

5.2.2.1. The Audit Committee shall determine the services to be provided by the Independent Auditing Firm and services and submit to the Board of Directors approval.

5.2.2.2. It shall ensure signing a contract with IAF.

5.2.2.3. It shall monitor compliance with contract provisions during IAF operations.

5.2.2.4. It shall always be in contact with the independent auditor for monitoring any incidents having an impact on the independency or objectivity of the independent auditor and shall ensure elimination of such incidents, if any, and efficient performance of the auditor.

5.2.2.5. It shall evaluate the outcomes of audits performed by IAF and financial tables at the joint meetings to be scheduled.

5.2.2.6. It shall evaluate the important findings received from IAF about ASELSAN accounting policy and practices and the auditor's suggestions.

5.2.2.7. It shall obtain the correspondences made between IAF and ASELSAN Management from the Firm.

5.2.2.8. It shall ensure that Independent Audit activities are included on the Board of Directors agenda minimum every 3 months for the purpose of determining efficiency of IAF operations.

5.2.2.9 IAF shall immediately inform the Audit Committee in written about important issues related to ASELSAN's accounting policy and practices, alternative implementation and public disclosure options from Public Oversight Accounting and Auditing Standards Authority as per the firm's accounting standards and accounting principles previously declared to the Company management and possible outcomes, practice suggestions as well as important correspondences made with the Company management.

5.2.3. DUTIES AND RESPONSIBILITIES OF THE AUDIT COMMITTEE REGARDING THE FINANCIAL REPORTS

5.2.3.1. The Audit Committee shall consult the company's authorized executives and IAF about interim and annual financial reports to be disclosed to the public in terms of compliance to the Company's accounting principles and to the actual figures and shall inform the Board of Directors in written with its own evaluation.

5.2.3.2. It shall sign the interim and annual financial tables, activity reports controlled and undersigned by the ASELSAN's authorized executives as well as the statement of responsibility enclosed as Annex-A quarterly and ensure public disclosure of these.

5.2.3.3. Financial Reports approved by the Audit Committee and Board of Directors shall be disclosed to the public on the Public Disclosure Platform and Company's website.

5.2.4. DUTIES AND RESPONSIBILITIES OF THE AUDIT COMMITTEE REGARDING TO INTERNAL CONTROLS

5.2.4.1 It shall monitor efficiency and adequacy of the internal control system adopted by the company and its subsidiaries and ensures its acknowledgement by the personnel and support of the management.

5.2.4.2. It shall evaluate auditor and internal auditor suggestions related to internal control and whether or not the necessary ones are applied.

5.2.4.3. It shall monitor the process of forming a mechanism for reviewing and settling complaints received from Stakeholders related to company transactions, which violate the regulation and are unethical, and its operations as per the confidentiality principle.

5.2.5. DUTIES AND RESPONSIBILITIES OF THE AUDIT COMMITTEE REGARDING TO THE INTERNAL AUDITS

5.2.5.1. It shall review efficiency of IAD directives, structure and activities and ensure settlement of particulars limiting the internal audit operations. 5.2.5.2. It shall monitor the coordination and communication between the IAD and Company's other departments, subsidiaries and independent audits for ensuring smooth processes.

5.2.5.3. It shall evaluate the audit plans and internal audit reports issued by IAD.

AUDIT COMMITTEE WORK DIRECTIVES

5.3. DUTIES AND RESPONSIBILITIES OF AUDIT COMMITTEE SECRETARIAT

5.3.1. It shall provide communication between the members, prepare committee meetings, keep meeting minutes and duly archive correspondences.

5.3.2. It shall plan, realize and follow up formalities before, during and after the Committee meetings in order to ensure outmost efficiency.

5.3.3. It shall ensure timely communication all of kinds of information to the committee members.

5.3.4. It shall always keep the records available to the members.

6. STRUCTURE OF THE AUDIT COMMITTEE

6.1. The Audit Committee shall be as a member of Board of Directors and have minimum 2 (two) members. If the committee has two members the both members shall be Board of Directors Non-executive independent members If there are more than two members, then the same rule shall be applicable for majority of the members. Members of the Audit Committee should have experience at least five (5) years at audit / accounting and finance subject.

6.2. As per the Capital Markets Board regulations, the Audit Committee shall be formed and authorized on the first Board of Directors Meeting held after the Annual Ordinary ASELSAN General Assembly Meeting.

6.3. At least two Audit Committee members shall be required for the committee meetings and at least two members are required for decisions.

6.4. The Audit Committee shall convene minimum every 3 months and four times a year and out**come of the meeting connecting with the** minute submitted to the Board of Directors. The audit committee's activities and about the outcome of the meeting must be disclosed in the annual report. During the period how many times the audit committee makes written notification to the Board shall indicated in the annual report.

6.5. The Committee's secretariat duties related to the financial tables shall be performed by the Chief Office of Capital Markets Board Financial Control and Reporting attached to the Accounting Department and the secretariat duties related to internal control and internal audit activities shall be performed by IAD.

7. ENFORCEMENT

These Directives have been approved by the Board of Directors as per the resolution dated 22.09.2003 and numbered 443/16 and came into force as of 25.09.2003

8. EXECUTION

The Audit Committee shall be responsible for executing the provisions listed on these Directives.

9. CIRCULATION PLAN

The document shall be circulated as per ASELSAN PLAN A. It shall be published to all users via intranet and internet.

10. ANNEX

EK A--STATEMENT OF RESPONSIBILITY

STATEMENT OF RESPONSIBILITY

BORSA İSTANBUL A.Ş. 34467-Emirgan-İSTANBUL Date: 11/02/2020 No: AS011-2020-0003

ASELSAN ELEKTRONİK SANAYİ VE TİCARET A.Ş.

BOARD OF DIRECTORS MEETING ON APPROVAL OF FINANCIAL TABLES AND ANNUAL REPORTS

DATE OF RESOLUTION: 11/02/2020 RESOLUTION NUMBER: 1067 STATEMENT OF RESPONSIBILITY AS PER SECTION TWO, ARTICLE 9 OF THE CAPITAL MARKETS BOARD COMMUNIQUÉ SERIAL NUMBERED II, NUMBERED 14.1

We hereby declare that;

a) We have examined the consolidated balance sheet dated 31 December 2018 and comparative consolidated balance sheet dated 31 December 2019, consolidated income statement issued for the period 1 January 2018 - 31 December 2018 and comparative consolidated income statement issued for the period 1 January 2019, consolidated additional financial tables, all audited independently, notes dated 31 December 2019 and annual report of the Board of Directors issued for the period ending on 31 December 2019,

b) As per the information we obtained in line with our duties and responsibilities at the company, the financial tables and annual report of the Board of Directors do not include any comments which materially misrepresent the facts and any missing data which might be misleading as of the announcement date,

c) As per the information we obtained in line with our duties and responsibilities at the Company, the consolidated financial statements prepared in accordance with the CMB Communiqué Serial II, No: 14.1, accurately represents the assets, liabilities, financial position and profit or loss information of the Company and the companies in the scope of consolidation; the annual report accurately represents the development and performance of the business, the financial position of the Company and the companies in the scope of consolidation and the significant risks and uncertainties which may company faces.

Regards,

Mehmet Fatih GÜÇLÜ Chief Financial Officer Vice President

Prof. Dr. İbrahim ÖZKOL Audit Comittee Chairman Prof. Dr. Ercümend ARVAS Audit Comittee Member Prof. Dr. Mehmet ARIK Audit Comittee Member

ASELSAN ELEKTRONİK SANAYİ VE TİCARET A.Ş. BOARD OF DIRECTORS' EARLY DETECTION AND MANAGEMENT OF RISK COMMITTEE WORK DIRECTIVES

1. PURPOSE

The purpose of these directives is to determine the duties, authorities, responsibilities and work principles of the Early Detection and Management of Risk Committee, which is established under Article 378 of the Turkish Commercial Code numbered 6102 and Board of Directors Resolution dated 10.04.2012, as per the Turkish Commercial Code and Corporate Governance Principles announced by the Capital Markets Board.

2. SCOPE

These directives cover works and actions to be performed as per the Turkish Commercial Code and Corporate Governance Principles by the Early Detection and Management of Risk Committee and/or Company personnel not a member of the Committee but assigned by the Committee.

3. DEFINITIONS

3.1. Independent Auditing Firm (IAF): Firms meeting the requirements of the Capital Markets Board Communiqué and granted with the authority of independent audit on the capital market as per Article 22/d of the Act.

3.2. Auditor: Auditor titles of any seniority and rank assigned to make audits by the Independent Auditing Firms

3.3. Early Detection and Management of Risk Committee (Committee): A committee to be appointed by the Board of Directors among the Board of Directors members or third parties specialized in certain areas for the purpose of fulfilling the liabilities listed on the Turkish Commercial Code for systematic early detection and management of company risks and executing, coordinating related risks.

3.4. Early Detection and Management of Risk Committee Secretariat (Secretariat): ASELSAN personnel arranging operations and meetings of Early Detection and Management of Risk Committee, archiving correspondences and coordinating communication between the members.

3.5. Capital Markets Board: Public legal entity established as per Article 17 of the Capital Market Law.

3.6. Company: ASELSAN Elektronik Sanayi ve Ticaret A.Ş.

4. RELATED REFERENCE DOCUMENTS

4.1. Turkish Commercial Code.

4.2. Capital Markets Board Regulations.

4.3. Corporate Governance Principles published by the Capital Markets Board

4.4. Regulations, provisions and principles on ASELSAN Articles of Association

5. DUTIES AND RESPONSIBILITIES

5.1. DUTIES AND RESPONSIBILITIES OF ASELSAN EARLY DETECTION AND MANAGEMENT OF RISK COMMITTEE

5.1.1. The main function of the Early Detection and Management of Risk Committee is early detection of risks threatening existence, development and sustainability of ASELSAN as well as taking action for the risks determined and trying to manage the risks determined.

5.1.2. The Committee shall determine, identify the potential risks having an impact on ASELSAN beforehand and ensure duly management of the risks according to the risk-taking approach of the company.

5.1.3. It shall evaluate the situation by means of a report to be submitted to the Board of Directors every two months as well as pointing out the threats, if any, and suggesting solutions.

5.1.4. It shall review the changes suggested to the risk management systems by the Enterprise Risk and Process Management Department under Finance Directorate as often as the agenda permits but minimum once a year.

5.1.5. The Committee shall advise the Board of Directors on internal audit systems including risk management and information systems and processes minimizing the risks and related impacts to be suffered by the shareholders and company stakeholders.

5.1.6. The Committee shall prepare an annual assessment report, including meeting frequency of Committee members and activities performed, which shall be included in the Annual Company Activity Report and basis to the Board of Directors assessment related to the work principles and Committee's efficiency.

5.1.7. The resolutions taken at the meetings shall be documented and undersigned by the Committee Members and archived by the Secretariat.

ASELSAN ELEKTRONİK SANAYİ VE TİCARET A.Ş. BOARD OF DIRECTORS' EARLY DETECTION AND MANAGEMENT OF RISK COMMITTEE WORK DIRECTIVES

5.2. DUTIES AND RESPONSIBILITIES OF THE EARLY DETECTION AND MANAGEMENT OF RISK COMMITTEE SECRETARIAT

5.2.1. It shall provide communication between the members, prepare committee meetings, keep meeting minutes and duly archive correspondences.

5.2.2. It shall plan, realize and follow up formalities before, during and after the Committee meetings in order to ensure outmost efficiency.

5.2.3. It shall ensure timely communication all of kinds of information to the committee members.

5.2.4. It shall always keep the records available to the members.

6. STRUCTURE AND AUTHORITIES OF THE EARLY DETECTION AND MANAGEMENT OF RISK COMMITTEE

6.1. COMMITTEE'S STRUCTURE

6.1.1. The Committee shall be formed and authorized at the first Board of Directors meeting held after the Annual Ordinary General Assembly Meeting of the company, as per the Capital Markets Board regulations.

6.1.2. The Committee shall have minimum two members. If the committee has two members then both members shall be Board of Directors members not having executive function and if there are more than two members, then majority of the members shall not have executive functions. Third parties specialized in certain areas can also be appointed as Committee members. The Committee chairman shall be appointed among Independent Members of Board of Directors.

6.1.3. The Chief Executive Officer / General Manager shall not take office in the committee.

6.1.4. The secretariat formalities of the Committee including the preparation of the report submitted to the Board of Directors shall be performed by Enterprise Risk and Process Management Department under Finance Directorate.

6.1.5. One more than half of the total members shall be required for committee meetings and majority is required for decisions.

6.1.6. The Committee shall convene once every two months, unless otherwise is required, and, if required, it shall convene at the Company's registered office following a call to be made by the Secretariat on behalf of the Committee Chairman. The Committee Chairman might offer to reschedule the meeting date, hour and place provided that the Committee Members are informed beforehand.

6.2. AUTHORITIES OF THE COMMITTEE

6.2.1. If required, the Committee shall start special inspections and appoint people specialized in their areas as consultant for the purpose of ensuring assistance in such inspections.

6.2.2. If required, the Committee shall hold meetings with representatives of Company's related parties and specialists, including Company personnel or subsidiaries; and under the provision of the Board of Directors and coordinated with the General Manager, it shall seek external and professional consultancy service.

6.2.3. The Committee shall act according to its authorities and responsibilities and make recommendations to the Board of Directors however the Board of Directors shall always have the final decision making responsibility and the Committee shall not relieve the Board of Directors from its duties and responsibilities arising from the Turkish Commercial Code.

7. ENFORCEMENT

These directives have been approved by the Board of Directors as per the resolution dated 29.11.2012 and numbered 750/4.3.e and came into force as of 29.11.2012.

8. EXECUTION

ASELSAN Early Detection and Management of Risk Committee shall be responsible for executing the provisions listed on these directives.

9. CIRCULATION PLAN

The document shall be circulated as per ASELSAN PLAN A. It shall be published to all users via intranet and internet. The document shall be circulated as per ASELSAN PLAN A. It shall be published to all users via intranet and internet.

ASELSAN ELEKTRONİK SANAYİ VE TİCARET A.Ş. BOARD OF DIRECTORS' CORPORATE GOVERNANCE COMMITTEE WORK DIRECTIVES

1. PURPOSE

The purpose of these directives is to determine the duties, authorities, responsibilities and work principles of the Corporate Governance Committee established as per the Corporate Governance Principles announced by the Capital Markets Boards (CMB).

2. SCOPE

These directives cover works and actions to be performed as per the Corporate Governance Principles by the Corporate Governance Committee and/or Company personnel not a member of the Committee but assigned by the Committee.

3. DEFINITIONS

3.1. Corporate Governance: Index of relations between the Board of Directors, shareholders and other stakeholders of a company.

3.2. Corporate Governance Committee (Committee): A committee to be appointed by the Board of Directors among the Board of Directors members or third parties specialized in certain areas for the purpose of executing and coordinating Corporate Governance Principles related formalities of the Company, provided that majority of the members are from the Board of Directors and the executive of Investor Relations Department shall be appointed as a member of the Committee.

3.3. Corporate Governance Committee Secretariat (Secretariat): ASELSAN personnel arranging operations and meetings of Corporate Governance Committee, archiving correspondences and coordinating communication between the members.

3.4. Capital Markets Board: Public legal entity established the Capital Market Law numbered 6362.

3.5. Company: ASELSAN Elektronik Sanayi ve Ticaret A.Ş.

4. RELATED REFERENCE DOCUMENTS

4.1. Capital Markets Board Regulations.

4.2. Corporate Governance Principles published by the Capital Markets Board.

4.3. Prepared as per the regulations, provisions and principles on ASELSAN Articles of Association.

5. DUTIES AND RESPONSIBILITIES

5.1. DUTIES AND RESPONSIBILITIES OF ASELSAN CORPORATE GOVERNANCE COMMITTEE

5.1.1. The Corporate Governance Committee shall mainly work on implementing corporate governance principles at the Company.

5.1.2. The Committee shall determine whether or not the Corporate Governance Principles are implemented and if not implemented, the Committee shall determine the reasons as well as conflicts of interest caused by failing to fully comply with these principles.

5.1.3. It shall monitor the operations of Investor Relations Department.

5.1.4. It shall play a leading part in maintaining effective communication between the Board of Directors, Company and shareholders, eliminating and settling any possible disputes as well as advising the Board of Directors accordingly.

5.1.5. The Committee shall advise the Board of Directors on due effectiveness of infrastructures related to management applications aiming at improving company performance as well as acknowledgement by the personnel and support of the management.

5.1.6. The Committee shall issue the Company's Corporate Governance Compliance Report.

5.1.7. The Committee shall revise the Company's Activity Report to be disclosed to the public and checks whether or not the information included in the Report conform to the information possessed by the Committee.

5.1.8. The Committee shall prepare an annual assessment report, including meeting frequency of Committee members and activities performed, which shall be included in the Annual Company Activity Report and basis to the Board of Directors assessment related to the work principles and Committee's efficiency.

5.1.9. The Committee shall make suggestions ensuring compliance to the law and regulations, company's Information Policy in terms of public disclosures to be made.

5.1.10. The Committee shall present its operations and suggestions to the Board of Directors in the form of a report.

5.1.11. The resolutions taken at the meetings shall be documented and undersigned by the Committee Members and archived by the Secretariat.

5.1.12. If Nomination Committee and Remuneration Committee cannot be established separately due to the structure of the Board of Directors, the Committee shall perform the duties assigned to these committees as per the Corporate Governance Principles published by the Capital Markets Board.

ASELSAN ELEKTRONİK SANAYİ VE TİCARET A.S. BOARD OF DIRECTORS' CORPORATE GOVERNANCE COMMITTEE WORK DIRECTIVES

5.1.13. Within the scope of the responsibilities of Nomination Committee; the Committee carries the duties on creating a transparent system for the evaluation of the nominees for Board of Directors and the nominees for the executives with administrative responsibility, their training and setting out policies and strategies regarding these matters. In this context, the Committee also regularly makes assessments on the structure and efficiency of Board of Directors and presents suggestions for improvement related to these issues.

5.1.14. Within the scope of the responsibilities of Remuneration Committee; the Committee determines and monitors the principles, criteria and the practices for the remuneration of the members of Board of Directors and executives with administrative responsibility, considering the long term objectives of the Company. In this context, the Committee also presents suggestions about the remuneration of the members of Board of Directors and executives with administrative responsibility, taking the level of achievement regarding the remuneration criteria met into account.

5.2. DUTIES AND RESPONSIBILITIES OF THE CORPORATE GOVERNANCE COMMITTEE SECRETARIAT

5.2.1. It shall provide communication between the members, prepare Committee meetings, keep meeting minutes and duly archive correspondences.

5.2.2. It shall plan, realize and follow up formalities before, during and after the Committee meetings in order to ensure outmost efficiency.

5.2.3. It shall ensure timely communication all of kinds of information to the Committee members.

5.2.4. It shall always keep the records available to the members.

5.2.5. It shall periodically submit reports on investor questions and content.

6. STRUCTURE AND AUTHORITIES OF THE CORPORATE GOVERNANCE COMMITTEE

6.1. COMMITTEE'S STRUCTURE

6.1.1. The Committee shall be formed and authorized at the first Board of Directors meeting held after the Annual Ordinary General Assembly Meeting of the company, as per the Capital Markets Board regulations.

6.1.2. The Committee shall be formed by at least 3 (three) members; two of whom shall be members of Board of Directors and one shall be the Investor Relations Department Executive. The majority of the members of Board of Directors in the Committee shall not have executive functions. Investor Relations Department Executive must have the "Capital Markets Activities Advanced Level" and "Corporate Governance Rating Expertise" certificates and must be working full time in the Company.

6.1.3. Third parties specialized in certain areas who are not members of Board of Directors can also be appointed as Committee members. The Committee Chairman shall be appointed among Independent Members of Board of Directors.

6.1.4. The Chief Executive Officer / General Manager shall not take office in the Committee.

6.1.5. The secretariat formalities of the Committee shall be performed by Investor Relations Department.

6.1.6. One more than half of the total members shall be required for Committee meetings and majority is required for decisions.

6.1.7. The Committee shall convene every 3 (three) months as a principle and, if required, it shall convene at the Company's registered office following a call to be made by the Secretariat on behalf of the Committee Chairman. The Committee chairman might reschedule the meeting date, hour and place provided that the Committee Members are informed beforehand.

6.2. AUTHORITIES OF THE COMMITTEE

6.2.1. If required, the Committee shall start special inspections and appoint people specialized in their areas as consultant for the purpose of ensuring assistance in such inspections.

6.2.2. If required, the Committee shall hold meetings with representatives of Company's related parties and specialists, including Company personnel or subsidiaries; and it shall seek external and professional consultancy service.

6.2.3. The Committee shall act according to its authorities and responsibilities and make recommendations to the Board of Directors however the Board of Directors shall always have the final decision making responsibility.

7. ENFORCEMENT

These directives have been approved by the Board of Directors as per the resolution dated 23.02.2006 and numbered 529/2.d and came into force as of 30.05.2006.

8. EXECUTION

ASELSAN Corporate Governance Committee shall be responsible for executing the provisions listed on these directives.

9. CIRCULATION PLAN

The document shall be circulated as per ASELSAN PLAN A. It shall be published to all users via intranet and internet.

PROFIT DISTRIBUTION PROPOSAL

	ASELSAN ELEKTRONİK SANAYİ VE TİCAR	ET A.Ş. 2019 DIVIDEND DISTRIBUTION T	ABLE (TL)
1- Is	sued Capital		1.140.000.000,00
2- Fi	rst Legal Reserve (According to Legal Records)		221.616.368,62
	rmation regarding the privileges on profit distribution as	per the Company Articles of	There are no privileges.
Asso	ciation, if there are any		
		According to Capital Markets Board	According to the Legal Records
3-	Profit for the Period	3.308.531.452,00	3.686.183.140,00
4-	Taxes Payable (+) (1)	44.141.945,00	0,00
5-	NET PROFIT FOR THE PERIOD (=) ⁽²⁾	3.340.447.007,00	3.686.183.140,00
6-	Accumulated Loss (-)	0,00	0,00
7-	First Legal Reserve (-)	6.383.631,38	6.383.631,38
8-	NET DISTRIBUTABLE PROFIT FOR THE PERIOD (=)	3.334.063.375,62	3.679.799.508,62
9-	Donations Made throughout the Year (+)	550.000,00	
10-	Net Distributable profit for the period, donations included	3.334.613.375,62	
11-	First Dividend to Shareholders	1.197.000.000,00	1.197.000.000,00
	- Cash	57.000.000,00	57.000.000,00
	- Non paid-up share	1.140.000.000,00	1.140.000.000,00
	- Total	1.197.000.000,00	1.197.000.000,00
12-	Dividends distributed to Preferred Shareholders	0,00	0,00
13-	Dividends distributed to;	0,00	0,00
	- Members of the Board of Directors	0,00	0,00
	- Employees	0,00	0,00
	- Others than Shareholders	0,00	0,00
14-	Dividends distributed to Holders of Usufruct Right		
14-	Certificates	0,00	0,00
15-	Second Dividend to Shareholders	278.000.000,00	278.000.000,00
16-	Secondary Legal Reserve	27.800.000,00	27.800.000,00
17-	Statutory Reserve	0,00	0,00
18-	Special Reserve	0,00	0,00
19-	EXTRAORDINARY RESERVE	1.831.263.375,62	2.176.999.508,62
20-	Other resources to be distributed	0,00	0,00

⁽¹⁾ Our Company has gained Continuing Operations Tax Income valuing TL 44.141.945,- within the scope of the Law regarding the Support of Research and Development Activities, numbered 5746.

⁽²⁾ The net profit for the period attributable to equity holders of the parent valuing TL 3.340.447.007,- is used, since TL 12.226.389,- of the net profit for the period corresponds to noncontrolling interests, where our Company's net profit for the period is TL 3.352.673.396,-.

It was decided at the Board of Directors meeting dated 25 February 2020 that; of the net profit generated by our company from its 2019 activities;

- In accordance with Article 519/(1) of the Turkish Commercial Code, General Legal Reserves amounting to TL 6.383.631,38 is going to be allocated,
- Out of net distributable profit to the shareholders for the period, calculated in the framework of the dividend distribution regulations and decisions of the Capital Markets Board, gross, TL 335.000.000,- (Kuruş 29,38596 per share of TL 1 and 29,38596% on the basis of the capital) (net TL 284.750.000,- Kuruş 24,97807 per share of TL 1 and 24,97807% on the basis of the capital) shall be distributed in the form of cash and TL 1.140.000.000,- shall be distributed as non paid-up share, which equals to 100% of the capital,
- In accordance with Article 519/(2) of the Turkish Commercial Code, General Legal Reserves amounting to TL 27.800.000,- is going to be allocated,
- The remaining profit is going to be allocated as Extraordinary Legal Reserves,

and distribution of the cash dividends to the shareholders are planned to be distributed as of July 17, 2020, October 16, 2020, and December 18, 2020 in 3 equal installments and the non paid-up share is to be distributed following the completion of the legal process shall be submitted to the 45th Ordinary General Assembly.

NOTES



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