

SUSTAINABILITY  
REPORT  
2021



# EMPOWER

YOUR FUTURE





## **WE ARE WORKING HARD TO MAKE DREAMS COME TRUE.**

Turkish Aerospace continues its rise on a global scale with its responsibilities, values, and R&D-based achievements. Following innovative technologies and integrating them into our products to ensure sustainable competitive advantage, we are taking firm steps towards becoming a pioneering company leading the aerospace ecosystem.

We are working not only to develop the aircraft but also to bring about positive effects on the world. We are commissioning the pioneering sustainable practices in aviation for the next generations. We are taking important steps in environmental issues such as protecting our natural resources, energy efficiency, zero waste, and recycling.

We are growing and increasing our employment and the number of suppliers so that more children and young people can take their dream jobs. The more benefits we provide to the country's economy, society, and the green future, and the more dreams we help to realize, the more successful we feel.





# IT'S BEYOND A BUSINESS FOR US, WE ARE FULFILLING OUR DREAMS.

We are a large family with thousands of employees. We all have different talents and values added to the business, but we all have the same goal: We implement leading sustainable practices in aviation for future generations with projects that will reduce the country's foreign dependency in defense industry. We all had stars in our eyes when we were children and young. That is why Turkish Aerospace is always at heights and always rising. We consider our projects such as ANKA, T129 ATAK, HÜRKUŞ, HÜRJET not just as a business, but rather as fulfilling a dream. Focused on goals and new discoveries, we are the future of technology, innovations, aviation, and defense with original end-to-end designs.

Total sales

**TL 13.9 billion**



# OUR WINGS THAT WE HAVE SPREAD WITH R&D EXTEND TO ALL OVER THE WORLD.

We implement not only defense industry projects, but also very important sky projects with our R&D strength. We cooperate with our suppliers towards a sustainable ecosystem. We are a reliable partner of the international industry and a rising global player in the industry. For example, we deliver a superior performance in meeting the quality standards, on-time delivery and affordability goals of the global giant Boeing. We are in many countries, from Malaysia to Pakistan, from Germany to France. The sun never sets on our company.

---

Total number of employees

**11,424**

Number of R&D employees

**3,809**





# WE ARE WORKING NOT ONLY FOR OUR COUNTRY BUT ALSO FOR OUR PLANET.

Our business is not only about aerodynamics, thrust, engine performances. We always take a beautiful future into account. We are working not only to develop aircraft, but also to have a positive impact on the world, and we attempt innovative initiatives in this respect. We have major targets on carbon emissions in the long term. To this end, we are gradually reducing carbon emissions. We also hold the title of “Green World Ambassador” for transforming almost all of our waste for the sake of healthy future generations, who fulfill their dreams. We dispose of our waste, use natural resources efficiently, focus on renewable energy, and work diligently to fulfill our responsibilities in terms of climate change.



---

## Our carbon footprint

**0.15** tCO<sub>2</sub>e/(m<sup>2</sup>)



# WE ARE FORMING THE FUTURE, NAMELY, OUR CHILDREN AND OUR YOUNG PEOPLE TODAY.

We have great responsibilities to society, especially to our children and young people, in line with our human-centered improvement approach. We develop projects in order to discover and improve their talents. In 2021, more than 400 newly graduated engineers joined us through the “Engineer Development” Program. We raise awareness about aviation, space, and engineering among primary school children with the “Gökyüzü Çocukları” (Sky Kids) Project, and we are forming the future today. The children reaching out to us today and saying that “I want to work in the Turkish Aerospace” will be the most valuable actors in our sustainable success.

---

## Sky Kids Project

# 7 schools in 7 provinces





# TABLE OF CONTENTS

- 08 Activity
- 09 Sustainability Performance in 2021

## Turkish Aerospace at a Glance

- 10 Turkish Aerospace in Brief
  - 10 Mission, Vision, and Values
  - 10 Strategic Focus Areas
  - 11 Subsidiaries and Affiliates
- 12 Organizational Structure
- 12 Shareholding Structure
- 13 Message from Management
- 15 Awards and Achievements
- 19 Milestones

## Understanding of Sustainability

- 22 Stakeholder Map and Stakeholder Communication

## For a More Robust Governance Structure

- 24 Corporate Governance
  - 24 Committees
  - 25 Ethical Principles Management
  - 26 Process Management
- 27 Risk Management

## For a Stronger Human Resource and Society

- 30 Human Resources
  - 32 Employee Profile
  - 33 Equal Opportunities
  - 33 Remuneration and Benefits
  - 35 Performance Development, Career and Talent Management
  - 36 Internal Communication
  - 38 Academy Activities
- 41 Occupational Health and Safety
- 43 Social Responsibility

## For a Cleaner and Healthier Environment

- 45 Environmental Management and Climate Change Practices
- 48 Air Quality and Greenhouse Gas Efforts
- 49 Water Management
- 50 Waste Management
- 52 New Era Environmental and Climate Change Projects
- 53 Environmental Awareness
- 55 Energy Management

## For a Higher Economic Welfare

- 59 Sustainable Growth Performance
- 60 Products and Services
- 66 Quality Management
- 68 Aviation Safety
- 71 Technology and Innovation
  - 71 Technology Roadmap
  - 72 R&D Projects
  - 73 R&D and Innovation Cooperation
  - 75 Suggestion System
  - 75 Lift-Up Industry-Oriented Undergraduate Graduation Projects
  - 76 Patent Engineering
  - 76 Localization Activities
- 77 Information Technologies
- 80 Supply Chain Management

Contact



# ACTIVITY

**IN LINE WITH OUR FOUNDING PHILOSOPHY, WE PRODUCE HIGH-TECH INDIGENOUS PRODUCTS AND SERVICES** THAT MEET THE NATIONAL SECURITY NEEDS OF OUR COUNTRY IN THE AVIATION AND SPACE INDUSTRY.



We were established as Turkish Aircraft Industries Corporation under the Ministry of Industry and Technology on June 28, 1973, to reduce Türkiye’s foreign dependency in the defense industry. In 2005, we merged with the Turkish-US joint investment company Turkish Aerospace Industries, Inc. (TAI), which was founded in 1984 to produce F-16 aircraft, integrate on-board systems, and conduct flight tests, under one roof with 100% domestic capital.

We conduct our business as an aviation and space base of Türkiye with our indigenous products, projects, technology centers, and R&D investments. We carry out Multirole Combat Helicopter T129 ATAK, Unmanned Aerial Vehicle

(UAV) System ANKA, Next Generation Training Aircraft HÜRKUŞ, and Earth Observation and Reconnaissance Satellite System GÖKTÜRK projects with our stakeholders within the framework of the “Nationalization of Technology Movement” launched in 2005. We work tirelessly to take the Turkish Fighter, which is the survivability project of Türkiye, out of the hangar and move HÜRJET to the sky for the first time in 2023. We continue to work full steam ahead to complete the first delivery of the T625 GÖKBAY, to complete the production process of the TÜRKSAT 6-A satellite and Multirole Heavy Combat Helicopter, and to proceed to the mass production of AKSUNGUR, which has already started its first field mission. We continue our efforts to increase the

number of our domestic and national products every year and to complete the export processes of our indigenous products. We will remark the beginning of a new area by exporting the first indigenous products in the aviation industry of Türkiye.

We maintain our production activities as a subcontractor with our successful deliveries within the scope of our strong business partnerships that we have entered into with leading brands on a global scale. We have consolidated our strength in this field by implementing the 4<sup>th</sup> largest composite plant in the world. We aim to develop our capabilities in aerostructure in order to have a say in the production of new generation materials as well as thermoplastic composite materials.

In order to train the human resources needed by our country, we organize internship programs to incorporate young people in Turkish Aerospace once they successfully complete their education at the engineering faculties of Turkish universities.

As of 2021, we have been working hard with our more than 11 thousand employees “To be among the top 10 players in the world” and “To carry the trained human resources to the future.” The biggest vision of the Turkish Aerospace is to ensure that Türkiye is acknowledged among the leading countries in aviation and assumes important roles within 10 years.

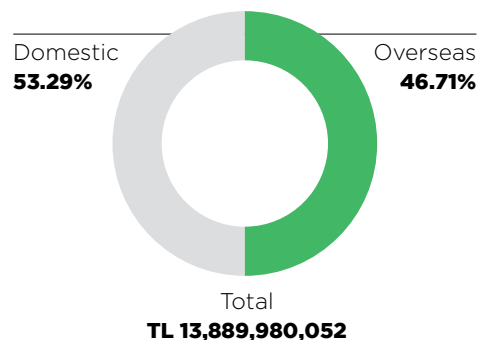


# SUSTAINABILITY PERFORMANCE IN 2021

TURKISH AEROSPACE HAS TAKEN ITS SUSTAINABILITY PERFORMANCE ONE STEP FURTHER IN 2021. **OUR SALES REVENUES REACHED TL 13.9 BILLION IN 2021, AND WE PROVIDED EMPLOYMENT TO 11,424 PEOPLE.**

## Sustainable Economic Growth

### Sales Revenues\* (TL Billion) 2021



<sup>(\*)</sup> Consolidated financial data of Turkish Aerospace.

## Adding Value to Employees

	2021
Number of Employees	11,424
Labor Turnover (%)	4.32
Female Employee Rate	14%
Female Executive Rate	19%

## Average Training Hours per Employee

	2021
Training Time (person/hour)	57

## Number of Students Participating in Engineer Development Internship Programs

Staj Programlarımız	2021
SKY (Undergraduate) Programs	1,341
Vocational High School / Vocational and Technical Anatolian High School Programs	684
SKY INT and Special Programs	31
<b>Total</b>	<b>2,056</b>

## Technology and Innovation

R&D Performance (TL Million)	2021
Total R&D Spending	4,389
Internally-Funded R&D Spending	1,287

	2021
Ongoing Internally-Funded R&D Projects	76
Ongoing Externally-Funded R&D Projects	36
Completed Internally-Funded R&D Projects	8
Number of R&D Employees	3,809
LIFT UP Industry-Oriented Undergraduate Graduation Projects, Number of Students	377
Patent Applications	84
Number of Registered Patents	20

## Environmental Management

### Greenhouse Gas Carbon Emission

Annual (Thousand/Tco <sub>2</sub> )	2021
Greenhouse Gas From Combustion*	67
Greenhouse Gas From Purchased Electricity	26
<b>Total Greenhouse Gas Emission</b>	<b>93</b>

<sup>(\*)</sup> Greenhouse Gas From Combustion sources include our consumption of natural gas, diesel fuel, sodium bicarbonate, and coal.

### Carbon Footprint\*

Years	tCO <sub>2</sub> e/(m <sup>2</sup> )
2021	0.15

<sup>(\*)</sup> Our Total Carbon Footprint figures include the amounts of carbon footprints from combustion and purchased electricity.

## Management and Efficient Use of Water Resources

### Data on Wastewater Treatment

	2021
Amount of Treated Wastewater (10 <sup>3</sup> m <sup>3</sup> )	320
Amount of Treated Water Used for Irrigation (10 <sup>3</sup> m <sup>3</sup> )	143
Recovery Rate (%)	45



# TURKISH AEROSPACE IN BRIEF

## MISSION, VISION, AND VALUES



### Mission

Providing solutions for national security requirements in the aerospace industry and leading the development of the industry.



### Vision

Becoming a “World Brand Aerospace Company” with indigenous products and global competitive power.



### Values

- Integrity and Reliability
- Creativity
- Productivity
- Stakeholder Satisfaction

## STRATEGIC FOCUS AREAS

### Competitive Domestic and National Products

To produce indigenous products with global competitiveness by using domestic and national technologies

### Sustainable Growth

To achieve high profitability and high business volume

### Leader in Technology

To be leader in our products and product development technologies in line with rapidly changing and developing technologies

### Highly Committed and Competent Employees

To work with committed, satisfied, competent, and sustainable human resources

### Adding Value to Stakeholders

To have a high sense of responsibility towards rising brand value and customer satisfaction, and all of our stakeholders

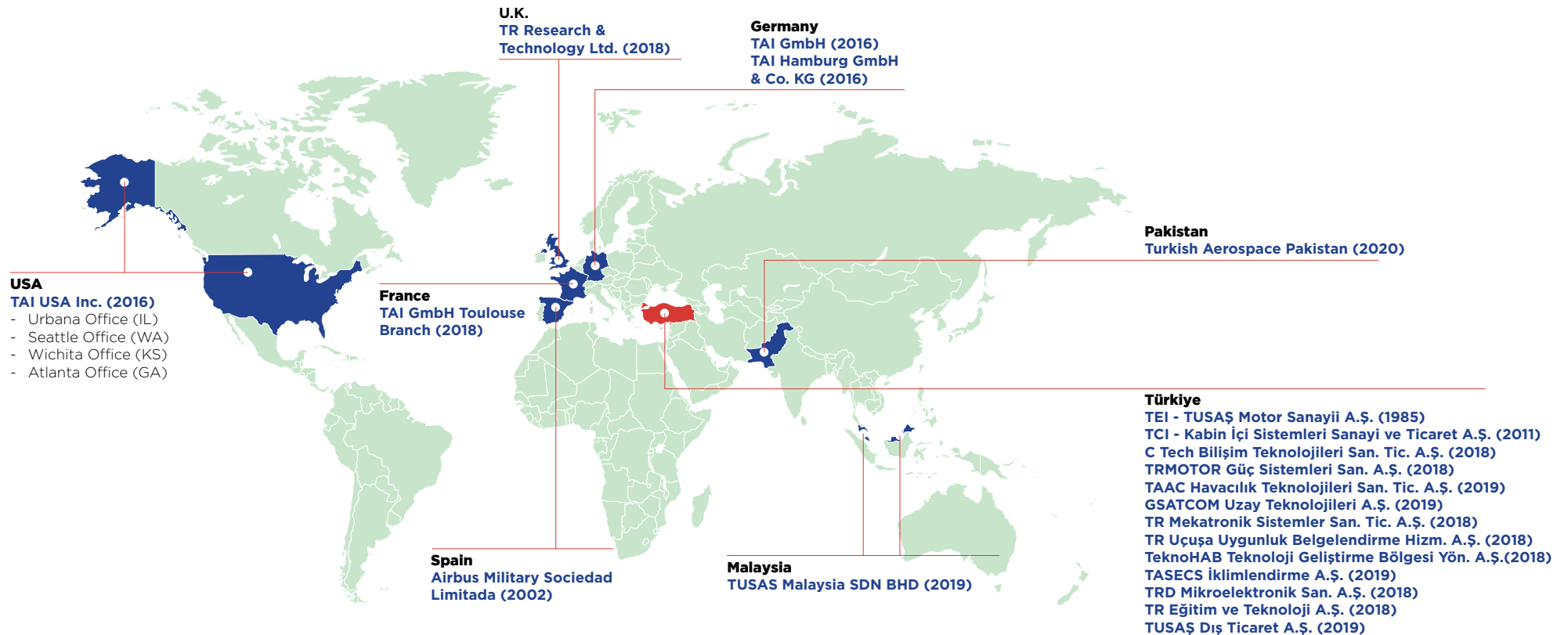




# TURKISH AEROSPACE IN BRIEF

TURKISH AEROSPACE PROVIDES SERVICES WITH ITS 5 SUBSIDIARIES AND 8 AFFILIATES IN TÜRKİYE, **AS WELL AS 5 SUBSIDIARIES, 1 AFFILIATE, AND 1 BRANCH ABROAD.**

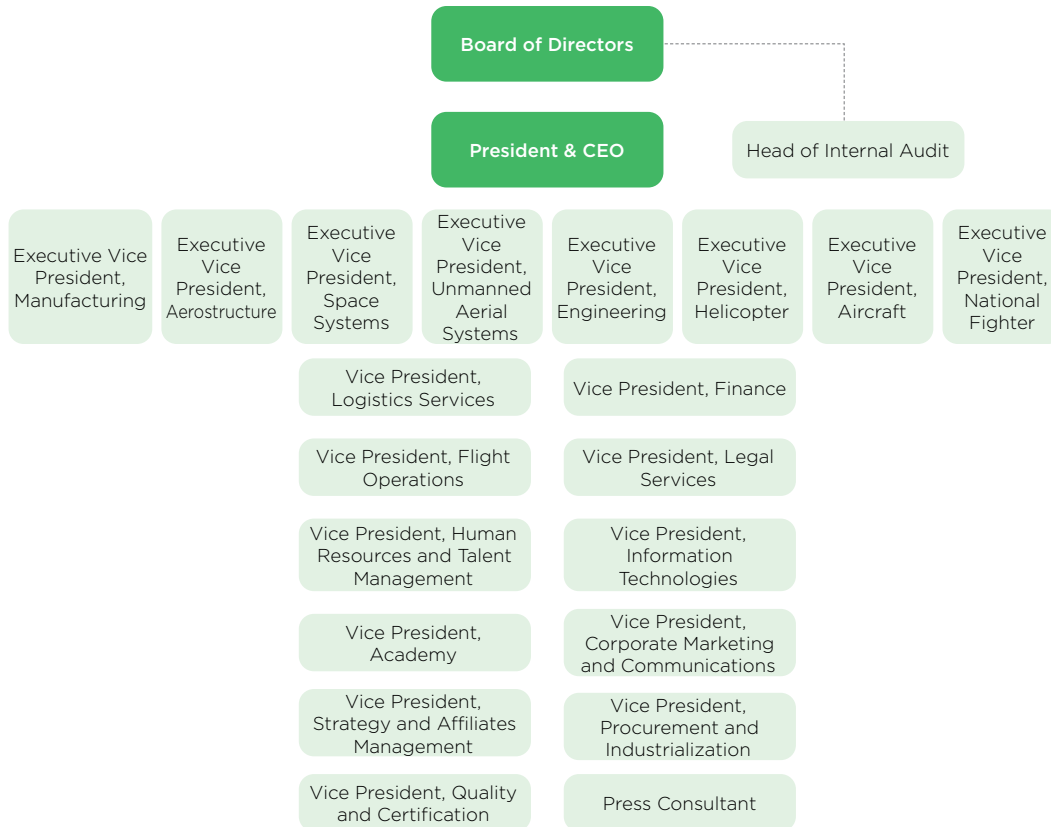
## SUBSIDIARIES AND AFFILIATES





# ORGANIZATIONAL STRUCTURE

**OUR AGILE ORGANIZATIONAL STRUCTURE ALLOWS US TO MOVE FORWARD WITH CONFIDENT STEPS TOWARDS OUR STRATEGIC GOALS.** 8 VICE PRESIDENCIES AND 13 DEPARTMENTS, WHICH MANAGE STRATEGIC PROJECT GROUPS UNDER THE PRESIDENT & CEO, CARRY OUT THE EXECUTIVE ACTIVITIES.



# SHAREHOLDING STRUCTURE

TURKISH AEROSPACE IS A SUBSIDIARY OF THE TURKISH ARMED FORCES FOUNDATION AND **AN AFFILIATE OF THE PRESIDENCY OF THE REPUBLIC OF TÜRKİYE DEFENCE INDUSTRY AGENCY (SSB).**

Shareholders	Share Percentage
Turkish Armed Forces Foundation (TAFF)	54.49%
Presidency of the Republic of Türkiye Defence Industry Agency (SSB)	45.45%
Turkish Aeronautical Association	0.06%



## MESSAGE FROM MANAGEMENT

CLOSING 2021 WITH A TURNOVER OF ABOUT TL 14 BILLION, **WE MAINTAINED OUR POSITION AMONG THE TOP 100 AEROSPACE COMPANIES IN THE WORLD WITH OUR NEARLY 12,000 COLLEAGUES.**



Esteemed Shareholders,

We continue our efforts to provide a sustainable competitive advantage with our development-oriented approach that places people at the center. In these efforts to bring innovative technologies and capabilities to our Company, we maintain our zero waste-based investments in the field of environment and energy, going beyond generally accepted practices preventing the waste of natural resources. We are among the leading R&D organizations of the aviation industry with our R&D activities. As a result of our quality-oriented performance, we have accelerated our intensive efforts to carry out all our processes including product design, production, delivery, and following steps in accordance with our sustainability strategy. In this context, we continue to add strength to the independent aviation, space, and defense ecosystem of Türkiye by supporting the personal and professional talents of our colleagues.

### **For a Higher Economic Welfare**

We aim to shape the wide range of products owned by our Company, which has incorporated significant achievements in the field of aviation and space into half a century of experience, according to the most current requirements in global markets. As a result of our activities carried out with this vision, we closed 2021 with a turnover of about TL 14 billion, and we maintained our position among the top 100 aerospace companies in the world with our nearly 12,000 colleagues. We have made a total of 84 patent applications with 120 projects that we have carried out with our nearly 4,000 R&D employees. With our R&D expenditures of TL 2 billion 648 million, we have ranked second in the “Top 250 R&D Companies with the Highest R&D Expenditures in Türkiye” survey. We have achieved significant successes in the field of export with our international activities.

We have entered into new business partnerships for further achievements in export. We have consolidated our place among the export leaders of Türkiye. We have contributed to the recognition of our Company and our activities by hosting important delegations from around the world in our Company.

### **For a Cleaner and Healthier Environment**

Turkish Aerospace incorporates sustainable development goals into its business processes by observing the principles of responsible production, value creation, environmental protection, and continuous transformation and improvement. We prevent pollution by reducing environmental impacts in all processes in accordance with legal and other requirements within the framework of our environmental sustainability policies and the principle of continuous improvement. We carry out our activities within the scope of our policy to contribute to environmental sustainability

by considering the fight against climate change. We continued to increase our recycling rate to reduce our carbon footprint and carbon emissions in 2021 as well. We contributed to the sustainable clean energy policy of our company with our investments that prioritize energy saving. We are the first company among industrial organizations in Türkiye to be eligible for the Basic Level Zero Waste Certificate issued by the Ministry of Environment, Urbanization and Climate Change. Moreover, we were ranked first out of 500 projects in the evaluation conducted by The Green Organization UK in 2020 and received “Gold” award at the Waste Management category at the Green World Environmental Awards, one of the most prestigious environmental awards in the world. As the first company affiliated with the Turkish Armed Forces Foundation (TAFF) with ISO 50001 Energy Management System Certificate, we continue our investments placing energy efficiency at the center.



## MESSAGE FROM MANAGEMENT

WE DESIGN OUR HUMAN RESOURCES PROCESSES BY FOCUSING ON OUR EMPLOYEES, AND DEVELOP PROJECTS IN ORDER TO ENSURE THE CONTINUITY OF THE PRINCIPLES THAT FORM THE BASIS OF OUR HUMAN RESOURCES MANAGEMENT. **WE ARE ONE OF THE TECHNOLOGY COMPANIES WITH THE HIGHEST EMPLOYMENT FIGURES IN TÜRKİYE.**

### **For a Stronger Human Resource and Society**

We have created our Human Resources Policy in order to bring highly qualified human resources to Türkiye and our Company, develop human resources, and ensure the sustainability of belonging to the corporate culture. We design our human resources processes by focusing on our employees, and develop projects in order to ensure the continuity of principles that form the basis of our Human Resources Management. We are one of the technology companies with the highest employment figures in Türkiye. We provided a total of 796 different training programs in 6 categories and delivered an average of 57 hours of training per person in 2021 within the scope of the Academy within our Company, which has determined professional development as its focal point. In order to train future engineers

and technicians, we provided internship opportunities to a total of 2,056 students in our Company in 2021, despite the fact that we had to apply certain restrictions on our internship programs due to Covid-19 measures. We continued to engage in national and international academic collaborations aimed at the sustainable future of aviation. As a consequence of the maximum importance we attach to Occupational Health and Safety in our ever-growing family, we took important actions aimed at the physical and professional safety of our colleagues.

### **For a More Robust Governance Structure**

In accordance with the principles of corporate governance, i.e. fairness, transparency, accountability and responsibility, we carry out our activities in a way that does not harm the interests

of the right holders and the public, while we attract financial resources and human resources to our Company by ensuring maximum compliance with these principles. We provide stable growth by working efficiently and creating long-term economic gains for our shareholders. In order to make the relations in our company more harmonious, we strengthen the ethical climate and develop a corporate culture that focuses on ethical values. Therefore, we started an ethical structuring, created our Ethics Board and Ethics Board Subcommittee, published our Ethics Manual, and created the Ethics Line so that our employees could report any breaches of ethical principles. We define our risks in an integrated manner with our processes, create risk management strategies, and proactively manage all of our risks in our Enterprise Risk Management System in order to secure

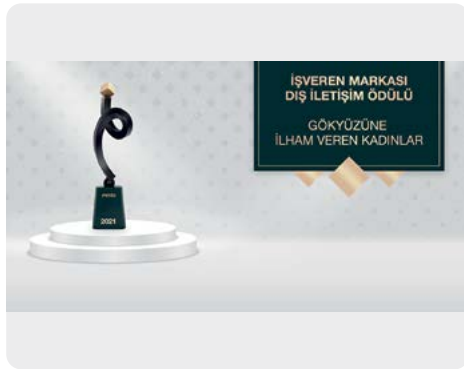
risk management activities. In 2021, we continued to increase our awareness in this regard and defined a total of 4,561 risks under 8 different risk classes within the Enterprise Risk Management System.

We would like to express our gratitude to our colleagues who have worked hard in all of our activities carried out with the aim of adding strength to the future of aviation in our country.



## AWARDS AND ACHIEVEMENTS

**IN 2021, WE HAVE WON GENERAL RECOGNITION ON NATIONAL AND INTERNATIONAL PLATFORMS** WITH OUR INDIGENOUS PRODUCT DEVELOPMENT ACTIVITIES, OUR EXCELLENT SERVICES AS A SOLUTION PARTNER, OUR FAIR AND EGALITARIAN PRACTICES AS AN EMPLOYER, AND OUR SOCIAL LIFE SUPPORTS.



**We received the “Prida” award with our Women Who Inspire The Sky Mentorship Program.**

We have received another award with our Women Who Inspire The Sky Mentorship Program, which has helped us further strengthen the foundations of our future in the industry by bringing together our women who are passionate about aviation. Previously being awarded three separate international awards, the Women Who Inspire The Sky Mentorship Program won the “Prida” award, one of the most prestigious communication awards in Türkiye to involve major projects.



**We have been awarded within the scope of the Boeing Premier Bidder Program.**

In 2020, we received the Boeing company’s “Gold Score” award for our 100% quality and delivery performance in our ongoing projects, particularly in the Boeing-787 Elevator, Cargo Barrier, and Horizontal Leading Edge projects. In 2021, we successfully maintained our “Gold” delivery and quality performance and received an award under the “Boeing Premier Bidder Program.”



**We have been selected as the “Best in Class” with our career website kariyer.tusas.com.**

Our career website kariyer.tusas.com earned us the “Best in Class” title in the international arena at the Interactive Media Awards (IMA), which evaluates websites for their features such as design, content, and development together with designers, programmers, and advertisers. Also, we have won a “Platinum” award with our career website from the Muse Creative Awards organized by the International Awards Associate (IAA).



**We received the “Bronze Stevie” with “Our Strength Lies in Our Heritage” campaign, which reached record access of 1 million.**

Our digital patch communication campaign “Our Strength Lies in Our Heritage,” with which we cherish the memory of the 18<sup>th</sup> March Çanakkale Victory and Martyrs’ Day, has reached record access with the participation of more than 1 million citizens. We were nominated for this campaign at the International Stevie Awards, and won the “Bronze Stevie” in the “Digital Media Relations” category based on the evaluation of the jury members consisting of reputable communication experts around the world.



# AWARDS AND ACHIEVEMENTS



**We have crowned the success of our Employer Brand with the “Bronze” award at the Stevie Awards for Great Employees in the international arena.**

With our programs focusing on young talent recruitment, we received the “Bronze” award in the “Most Innovative Talent Acquisition Program” category of the Stevie Awards for Great Employees. The success of our efforts for young talents and the strength of our Employer Brand have been crowned with an award in the “Most Innovative Talent Acquisition Program” category of the Stevie Awards for Great Employees, for which we have been nominated for our SKY Experience, SKY Discover, LIFT-UP, VLA and Vocational High School/Vocational School of Higher Education Workplace Training programs.



**We were granted the title of “Supplier of the Year” with our excellent production.**

We were awarded the “Supplier of the Year” by Spirit as a result of our flawless production as the only source producer of various parts for the world’s leading air vehicles.



**We received the “Bronze” award at the Communication Magazine’s Employer Brand Management Awards.**

We received the “Bronze” award at the Employer Brand Management Awards launched by Communicate magazine 5 years ago, where the employer brand activities of companies are evaluated.



**We have received many awards as Turkish Aerospace at the Istanbul International Inventions Fair (ISIF) 2021.**

We have received the “World Intellectual Property Organization (WIPO) National Award” at the Istanbul International Inventions Fair (ISIF) 2021 awards held within the scope of TEKNOFEST. At the ISIF 2021 award ceremony, we received a total of 33 awards, including 3 Gold, 11 Silver and 18 Bronze awards.



# AWARDS AND ACHIEVEMENTS



### We were the only Turkish brand awarded at the Corporate Engagement Awards 2021.

Standing out with our internal communication events such as “Young Inventors Workshop,” “Green Flag League,” and “Süper Takım Gaming Tournament,” our Employer Brand earned us a great achievements in 2021; and we became the only Turkish brand to be awarded at the Corporate Engagement Awards within the year.

### We were selected as the Most Favorite Company at the Youth Awards.

We were granted 3 awards by the Youth Awards, where young people evaluate the employer brand activities of companies in 15 different categories. 46,238 young people took part in voting and we won the 1<sup>st</sup> prize with our “Ask the CEO!” event in the category “Youth’s Most Favorite Digital Career Event”; the 2<sup>nd</sup> prize with “SKY” in the category “Youth’s Most Favorite Internship Program”; and the 3<sup>rd</sup> prize in the category “The Most Favorite Company with Its Campus Events.”



### We were granted the “Silver” award in the category of the Best Internal Communication.

We were granted the “Silver” award in the “Best Internal Communications” category within the scope of the program which was launched by Communicate magazine in 2011 to evaluate prestigious brands.



### We were honored as the “Defense Industry Company of the Year” in 2021 as well.

We were granted the “Defense Industry Company of the Year” award this year at the “Boğaziçi Business World Awards” organized by Boğaziçi University, which was attended by representatives of leading companies of Türkiye, academicians, and students.



### We were awarded with the contribution we made to the country’s economy through our exports.

We were granted the title of the company with highest export rate by the Defense and Aerospace Industry Exporters’ Association within the scope of the “Global Strategies Conference in the Defense and Aerospace Industry’21.” Hosted on the 10<sup>th</sup> anniversary of the Defense and Aerospace Industry Exporters’ Association, the ceremony featured the award ceremony for companies with the highest export rates. In the ceremony, we were ranked 1<sup>st</sup> and received 2 awards thanks to our exports in the last decade.



# AWARDS AND ACHIEVEMENTS



**We were awarded with our in-house trainings.**

In 2021, we were awarded the “Training” award at the “Platinum 100 Awards” for activities focused on in-house training.

**We ranked 9<sup>th</sup> in the “Most Favorite Companies” list among 250 companies.**

According to the 2021 results of the “Most Favorite Companies” research carried out by Realta Danışmanlık, we rose to 9<sup>th</sup> place standing out amongst other 250 companies. Last year, we climbed four ranks and ranked 10<sup>th</sup> in the research participated by over 70,000 young talents. This year, we climbed one more rank and once again demonstrated our success in Employer Brand.



**We have achieved another success with our “SKY Discover” and “SKY Experience” programs, which were selected as the “Most Popular Talent Program in Türkiye.”**

We have made a difference with our Talent Program Management and Employer Brand Youth Talent Communication that have won the admiration of young people. We have added another one to our achievements with our “SKY Discover” and “SKY Experience” programs, which were selected as the “Most Popular Talent Program in Türkiye” in the voting of TOP 100 Talent Program.

**We have ranked 35<sup>th</sup> among the Most Valuable Brands in Türkiye.**

We were ranked 35<sup>th</sup> in the “TÜRKİYE 100 - The Most Valuable Brands of Türkiye” survey, where the 100 most valuable and powerful brands were announced by Brand Finance.



**We have become the 2<sup>nd</sup> company with the Highest R&D Spending in Türkiye.**

With our R&D expenditures reaching TL 2 billion 648 million, we have been ranked 2<sup>nd</sup> in the “R&D 250, Companies with the Highest R&D Spending in Türkiye” survey prepared by Turkishtime.

**We continued to be a center of attraction for young talents.**

According to the results for Türkiye in the report “World’s Most Attractive Employers (WMAE),” compiled by Universum and regarded as the most prestigious employer brand research on a global scale, we were named as the fastest-rising brand in the Report in 2021.

**We were ranked 68<sup>th</sup> in the evaluation made by Defense News.**

According to an assessment by Defense News, we were ranked 68<sup>th</sup> on the Top 100 List in 2021.

**We were ranked high for our performance in the field of innovation and R&D.**

In 2021, we were ranked 3<sup>rd</sup> in Türkiye in the Innovation Resources category among the large scale champions of InovaLİG, Türkiye’s first innovation development program. We also took the 2<sup>nd</sup> place in the “Number of R&D Employee” and “Number of Female Employee Working in R&D.” At the 7<sup>th</sup> Technology Development Zones and R&D Centers Award Ceremony organized by the Ministry of Industry and Technology, we were ranked 3<sup>rd</sup> in the list of the largest number of new R&D staff employed in our R&D Center. We were awarded the “SAS Panel Excellence Award” for the Year 2021 with our SAS-123 working group, where we worked with representatives from 11 different countries with the participation of our R&D Center Technology Management Director.



# MILESTONES



## 1973

Turkish Aircraft Industries Corporation was established on June 28, 1973 as a public economic organization under the Ministry of Industry and Technology in order to reduce the foreign dependency of our country in defense industry.

## 1980s

- In 1984, Turkish Aerospace Industries, Inc. (TAI) was established as a Turkish-US joint investment company for 25 years.
- We signed a cooperation agreement with Lockheed Martin.
- We delivered the first F-16 produced at TAI production line.
- We opened our TAI facilities.

## 1990s

- We delivered the first TAI production CN-235 aircraft to the Turkish Air Force.
- We launched our Cougar Helicopter production activities.

## 2000s

- We delivered the first CN-235 Naval Patrol Aircraft to the Coast Guard Command.
- We delivered 19 Cougar helicopters to the Land Forces Command after completing their renovation.
- We carried out the first flight of Pelikan, an indigenous UAV System.
- We bought the shares of Lockheed Martin and General Electric.
- Before the 25-year process was completed, in 2005, TAI's foreign shares were purchased by our Turkish shareholders and we restructured our Company. By combining TAI and Turkish Aircraft Industries Corporation (TUSAŞ), we expanded our activities under the umbrella of TAI - Turkish Aerospace Industries, Inc. (TUSAŞ - Türk Havacılık ve Uzay Sanayii A.Ş.)
- We named our first training aircraft as "HÜRKUŞ" in memory of Vecihi Hürkuş.
- We signed the Contract on Supporting the Scientific Research and Technology Satellite Development Project for 2.5 m Resolution Imaging Purposes "GÖKTÜRK-2" on April 13, 2007 with the Ministry of National Defense, the TÜBİTAK Presidency, and the TÜBİTAK SPACE-Turkish Aerospace Business Partnership.
- We started our first satellite design activities.
- We opened our Aircraft Satellite Assembly and Integration Facility.
- We delivered the first helicopter of the Special Forces Helicopter Modernization Program "YARASA" to the Special Forces Command.
- We established the Audit Committee within our company.



## 2010

- By signing a protocol with the Middle East Technical University, we launched the first Researcher Training Program For Defense Industry (SAYP) project.
- We started working to launch our Flight School with the vision of meeting the needs of military/police and civilian helicopter pilot training in Türkiye as well as in other countries of the region at international standards.
- We took T-38 out of its hangar and started its engine for the first time.
- We carried out the first flight under the Peace Eagle Program.
- We carried out the first flight of ANKA.



## 2011

- We successfully carried out the first flight of the T129 ATAK Multirole Combat Helicopter produced under the ATAK Helicopter Program to meet the offensive/tactical reconnaissance helicopter needs of the Turkish Air Force Command.
- We signed the Jet Training and Combat Aircraft Conceptual Design Project contract.
- We were ranked among the top 10 companies in the "Company of the Year" category at the European Business Awards 2011, where the excellence, best practices, and innovation in the business world were evaluated, and we gained the title of the first Turkish aviation company to receive the "Ruban d'Honneur (Ribbon of Honor)."



# MILESTONES

## 2012

- As a result of the inspections carried out by the European Union Aviation Safety Agency (EASA) and the Directorate General of Civil Aviation (DGCA), we received the EASA Design Organization Certificate for our training aircraft "HÜRKUŞ." With this certificate documenting the compliance of the entire organization of our Company with international standards from the idea stage throughout the flight, we were granted the authority to design aircraft, which were given by EASA to Türkiye for the first time.
- We organized the "roll out" ceremony of HÜRKUŞ.
- With the support of our equity and TEYDEB, we carried out the first flight of "ŞİMŞEK" High Speed Target Drone System, which we developed to be used in the locking and firing training of surface-to-air and air-to-air missile systems.
- On the 25<sup>th</sup> anniversary of the foundation of the Turkish Armed Forces Foundation (TSKGV), our main shareholder, we opened our doors to the public visit for the first time.
- As a result of our business partnership with TÜBİTAK SPACE, we completed the production, integration, and testing stages of 3 satellites at our facilities: aerostructure qualification model, qualification model, and flight model. Our first observation satellite GÖKTÜRK-2 was launched into space from China.



- We delivered the 308<sup>th</sup> Advanced Block 50 Type F-16 aircraft to the Air Force Command under the Peace Onyx IV Program that was developed in cooperation with Lockheed Martin.

## 2013

- We carried out the first flight of HÜRKUŞ.
- We signed the T625 GÖKBEY Multirole Utility Helicopter Program contract.
- Within the scope of the Multirole Helicopter Program Contract signed with the Presidency of the Republic of Türkiye Defence Industry Agency, we established our Rotary Wing Technology Center in the Middle East Technical University Teknokent in order to acquire the technologies of the future in the helicopter field, develop university-industry cooperation, and contribute to the human resources trained in this field.
- In cooperation with Gazi University, we signed an agreement for a Vocational School of Higher Education with a capacity of 2000 students to meet the needs for semi-qualified personnel of industrial organizations in the region, particularly in aviation and space.

## 2014

- We undertook the development, harness design, and production of mechanical ground support equipment with structural layout, luminous, and chemical propulsion subsystems of TÜRSAT 6A, the first national communication satellite of Türkiye.
- We signed the T70 Utility Helicopter Program contract.
- We delivered the T129A Early Delivery Helicopter to the Land Forces Command.
- We put our Academy into operation in order to transfer our knowledge to future generations.
- We received Türkiye's first Aircraft Design Organization Approval (DOA) from the Directorate General of Civil Aviation of the Ministry of Transport, Maritime Affairs, and Communications with our outstanding performance in the design of our national aircraft HÜRKUŞ.

## 2015

- We held the inauguration of the Space Systems Assembly Integration and Test (AIT) Center at our Kazan Facilities with the participation of our President.
- We organized the groundbreaking ceremony for the T625 GÖKBEY Multirole Utility Helicopter Program facilities.
- We maintained our support for the arts and provided the sponsorship for the opening concert of the 19<sup>th</sup> Ankara Jazz Festival.
- We have established Early Detection of Risk Committee and Corporate Governance Committee within our company.



## 2016

- We received the Type Certificate from EASA for Hürkuş-A we produced within the scope of the HÜRKUŞ Project. This project was started in order to develop a training aircraft to meet the needs of the Air Force Command and enter the world markets. We also obtained the right to property and use our 1<sup>st</sup> prototype aircraft.
- We signed the Turkish Fighter (MMU) Project Term-1 Stage-1 contract with the Undersecretariat of Defense Industries (SSB).
- GÖKTÜRK-1 was launched from the Kourou Launch Base in French Guiana. We watched the GÖKTÜRK-1 Satellite Launch Ceremony, which we held with the presence of Honorable President, live on our facilities.

## 2017

- HÜRKUŞ-C completed the first firing demonstration as part of the trial studies.
- We delivered the mid fuselage of the first Turkish JSF/F-35 aircraft.



# MILESTONES



## 2018

- We carried out the first delivery of ANKA-S.
- We organized the delivery ceremony of the T129 ATAK helicopter to the General Command of the Gendarmerie.
- We carried out the first flight of the T625 GÖKBAY helicopter.
- We carried out the first test flight of ANKA with a PD-170 domestic engine.
- We signed an agreement with Airbus as the solution partner for the R&D of the structures of moving parts for Airbus aircraft programs.



## 2019

- We signed the Project Development Contract for the Multirole Heavy Combat Helicopter.
- AKSUNGUR performed its first flight.
- At TEKNOFEST, held at Istanbul Atatürk Airport, we presented all of our products, especially our 5<sup>th</sup> generation fighter aircraft, the Turkish Fighter (MMU), to technology and defense industry enthusiasts.

## 2020

- AKSUNGUR stayed in the air for 49 hours and engraved our flag in the sky at 20 thousand feet height.
- We signed a cooperation agreement with Boeing company in order to develop the ability to produce thermoplastic parts in accordance with aviation standards in Türkiye.
- With the exemplary studies we have conducted on environmental waste management at our facilities, we received the “Zero Waste Certificate” issued by the Ministry of Environment,



## 2021

- Urbanization and Climate Change for the first time among all industrial organizations in Türkiye.
- With our Waste Management and Green Flag League Project, we won the “Gold Award” in the Waste Management category at the Green World Awards, where 500 projects competed and the best environmental practices of the world were selected, and we became the winner of the “Green World Ambassador” title in the international arena.
- For the purpose of contributing to Malaysia’s aviation ecosystem, we signed a cooperation agreement with SIRIM, a Standardization and R&D organization affiliated to the Ministry of Economy of Malaysia.
- We signed a cooperation agreement with the National Aerospace University-Kharkiv Aviation Institute of Ukraine to carry out joint academic and research activities within the



- scope of our international efforts to share information in the field of aviation. We strengthened our international academic cooperation with the cooperation we have established with Istanbul Technical University, Gazi University, and Ankara Yıldırım Beyazıt University.
- We signed a cooperation agreement with the Malaysian Institute of Aviation Technologies of the University of Kuala Lumpur to develop technical and applied aviation trainings and research programs.
- We welcomed more than 400 engineers from different disciplines with the “Engineer Development Program” that we launched in January 2021 to train competent engineers and introduce them to the national aviation ecosystem, and we allowed 200 engineers who have completed their training within the scope of Engineer Development Program to start working in different projects in our company.
- We established the Sustainability Committee within the company.



# STAKEHOLDER MAP AND STAKEHOLDER COMMUNICATION

**TURKISH AEROSPACE INCLUDES ALL INDIVIDUALS, INSTITUTIONS, AND COMPANIES, THE ACTIVITIES OF WHICH AFFECT, DIRECTLY OR INDIRECTLY, THE COMPANY AND WHICH ARE AFFECTED BY OUR ACTIVITIES IN OUR STAKEHOLDER MAP.**

## STAKEHOLDER MAP

### Employees

We consider our dynamic, expert, and competent human resources as the most effective element of our sustainable success. By increasing the satisfaction and motivation of our employees, we aim to increase labor productivity and create a sustainable human resource. We enable them to participate in our decision-making processes by encouraging them to provide feedback on our human resources practices and processes and to offer suggestions through the communication channels that we have diversified during their career journeys in our company.

### Customers

Our customers consist of the Turkish Armed Forces and other public institutions and organizations at home as well as large aerospace and defense industry companies such as Boeing, Airbus, Sikorsky, Spirit, Northrop Grumman abroad. We meet the needs and expectations of our customers with our superior quality understanding and perfect production approach by fulfilling our obligations arising from our contracts in a timely and complete manner.

### Suppliers

We aim to strengthen our ties with our supplier ecosystem, mainly existing and potential subcontracting companies, defense, and aerospace industry clusters, which we consider to be one of the most important rings of our value chain, and to increase the competencies and capacities of our outsourcing organizations. We carry out an effective communication with our suppliers through our Outsourcing Portal, which we have implemented.



### Universities

Within the scope of the agreements we have concluded with universities, we benefit from the synergy of industry-academy cooperation in our R&D activities, Academy programs, and corporate social responsibility projects.

### Public Organizations and Institutions

We develop cooperation with all public institutions and organizations operating in the field of defense industry, and support their efforts with our national and international memberships.

### Society

We prioritize the economic and social development and well-being of our society. While continuing our nationalization efforts in our production, we develop projects to share the resource we have created with society. We make great efforts to support all segments of society with the training projects, internship programs, and charity campaigns we have developed.



# STAKEHOLDER MAP AND STAKEHOLDER COMMUNICATION

WE MAINTAIN OUR COMMUNICATION WITH ALL INDIVIDUALS, INSTITUTIONS, AND COMPANIES INCLUDED IN OUR STAKEHOLDER MAP **WITHIN THE FRAMEWORK OF OUR VALUES OF INTEGRITY AND RELIABILITY.**

## COMMUNICATION WITH STAKEHOLDERS

The principle of “Partnerships for the Goals,” which is the 17<sup>th</sup> of the Sustainable Development Goals adopted by the United Nations, emphasizes that sustainability is a culture that can only be achieved together. Within this framework, we care about acting together and cooperating with all of our stakeholders. Stakeholder satisfaction is one of our strategic focuses underlying our strategic planning. We are working to meet the demands and expectations of our stakeholders in the best manner. We develop cooperation with our employees, customers, suppliers, universities, public institutions, and organizations, as well as many stakeholders, including society, to create value in social, economic, and environmental issues. We maintain our communication with our stakeholders within the framework of our values of integrity and reliability.

### Employees

- Employee Engagement and Satisfaction Survey (annual)
- Employee Support Program (constant)
- Experience-Sharing Platform (constant)
- Suggestion System (constant)
- Ethics Line (constant)

### Customers

- Customer Support Portal (constant)
- Customer Coordination System (constant)

### Suppliers

- Outsourcing Portal (constant)
- Supplier Coordination System (constant)

### Universities

- Workshops and Panels (a few times a year)
- Internally Funded R&D Projects (constant)
- Academy (constant)

### Shareholders

- Turkish Armed Forces Foundation (TAFF)
- Presidency of the Republic of Türkiye
- Defence Industry Agency (SSB)
- Turkish Aeronautical Association

### Public Organizations and Institutions

- Conferences, Panels and Workshops (a few times a year)
- Cooperation within the Scope of Legal Regulations (when necessary)

### Society

- Corporate Website (constant)
- Social Media and the Press (constant)
- “Elini Uzat” Community (project based)



# CORPORATE GOVERNANCE

## WHILE ACTING AS THE LEADER OF THE INDUSTRY IN TÜRKİYE IN LINE WITH OUR MISSION, WE CONTINUE TO RISE INTERNATIONALLY IN LINE WITH OUR VISION.

In accordance with the principles of corporate governance, i.e. fairness, transparency, accountability and responsibility, Turkish Aerospace carries out its activities in a way that does not harm the interests of the right holders and the public due to the critical importance of the aerospace industry in which it operates. While acting as the leader of the industry in Türkiye in line with our mission, we continue to rise internationally in line with our vision. We attract financial resources and human resources to our Company by ensuring maximum compliance with corporate governance principles, and we provide stable growth by creating long-term economic gains for our shareholders by working efficiently.

There are 7 members at the Board of Directors, which is our highest management body. The decisions taken by our Board of Directors are executed by the Presidency office of our Company. There are three committees affiliated to our Board of Directors and one committee affiliated to the Directorate General.

### COMMITTEES

**Corporate Governance Committee:** We established the Corporate Governance Committee in 2015. Operating under the Board of Directors, the purpose of the Committee is to prepare the corporate governance principles that our Company will be subject to and submit them to the approval of our Board of Directors; to monitor compliance with the corporate governance principles approved by our Board of Directors; to carry out improvement studies in this regard, and to provide suggestions to our Board of Directors.

**Early Detection of Risk Committee:** We established the Early Detection of Risk Committee in 2015. Operating under the Board of Directors, the purpose of the Committee is to identify the threats that may endanger the existence, development, and continuation of our Company or the opportunities that may positively affect the existence, development, and continuation of our Company at an early stage; to implement the necessary activities related to the identified threats and opportunities, and to carry out activities to manage the risks.

**Audit Committee:** The purpose of the Audit Committee, which operates under our Board of Directors, is to monitor on behalf of the Board of Directors the effectiveness and adequacy of internal control, risk management, and internal audit systems, the functioning of these systems and accounting and reporting systems, and the integrity of the information generated.

In order to improve our activities and add value to our work, we carry out our internal audit and evaluation activities with an independent and objective approach in cooperation with our Audit Committee, which operates under the Board of Directors. We systematically carry out our internal audit and evaluation studies to evaluate and improve the effectiveness of our enterprise risk management, internal audit, and corporate governance processes.

**Sustainability Committee:** The purpose of the Sustainability Committee, which we have established with the support (sponsorship) of the President & CEO, is to determine, review, constantly improve our sustainability strategies, policies, short-, medium- and long-term sustainability goals, and to decide on improvement projects that will improve our sustainability performance. The duties of the Sustainability Committee include;

- To proactively manage our risks in the environmental, social, and corporate governance fields and to guide our Company's sustainability strategy.
- To follow the developments in our sustainability roadmap and applications that we have created to achieve the sustainability goals of our Company; to determine the performance criteria within the scope of the goals, and to audit the performance,
- To ensure that our sustainability strategies, policies, and targets are disseminated to all of our stakeholders and to supervise the execution of all necessary procedures, studies, and practices,
- To determine the projects that may be included in the scope of our sustainability activities and to ensure that these projects are implemented.



# CORPORATE GOVERNANCE

**WE AIM TO ENSURE THAT OUR EMPLOYEES DEVELOP MORE HARMONIOUS RELATIONSHIPS WITH EACH OTHER AND WITH OTHER GROUPS THROUGH ETHICAL STRUCTURING AND TO ESTABLISH A HAPPIER WORKING ENVIRONMENT.**



## ETHICAL PRINCIPLES MANAGEMENT

### Ethical Structuring

In order to strengthen the ethical climate within the organization of our company and to develop a corporate culture that focuses on ethical values, we have started an ethical structuring and created our Ethics Board and Ethics Board Subcommittee. We aim to ensure that our employees develop more harmonious relationships with each other and with other groups through ethical structuring and to establish a happier working environment.

### Ethics Handbook

We have prepared our Ethics Handbook as a guide containing the basic policies and procedures that we will follow in order to carry out our activities in accordance with the applicable codes, laws, and ethical rules in the light of the principle of respect to the law.

With Ethics Handbook, we aim:

- To create a common corporate culture on business ethics in our company and to put it in writing,

- To define our ethical rules and implementation processes in a clear and explicit manner,
- To lead our employees in acting according to our code of ethics,
- To ensure the development of professional ethics rules by increasing the awareness of our employees about ethics,
- To develop business ethics and legal forms of behavior in our working life,
- To create and maintain an environment that supports behaviors complying with all relevant laws and regulations, ethical standards, and industrial obligations,
- To introduce ethical standards into the corporate life of our company,
- To harmonize interpersonal relations by providing guidance in our business relations, to contribute to the establishment of cooperation and business peace.

### Ethics Board

We review and take decisions on the reports of our employees regarding the violation of ethical values, principles and responsibilities contained in our

Ethics Handbook within the scope of the Personal Data Protection Law with the contribution of our Ethics Board.

### Ethics Line

The Ethics Line is our reporting line consisting of a dedicated e-mail address and phone number that we have announced for our employees to report any violations of ethical principles in our business areas. We also allow our employees to submit applications for ethical violations by filling out forms through an independent service provider.

### Trainings on Ethics

In 2021, we carried out the “Conversation on Ethical Values in Business Life” and the “Conversation on Mobbing Awareness” with the participation of our consultant Prof. Dr. İnyet Aydın in order to raise ethical awareness among our employees and managers. We organized informational seminars on “Management Ethics and Leadership,” “Ethics in Science and Technology,” “Training of Ethical Trainers,” “Engineering Ethics,” and “Ethics in Science and Research.”

### Actions Planned within the Scope of Ethics Studies

- To provide training related to the ethical rules and concepts of our Company to our newly recruited employees within the scope of orientation training.
- To ensure that ethical awareness is developed by providing reminders and notices about issues such as definitions of code of ethics and violations via screensavers, portals, billboards, etc. at regular intervals.
- To train ethical trainers in order to provide trainings on refreshing, raising awareness, and creating ethical culture in our company and thus to make ethical awareness sustainable.
- To establish and implement an “Ethical Behavior Reward” system in order to establish an ethical culture and encourage ethical behaviors.



# CORPORATE GOVERNANCE

WE MANAGE ALL OF OUR ENTERPRISE PROCESSES **BASED ON A CONTINUOUS IMPROVEMENT APPROACH THROUGH A PLAN-DO-CHECK-ACT (PDCA) CYCLE.**

**Number of main processes defined in the Enterprise Process Management System**

# 14

## PROCESS MANAGEMENT

We are able to monitor all of our processes effectively through our Enterprise Process Management System. We define new processes and update our existing processes as per our needs. We manage all of our enterprise processes based on a continuous improvement approach through a Plan-Do-Check-Act (PDCA) Cycle.

### Enterprise Process Management System



We have defined 14 main processes and 180 sub-processes in our Enterprise Process Management System. We evaluate our main processes under 3 groups: operational, managerial, and support.

We have designed our Enterprise Process Management System to include all of our operational, managerial and support processes, their sub-processes as well as our activities, suppliers, customers, inputs and outputs, resources, process owners and supervisors. In our Enterprise Process Management System, we have included all of our activities aiming to define our performance indicators and targets, determine and update the risks related to the process, and maintain their relations with each other through the System.



# RISK MANAGEMENT

WE DEFINE OUR RISKS IN AN INTEGRATED MANNER WITH OUR PROCESSES, CREATE RISK MANAGEMENT STRATEGIES, AND **PROACTIVELY MANAGE ALL OF OUR RISKS IN THE ENTERPRISE RISK MANAGEMENT SYSTEM IN ORDER TO SECURE RISK MANAGEMENT ACTIVITY.**

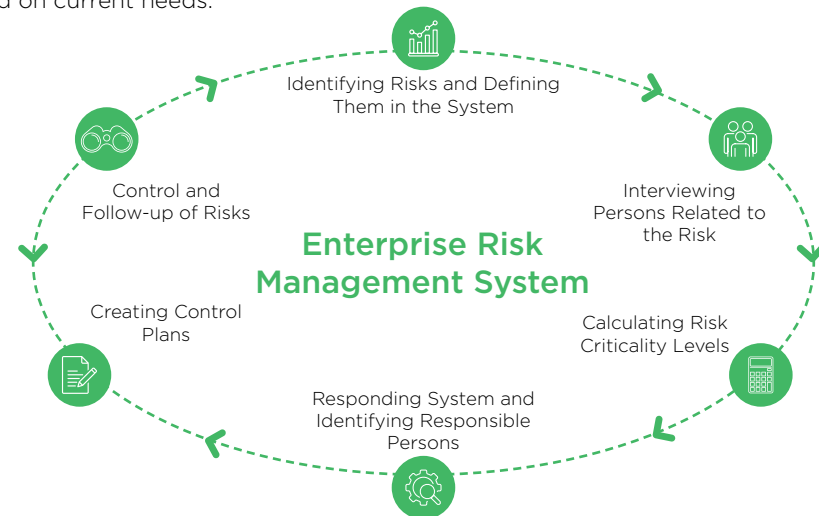
As per our Enterprise Risk Management Policy, we aim to contribute to corporate sustainability by proactively managing all kinds of opportunities and threats that we may encounter within the scope of the activities aiming to achieve our strategic goals. We define our risks in an integrated manner with our processes and create risk management strategies that are compliant with our strategic goals.

### Risk Management Purposes



We carry out our risk management activities with proactive methods in accordance with our Company’s risk-taking profile, risk appetite, culture, and the principle of continuous improvement and in compliance with legal regulations. We aim to reduce subjectivity by making the risks visible and measurable for our decision-making mechanisms. We constantly improve our risk management model and infrastructure, which we have created to proactively manage all risks, based on current needs.

We have designed our Risk Management process to have a cyclical structure consisting of identifying risks, defining these risks in our Enterprise Risk Management System, interviewing persons related to the risk, calculating risk criticality levels, identifying responding management and responsible persons, creating control plans, and risk control and monitoring.





# RISK MANAGEMENT

**TURKISH AEROSPACE IDENTIFIES THE RISKS AND CONTROLS THEM THROUGH METRICS** IN ORDER TO ACHIEVE ITS GOALS IN LINE WITH ITS SUSTAINABLE GROWTH STRATEGY.

**In 2021, we identified a total of 4,561 risks into the Enterprise Risk Management System under 8 different risk classes.**

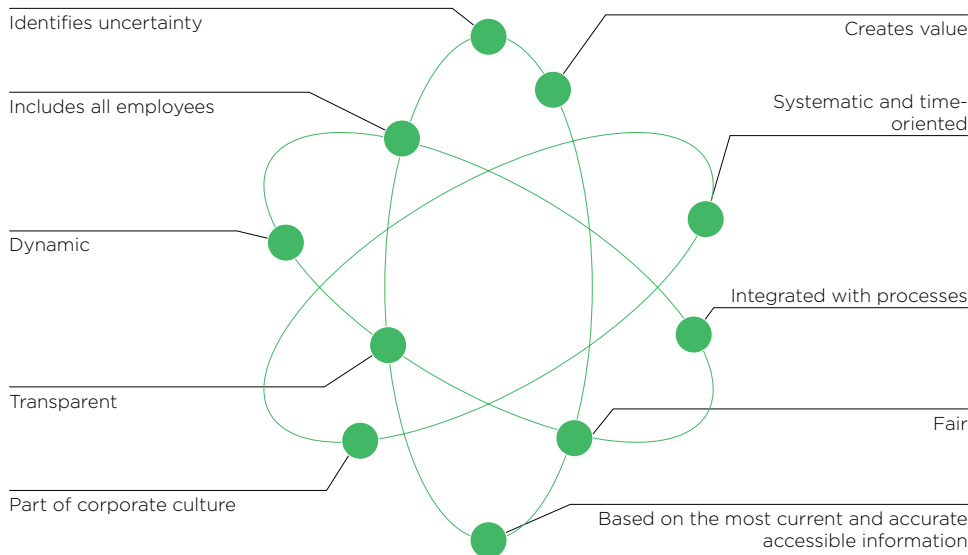
# 4,561

Turkish aerospace identifies the risks and controls them through metrics in order to achieve its goals in line with its sustainable growth strategy. Within the framework of resources/support we provide and the limits we set, it is our main priority to consistently and optimally manage the risks that have

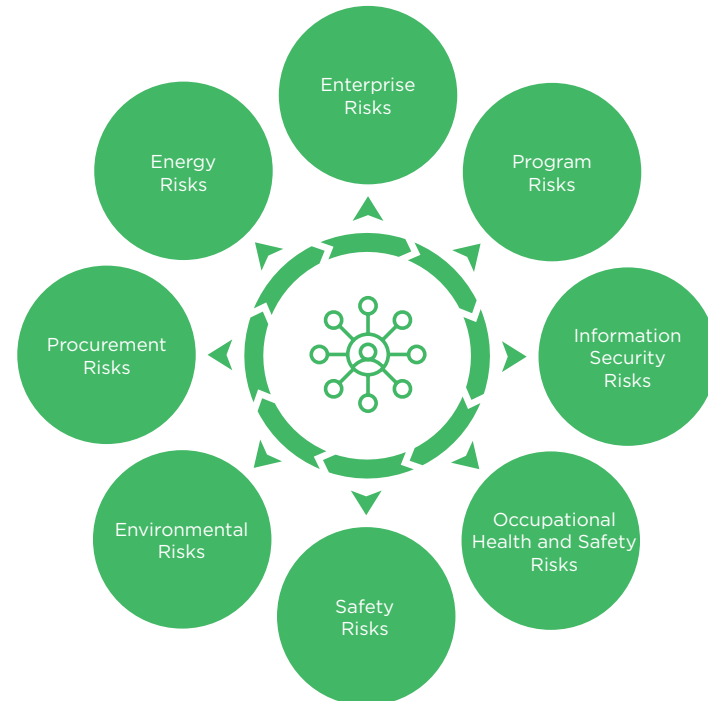
been identified by different departments of the Company and have different effects but affect each other, to create a common risk perception throughout our Company, and to raise awareness by ensuring the engagement of all departments in risk management process.

Turkish Aerospace monitors risks in 8 different risk classes under the Enterprise Risk Management System.

### Risk Management Principles



### Risk Classes





# RISK MANAGEMENT

IN ORDER TO ENSURE BUSINESS CONTINUITY IN OUR COMPANY, WE HAVE ESTABLISHED OUR BUSINESS CONTINUITY TEAM CONSISTING OF MEMBERS SELECTED FROM DIFFERENT DEPARTMENTS.

**WE PERIODICALLY HOLD BUSINESS CONTINUITY TEAM MEETINGS, REVIEW SCENARIOS, AND PLAN NEW SCENARIOS.**

## Business Continuity

We have created our Business Continuity Plan in order to plan, coordinate, and manage, when necessary, our main processes, services, practices, transactions to be carried out with suppliers, and corrective/preventive actions to be taken in case of unexpected events that will partially or completely disrupt our main activities. In this context, we have defined resources required to ensure business continuity throughout our Company as critical employees, critical machine tools, critical outsourcing companies, critical suppliers, critical subcontractors, and critical buildings, and have determined the activities.

We have created scenarios to prepare for unexpected events, we have determined the proactive and reactive strategies that we will implement within the scope of scenarios, and we continue to work on implementing proactive strategies.

In order to ensure business continuity in our company, we have established our business continuity team consisting of members selected from different departments. We periodically hold business continuity team meetings, review scenarios, and plan new scenarios.

## Our Efforts to Combat Covid-19

Since the beginning of 2021, the normalization steps have been taken depending on the vaccination rate and course. Although these steps have revived economic and social life, it has been a year in which the effects of the pandemic have continued and new variants have caused further concerns.

Thanks to its agile decision-making mechanisms and dynamic human resources, Turkish Aerospace managed to adapt rapidly to the measures implemented across the country and continued to take measures that prioritize human health. We were attentive to communicating transparently with our stakeholders in order to prevent any potential loss of motivation due to the uncertainty and to ensure business continuity.

In order to overcome the adverse effects of Covid-19 pandemic with minimal losses, we conduct risk assessments and prepare the necessary action plans.

The following are the measures we have taken in 2021.

- We have established our Pandemic Coordination Board to make new decisions and make assessments in our Company within the framework of all restrictions imposed in our country during the pandemic.
- We have informed our employees about the pandemic by periodic e-mails.
- We have allowed our own medical staff to give our employees the Covid-19 vaccine at our Health Center.
- We have planned our meetings with high numbers of participants online.
- We have moved our in-house training to the e-Learning/online platform.
- We have created seating plans suitable for social distancing in our dining halls.

- We conducted vaccination card checks at the entrances of the company and weekly PCR checks for our non-vaccinated employees.
- We have provided our employees with protective equipment.
- We have maintained protective measures such as masks, distance, and hygiene.

Since delays or interruptions caused by the supply chain posed a risk during this period, we conducted risk assessment studies with our critical suppliers at a more frequent intervals. We continue to work on diversifying our supplier portfolio in order to prevent interruptions and disruptions in the supply chain. If delays and failures are likely to occur in the delivery of the product, we try hard to create alternative methods or routes for transportation.



# HUMAN RESOURCES

## WE AIM TO RAISE AWARENESS OF OUR EMPLOYEES ABOUT SUSTAINABILITY AND RECYCLING VIA OUR GREEN HUMAN RESOURCES PROJECTS THROUGHOUT THE HUMAN RESOURCES PROCESSES.

We have created our Human Resources Policy in order to bring highly qualified human resources to Türkiye and our Company, develop human resources, and ensure the sustainability of engagement to our vision. We implement our human resources practices without compromising the corporate values that we have determined as integrity, reliability, creativity, efficiency, and stakeholder satisfaction.

Turkish Aerospace aims to provide a peaceful working environment by observing the principles of justice and equality to ensure that its employees work in a happy environment with high motivation. We design our human resources processes by focusing on our employees, and develop projects in order to ensure the continuity of principles that form the basis of our Human Resources Management.

### Green Human Resources Projects

In 2021, we aimed to contribute to the sustainability and effective use of our resources with our projects in human resources processes and to increase awareness of our employees in this regard. We switched into the e-archive system and transferred our existing personal files to the e-archive, while we started to log in files of newly recruited employees directly through the e-archive. We aim to minimize the use of paper for any further updates.

In 2021, we updated the contents of our “Welcome” packages that we share with our newly recruited employees with a multi-use water bottle and a recycled notebook. Within these packages, we added information notes on products made from recycled materials in order to raise awareness of our employees about sustainability and recycling.





# HUMAN RESOURCES

## IN ORDER TO SECURE THE SUSTAINABILITY OF ITS HUMAN RESOURCES, **TURKISH AEROSPACE GUIDES ITS ACTIVITIES BY OBSERVING THE PRINCIPLES OF EQUAL OPPORTUNITY, DIVERSITY, AND INCLUSION IN EMPLOYMENT.**

As in previous years, we also contributed to our forests by donating saplings to the Memorial Forest of our Company as well as to various regions of Türkiye on behalf of each newly recruited employee. We offered our employees the option of “Planting Sapling” as part of our social responsibility and green human resources practices under the motivation budget defined annually. We, together with our employees, planted saplings in the designated areas of our campus with the allocated budget. For 2022, we aim to continue raising awareness by selecting the birthday gifts of our employees from sustainable glass materials and adding a zero waste information message on the packages.

### **Sustainable Human Resources Efforts**

In order to secure the sustainability of its human resources, Turkish Aerospace guides its activities by observing the principles of equal opportunity, diversity, and inclusion in employment.

The feedback we have received from the exit interviews, focus group meetings, employee interviews, and employee engagement and satisfaction surveys plays a crucial role in our root cause researches. We aim to reduce the exits from our company by making improvements in line with root cause analyses. In order to ensure the continuity of corporate memory and experience and to strengthen the corporate culture, we take care that people who gained experience and got specialized in their field prefer to pursue their careers in our Company.

With the efforts we carry out to prevent loss of corporate memory and experience, we aim to increase employee loyalty and satisfaction and thus reduce labor turnover. We are aware that happy and motivated employees are the most effective force on the way to corporate sustainability.

Turkish Aerospace has always been working with a young and dynamic staff. We keep the average age at a dynamic level by recruiting people from the new generation along with our senior employees who are experts in their field. We support the corporate experience and foresight transfer by encouraging our senior employees and new generation employees to produce together. In order to ensure the continuity of our company policies, the activities we carry out, and the corporate memory we create, we aim to ensure the continuity of experience and foresight transfer through mentoring and reverse mentoring practices.

We are aware of the positive contribution of the new generation’s interest and expectation in sustainability to our corporate sustainability activities. Based on this awareness, we pay attention to the employment of Z and Y generations in line with the principles of diversity and inclusion.

Turkish Aerospace cares and encourages the participation of women in all areas and at all levels of society. We support our disabled citizens to actively take part in business life. Within the scope of our cooperation with İŞKUR (Turkish Employment Agency), we continue our negotiations for a project aimed at providing on-the-job training programs for our disabled employees and providing the necessary equipment in the field.



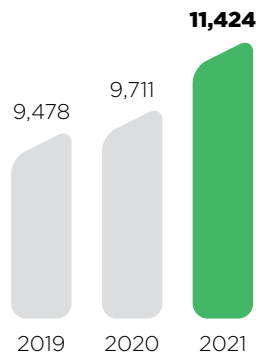
# HUMAN RESOURCES

WE HAVE INCREASED THE TOTAL NUMBER OF EMPLOYEES OF OUR COMPANY TO 11,424, **33.4% OF WHICH (3,809) WERE ASSIGNED TO OUR R&D ACTIVITIES AS OF THE END OF 2021.**

## EMPLOYEE PROFILE

Turkish Aerospace increases its employment every year in line with its expanding fields of activity and increasing business volume, strengthens its staff with newly recruited employees, and contributes to the country's economy with its well-trained workforce resource.

### Number of Employees by Years



We have increased the total number of employees of our company to 11,424, 33.4% of which (3,809) were assigned to our R&D activities as of the end of 2021.

We provided the distribution of our employees based on their age groups, gender, contract type, and seniority in the following tables. In addition to the distribution of our current employees in the aforementioned categories, we also share information about the number of employees who have been recruited in 2021 and the labor turnover in the following tables in order to keep track of the change in the workforce.

The average age of our employees was 33.6 in 2021 following the recruitment of 2,179 new employees. The ratio of our female employees stood at 14.5%, and 19.2% which held executive positions.

### Number of Employees By Age Groups

Age Range	Number of Employees
0-29 Years	3,745
30-39 Years	5,024
40-49 Years	1,908
50-59 Years	640
60 Years and Older	107

### Numbers and Rates of Employees By Gender

	Number of Employees	Rate
Male	1,657	14.5%
Female	9,767	85.5%

### Numbers and Rates of Employees By Contract Type

	Male	Female	Rate
White Collar	1,492	4,561	53%
Blue Collar	165	5,206	47%



# HUMAN RESOURCES

TURKISH AEROSPACE STRENGTHENS ITS EXPERIENCED AND **SPECIALIZED HUMAN RESOURCES WITH ITS YOUNG GENERATION OF EMPLOYEES, AND MAINTAINS ITS DYNAMIC STAFF STRUCTURE.**

**Number of employees recruited in 2021**

**2,179**

## Number of Employees by Seniority

Employment Term	Number of Employees
0-3 Years	4,100
3-5 Years	2,988
5-10 Years	1,833
10-15 Years	1,517
15 Years and Above	986

## Labor Turnover in 2021

Employee Turnover Rate (%)	4.32
----------------------------	------

## Number of Employees Recruited in 2021

Newly Recruited	2,179
-----------------	-------

## EQUAL OPPORTUNITIES

Turkish Aerospace includes candidates who meet the appropriate criteria for the position in the recruitment process, taking into account their academic success and competence, regardless of the characteristics of the educational institution, gender, origin, religion, etc., by screening candidates and application evaluation stages in the recruitment process to ensure equality of opportunity.

In our promotion and transfer processes, which are part of our career management under the responsibility of Human Resources and Talent Management, we adopt the principle of providing equal opportunities to our employees and take great care to follow the procedures within the framework of the same rules for all employees without making any kind of discrimination. In this regard, we continue to work with our equal, fair, accountable and data-based Career System applications that will contribute to the individual development of our employees while allowing them to evaluate their own competencies, qualifications, experiences, and interests, and thus achieving their career goals.

## REMUNERATION AND BENEFITS

### Remuneration Policy

Turkish Aerospace adopts an equal pay for equal work approach and determines its remuneration policy by making measurable, transparent, balanced, and fair evaluations based on the value of the work. We use analyses accompanied by sectoral wage surveys to maintain the balance between internal and external wages. We aim to implement more competitive, motivating, and rewarding practices with an objective approach by observing the economic indicators of Türkiye and sectoral market data.

### Academic Leave

We care about our employees gaining experience at work as well as improving themselves in the academic field because we appreciate the value that our employees' academic knowledge adds to our Company. For this reason, we grant our employees the right to use academic leave during their graduate and/or doctoral studies, and we provide paid



# HUMAN RESOURCES

**WE PROVIDE OUR EMPLOYEES WITH SIDE BENEFITS SUCH AS ANNUAL LEAVE, PRIVATE HEALTH INSURANCE, LIFE INSURANCE, INFIRMARY SERVICE, NURSERY FACILITIES, HOUSING, AND POSTGRADUATE EDUCATION OPPORTUNITIES.**

leave for each semester, provided that it complies with our employees' course schedules. Thanks to the academic leave option, we create an opportunity for our employees to continue their academic studies together with their business processes and to use the academic qualifications they have acquired in their business fields as well.

**Social Benefits, Paid Leaves, and Flexible Working**

We provide our employees with side benefits such as annual leave, private health insurance, life insurance, infirmary service, nursery facilities, housing, and postgraduate education opportunities. In addition, we offer our employees the opportunity to work flexibly so that they can achieve a work-life balance in accordance with their priorities.

**Minik Kanatlar Nursery and Kindergarten**

We provide bilingual education services to our employees' children aged 0-6 in our Minik Kanatlar Nursery and Kindergarten free of charge. We aim to increase the capacity of our Nursery, where we served 220 children as of the end of 2021, to accommodate 450 children as of 2022. In order for our nursery teachers to develop themselves and prepare our children for the future with confident steps, we provide them with training in drama and off approach, coding, fairy tale and game therapy, current learning approaches, family and child communication, effective communication methods, learning with a thematic system, etc. In order to support the interests and skills of our children, we continue our in-field courses that we have enriched with English, drama, gymnastics, dance, visual arts, chess, and off approach education throughout the academic year. We ensure that our employees are confident and happy to entrust their children to our Nursery and Kindergarten and our teachers.





# HUMAN RESOURCES

## **TURKISH AEROSPACE FOLLOWS AN EFFECTIVE PERFORMANCE MANAGEMENT PROCESS BY SETTING INDIVIDUAL TARGETS** IN ORDER TO MAINTAIN THE DEVELOPMENT OF EMPLOYEES AND INCREASE THEIR CONTRIBUTION TO THE BUSINESS.

### **PERFORMANCE DEVELOPMENT, CAREER AND TALENT MANAGEMENT**

#### **Competency Management**

In order to monitor the level of knowledge and competencies of our employees throughout their career within the framework of the expertise they have and to improve them by supporting with related trainings, we have defined the roles, relevant competencies, and requirements in the competence details. In 2021, we evaluated the competence development of our executives and organized coaching activities for them on the development topics we have determined.

#### **Performance Management**

In order to maintain the development of our employees and increase their contribution to the business, we set individual goals and follow an effective performance management process. We implement interim review processes every quarter during the evaluation year. We evaluate our employees with the participation of their first and second executives to whom they report to base on the individual goals set by our executives in accordance with our corporate and strategic goals and the behavioral success criteria that we set according to their titles. We aim at constant development by giving feedback to our employees during the evaluation process and during the interim periods.





# HUMAN RESOURCES

**WE DEVELOP OUR INTERNAL COMMUNICATION CHANNELS AND ENCOURAGE OUR EMPLOYEES TO ENGAGE IN OUR PROCESSES IN ORDER TO PROVIDE OUR EMPLOYEES WITH A HAPPY AND MOTIVATING WORK ENVIRONMENT FROM THE DAY ONE UNTIL THEIR RETIREMENT.**

## INTERNAL COMMUNICATION

We have designed our Human Resources Management to provide a peaceful, happy, and motivating work environment in which we observe the principles of justice and equality for our employees. The focal point of our Human Resources Management processes is the satisfaction and development of our employees. In order to ensure the continuity of these values, we keep up our activities to communicate effectively with our employees through our contact points and platforms from the day one throughout their retirement.

### Employee Engagement and Satisfaction Survey

We conduct Employee Engagement and Satisfaction Surveys at certain periods in order to increase the engagement of our employees, keep them happy and motivated throughout the year, and identify possible areas of improvement. Based on the survey results, we organize action workshops and work to improve our processes until the next survey period. We aim to strengthen the trust of our employees in our Company and policies and to increase their engagement with our Company.

In addition to Employee Engagement and Satisfaction Surveys, we also receive our employees' feedback by conducting instant surveys at the end of the activities and programs we carry out during the year.

### Human Resources Business Partnership Structure

Turkish Aerospace represents a dynamic family that is growing year by year with more than 11 thousand employees as of the end of 2021. We have established our "Human Resources Business Partnership" department in order to carry out the human resources processes of all our main units effectively, identify existing and potential problems, and take quick action by evaluating improvement proposals. With the participation of our business partners, we conduct short conversations and focus group meetings in our departments. We support our employees to evaluate the existing problems and improvement areas in our departments and take part in the solution altogether.

### Employee Support Program

In addition to the Business Partnership structure, we use alternative communication channels through which our employees can communicate their problems, complaints, and suggestions face-to-face. We conduct face-to-face interviews with our employees who want to submit their complaints and suggestions to our Human Resources Management within the scope of the Employee Support Program that we have developed in order to effectively listen to our employees and offer suggestions for solutions. We provide free of charge, 24/7 telephone and/or face-to-face psychological support services for our employees who need psychological support for themselves or their families.

### Feedback Process

Turkish Aerospace cares about the feedback of its employees who quit their jobs. We conduct face-to-face job interviews with our employees who will resign and we receive their feedback in this process. We take necessary actions in the fields according to the feedbacks.



# HUMAN RESOURCES

WE CARE ABOUT THE HAPPINESS AND MOTIVATION OF OUR EMPLOYEES FOR THE SUSTAINABILITY OF OUR HUMAN RESOURCES AND **WE FOCUS ON OUR EMPLOYEES IN HUMAN RESOURCES PROCESSES.**



## Employee Experience Maps

We carefully determine the points where we will contact our employees in the process from their recruitment to our Company to their retirement, and we create our employee experience map. As part of our orientation program, which is the starting point of our employee experience map, we take care to warmly welcome our newly recruited employees on their first working day. In our orientation program, called Sky and Beyond 101, we organize field trips at our plant site to introduce our company to our new employees, and we design group games to allow our employees to communicate with each other. We are preparing a welcome gift with the concept of "Welcome!" for each of our employees who have just started working and we are planting saplings in our memorial forest. Based on our employee experience map, we share the happiness of our employees through gifts accompanied by our greeting messages on special days such as eids, birthdays, marriages, having a baby, or retirement.

## Efforts to Strengthen Communication

In order to ensure the happiness and engagement of our employees, we consider the approaches of our executives and their communication with our employees as decisive elements. In this context, we launched our "High Altitude" managerial competence program in 2021 in order to provide multifaceted support to the leaders of our Company and to strengthen the communication between our executives and our employees. Within the scope of the High Altitude program, we contribute to strengthening intra-departmental communication by bringing our executives and employees together at various events. We improve the leadership competencies of our executives through management trainings. In our communication project, called "Red Microphone," we welcome our executives and employees to meet in a friendly atmosphere, and expect our

employees to ask any questions to our senior executives and our executives to answer questions open-heartedly. It helps us to contribute to strengthening the communication between our senior management and our employees, creating a communication-oriented corporate culture and increasing employee engagement.

## Digitalization of Human Resources Processes

We care about the happiness and motivation of our employees for the sustainability of our human resources and focus on our employees in human resources processes. In order to make our competent human resources sustainable, we think that digital transformation in human resources processes and HR data analytics studies are as important as our other activities that increase employee engagement.

We carry out analytical studies with human resources data in order to make data-based decisions and develop HR strategies. We prepare interactive business intelligence reports that provide detailed metrics using HR data. We develop protocols to ensure data integrity and improve data quality. As for 2022, we aim to develop strategies to keep our employees in our Company by creating exit forecasting models. We plan to take action in advance with a proactive approach by identifying our employees who are about to leave their jobs. We aim to increase productivity and reduce our labor costs by automating many of our processes with RPA (Robotic Process Analysis) software that we plan to launch in 2022.



# HUMAN RESOURCES

**IN 2021, WE OFFERED A TOTAL OF 796 DIFFERENT TRAINING PROGRAMS UNDER 6 CATEGORIES** TO OUR EMPLOYEES WITHIN THE ACADEMY, AND WE PROVIDED AN AVERAGE OF 57 HOURS OF TRAINING PER PERSON.

## ACADEMY ACTIVITIES

At the heart of our highly qualified human resources, which is the most important factor in increasing our global competitiveness, there are our training and development activities that we carry out based on “lifelong learning” approach. We contribute to the professional development of our employees as well as their personal development through our learning and development activities that we structured and constantly improved in accordance with the goals and strategies of our company.

### Academy Training Programs

In 2021, we provided our employees with a total of 796 different trainings under 6 categories within the Academy, and we offered 45 of them as online courses.

### Academy Basic Trainings

Category	Number of Courses
Technical Trainings	452
Engineering Trainings	204
Organizational Trainings	66
Specialty Trainings	41
Personal Development And Managerial Trainings	20
Legal Obligations Trainings	13
<b>Total</b>	<b>796</b>

In 2021, we provided an average of 57 hours of training per person within the Academy. The following tables show the total hours of our in-house trainings in 2019, 2020, and 2021.

### Duration of Trainings (hour)

2019	2020	2021
472,254	475,468	578,502

We support our sustainability awareness activities, which we consider to be one of the main components of our corporate culture, with energy efficiency, zero waste, and environmental awareness trainings within the Academy. The following table contains the details about the number of employees participating in the environmental and energy trainings within the Academy and the total time allocated for these trainings.

### Academy Energy and Environmental Trainings

Name of Training	Number of Employees	Duration (hour)
Energy Efficiency Awareness and Energy Management System Introduction Training	5,283	6,647
Environmental Awareness and Environmental Management System Introduction Training	8,939	29,985
Environmental Audits and Environmental Obligations Training	6,964	6,964
Zero Waste Management System Training	8,484	15,540
Environmental Management System and Environmental Information Forms Training	4,700	10,233

We continue our efforts to address the training needs of our employees as well as our business partners in the ecosystem in which we operate. In 2021, we provided a total of 17,469 hours of training services to meet 2,443 training requests received from subcontractors and outsourcing companies.



# HUMAN RESOURCES

**WE PROVIDED INTERNSHIP OPPORTUNITIES TO A TOTAL OF 2,056 STUDENTS IN OUR COMPANY IN 2021, DESPITE THE FACT THAT WE HAD TO APPLY CERTAIN RESTRICTIONS ON OUR INTERNSHIP PROGRAMS DUE TO COVID-19 MEASURES.**



## Academy Development Programs

### Executive Development Programs

Turkish Aerospace carries out many programs simultaneously with different approaches for its executives at different levels.

### “Accelerated Executive Leadership for Transformation” Program

In 2020, we started implementing the “Accelerated Executive Leadership for Transformation” development program as part of our cooperation with Boeing. In 2021, we implemented the managerial coaching program for our senior executives based on the data obtained from the 360-degree evaluation studies. In this context, we ensure that all our executives follow a minimum of 6-session coaching program in the development areas they have determined together with their coaches. We plan to implement a 2-day training program on the Blanchard SLII leadership Model in 2022.

### Leadership Base Executive Development Program

Since 2019, we have been implementing a Leadership Base Executive Development Program in order to guide our executives and employees to achieve our strategic goals by creating a common managerial language within the Company. Within the scope of the program, we aim to increase the awareness of our first-tier executives about the knowledge, skills, and experience required by their positions, enable them to develop flexible leadership styles, create agile and result-oriented teams that observe generational differences, and have the right job distribution. In the 12-week program based on a multidimensional learning and development model, we include preliminary preparation, face-to-face training modules, reinforcement tasks between modules, agile working method, coaching/mentoring interviews, and Evaluation Center applications.

### Masters of Change - Chief Technician Development Program

We implement the “Masters of Change - Chief Technician Development Program” on improving communication skills and emotional intelligence, courtesy and protocol rules in business life, leadership, and team management, which we have prioritized as a result of internal analyses. We have prepared the program in parallel with the methods and contents covered in the Leadership Base Executive Development Program. With the program that has been completed by our 24 chief technicians to date, we aim to create a common language in team management and facilitate communication between first supervisors and chief technicians.

### Young Talent Programs Conducted with Universities and Vocational High Schools

We carry out a large number of internship programs for many different educational levels within the Academy. We provided internship opportunities to a total of 2,056 students in 2021, despite the fact that we had to apply certain restrictions on our internship programs due to Covid-19 measures.

Internship Program	2021
SKY (Undergraduate) Programs	1,341
Vocational High School / Vocational and Technical Anatolian High School Programs	684
SKY International and Special Programs	31
<b>Total</b>	<b>2,056</b>

### SKY Discover Program

We aim to enable young people to explore aviation and space technologies and defense industry with the SKY Discover Program. The program is held between June and September for 20 business days on an annual basis, and addresses our young talents, the future of Türkiye, from 3<sup>rd</sup> and 4<sup>th</sup> year at the engineering faculties of the universities. With the SKY Discover Program, we offer our trainees the opportunity to see the workspaces where design/manufacturing/assembly/testing and integration operations are carried out for the aerospace industry, and to explore the working culture and engineering notion of a large-scale corporate company on the site.



# HUMAN RESOURCES

## WE HOST TURKISH AND FOREIGN ENGINEER CANDIDATES IN OUR COMPANY WITHIN THE SCOPE OF INTERNSHIP PROGRAMS THAT WE HAVE DEVELOPED IN ORDER TO STRENGTHEN OUR RELATIONS ON AN INTERNATIONAL SCALE.

### SKY Experience Program

We have developed a trainee engineering program to provide our young talents studying their 3<sup>rd</sup> and 4<sup>th</sup> year at the engineering faculties of universities with the opportunity to experience aviation and space technologies and the defense industry for 6.5 months. We offer candidate engineers the opportunity to work part-time in the fields of design/manufacturing/assembly/testing and integration operations for the aerospace industry while studying and to experience the concept of engineering and the working culture of a large-scale corporate company.

### Vocational High School Programs

In order to train qualified technicians in accordance with our corporate culture, we carry out Vocational High School Programs within the framework of our cooperation with the relevant vocational high schools of universities. As part of the program, we accept trainee

technicians based on the yearly quota that we define before the start of the academic year for the relevant high schools. We provide trainee technicians studying in the relevant departments of universities, particularly in Aircraft Technology, Machine Technology, and Mechatronics Technology programs, with the opportunity to gain practical experience in assembly/manufacturing/integration and testing through summer internship and workplace trainings.

### Vocational Technical High School Programs

Within the framework of the Vocational Technical High School Programs that we have designed to train technicians, who are qualified and familiar with the corporate culture, we offer students from departments of Aircraft Technology, Machine Technology, and Metal Technology the experimental learning opportunity within the scope of workplace skills training and/or summer internship.

### SKY International and Special Internship Programs

We host Turkish and foreign engineer candidates in our company within the scope of internship programs that we have developed in order to strengthen our relations on an international scale. We plan to contribute to the market activities of our Company and the possible employment of foreign engineers, mainly our citizens working abroad, through these programs that we have started with Pakistan and Indonesia.

### Cooperation Protocols

We have cooperation protocols with 95 Universities within the scope of the SKY Experience Program, vocational high schools of 7 universities based in Ankara within the scope of Vocational High Schools Programs, and 4 Vocational Technical Anatolian High Schools within the scope of Vocational Technical Anatolian High School Programs. Within the scope of the protocols, we provide internship and/or workplace training opportunities to the relevant school students during the summer term or academic periods, and we give priority to our interns in employment.

### Postgraduate Education Programs

- Istanbul Technical University (İTÜ) Master's Program in Aircraft Structures and Materials
- Ankara Yıldırım Beyazıt University (AYBÜ) Master's/Doctoral Program in Aerospace Engineering
- Yıldız Technical University Master's Program in Avionics Engineering
- Gebze Technical University Master's Program in Applied Propulsion System Design Engineering in Aviation and Space Technologies



# OCCUPATIONAL HEALTH AND SAFETY

**IT IS OUR FIRST PRIORITY TO PROVIDE OUR EMPLOYEES WITH A SAFE AND HEALTHY WORKING ENVIRONMENT THAT WE HAVE CREATED WITHIN THE FRAMEWORK OF OUR LEGAL OBLIGATIONS AND POSITIVE OCCUPATIONAL HEALTH AND SAFETY CULTURE.**

**We reduced our occupational accident frequency rate in 2021.**

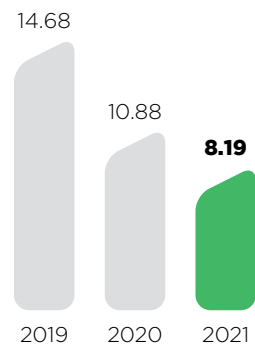
# 8.19

As Turkish Aerospace, we consider the health and occupational safety of our employees as our first priority in all of our operations and activities. We provide our employees with a safe and healthy working environment that we have created within the framework of our legal obligations and positive occupational health and safety culture.

With our occupational health and safety activities carried out within the scope of our Occupational Health and Safety (OHS) Policy, we comply with legal legislation and other requirements, observe the principle of continuous improvement, ensure the participation of our employees, and consult them. Our aim is to provide a healthy and safe working environment free from occupational accidents and occupational diseases in compliance with the purpose, size, context, and nature of OHS risks and opportunities of our company.

We continue our OHS operations under the coordination of our OHS Board with the participation of our senior management and the cooperation of our employee representatives. We conduct OHS-related assessments, examine occupational accidents that occur despite all preventive measures, identify measures, and take action decisions at our monthly OHS Board meetings.

### Occupational Accident Frequency Rate



### OHS Management System

We have implemented the OHS Module in order to maximize our rate of fulfillment of legal requirements, to ensure the participation of all employees in practices, and to strengthen communication in our OHS activities. The OHS Module was instrumental in creating a software-based management structure where we could create accident/incident records, investigations, legal compliance assessments, and field surveillance records and track our corrective actions in order to record and monitor our OHS-related information.

### Full Compliance with ISO 45001 OHS Management System Standards

With our OHS Management System, we became eligible for certification in 2008 by meeting the requirements of TS 18001 (OHSAS): 2007 Occupational Health and Safety Management System standard, and we have renewed our certificate in the interim audits conducted since 2008. We also became eligible for the ISO 45001 Occupational Health and Safety Management System Standard Certificate as a result of the audit conducted by Bureau Veritas between November 4-6, 2020 to certify our compliance with the ISO 45001: 2018 Occupational Health and Safety Management System standard published as a replacement for the OHSAS standard in 2018.

## OCCUPATIONAL HEALTH AND SAFETY

WE CARRIED OUT ACTIVITIES TO PREVENT THE OCCURRENCE OF OCCUPATIONAL ACCIDENTS BY CONDUCTING WORK ENVIRONMENT INSPECTIONS IN ORDER TO INCREASE EMPLOYEE AWARENESS. **WE ENSURED THAT ALL OF OUR EMPLOYEES ADOPTED OHS AS A LIFESTYLE.**

### OHS Risk Management Efforts

During our operations, we identify hazards in our working environment, and establish the risk levels by defining the risks that may arise from these hazards, their probability, impact, and frequency of occurrence. We carry out our risk assessment studies with the participation of our occupational safety experts, our workplace physician, the executives of the relevant department, and the employee representative. We report the results of the analysis to our relevant departments as well as save them to our Enterprise Risk Management System, which is a digital platform accessible to all employees. When eliminating risks, we primarily use the hierarchy of hazard elimination, substitution, engineering measures, administrative measures and the use of personal protective equipment.

### OHS Awareness Activities

We carried out activities to prevent the occurrence of occupational accidents by conducting work environment inspections in order to increase employee awareness. We ensured that all of our employees adopted OHS as a lifestyle.

In order to increase risk awareness among our employees related to OHS, we organized Hazard Prediction Workshops and continued our efforts to increase the internalization.

### OHS Trainings

In 2021, we delivered trainings on OHS awareness to our employees and executives. Due to the Covid-19 pandemic measures, we transferred our training activities to the e-Learning platform and started to provide many trainings, including compulsory basic OHS trainings, remotely. In this context, we enabled our 6,345 employees in total to participate in OHS Basic Awareness training through the e-Learning platform during the year.



## SOCIAL RESPONSIBILITY

AS TURKISH AEROSPACE, IT IS A PREREQUISITE FOR US THAT EVERY CHILD IS EDUCATED IN AN EQUAL AND FAIR ENVIRONMENT IN ORDER TO BE PREPARED FOR THE FUTURE. **WITH THE GÖKYÜZÜ ÇOCUKLARI (SKY KIDS) PROJECT, WE AIM TO RAISE OUR CHILDREN'S INTEREST AND AWARENESS IN ENGINEERING, AVIATION, AND SPACE.**

### SKY KIDS

Within the scope of the protocol signed with the Ministry of National Education, we will continue to help next generation gain competence in respect of STEM (Science, Technology, Engineering, Mathematics) education in 81 schools in 81 provinces in 2022 as well with the "Sky Kids" project, which we launched as a Corporate Social Responsibility project in 2019.

In the first phase of the project, we prepared training classes compatible with the STEM model in 7 primary schools in 7 provinces. The project was implemented in Ankara, Izmir, Elazığ, Kastamonu, Mersin, Mardin and Çanakkale provinces and involved activities for 3<sup>rd</sup> grade students and teachers. We enabled the participation of total 14 teachers, including two classroom teachers from each school, in a 50-hour technical and practical training program delivered by the academicians of the Faculty of Educational Sciences of Boğaziçi University. Upon the completion of the first phase, we aim to expand the scope of the project and create "Sky

Kids" STEM classes in 81 schools in 81 provinces on the 50<sup>th</sup> anniversary of the establishment of our Company.

With the Sky Kids project, we aim to raise our children's interest and awareness in engineering, aviation, and space.

### LIFE WORKSHOP AND SPORTS CLUB ACTIVITIES

We support our employees to pursue their hobbies with the Life Workshop Association within the Company and more than 20 social communities affiliated to the association. Strengthening the motivation of our employees by observing the balance between career and social life, the activities of the life workshop are ranging from diving to amateur photography, from skiing to folk dances and sailing. We encourage them to participate in events organized both at home and abroad and also contribute to the equipment, materials, and transportation costs of social events.





# SOCIAL RESPONSIBILITY

**WE OFFER SUPPORT PRIMARILY FOR THE EDUCATION OF THE YOUNGER GENERATIONS OF OUR COUNTRY, THE CARE OF OUR ELDERLY AND THE SUSTAINABILITY OF OUR NATURAL ASSETS** WITHIN THE SCOPE OF OUR SOCIAL RESPONSIBILITY ACTIVITIES, POWERED AND INSPIRED BY THE VOLUNTARY SUPPORT OF OUR EMPLOYEES.

While implementing pioneering projects in the field of aviation and space for the future of Türkiye with more than 11 thousand employees, as Turkish Aerospace, we develop social responsibility projects together with social communities, "Elini Uzat" Community and the Turkish Aerospace Nature Preservation Community (TADOK), and we have the opportunity to contribute to the society with the voluntary support of our employees. Our employees actively participate in the process and become partners of social contribution with their voluntary support for social responsibility projects.

### **LEND A HAND COMMUNITY PROJECTS**

We continued our efforts for the groups in need with the voluntary contribution of our employees in 2021 as well. In this context, we primarily offer support for the education of the younger generations of our country, the care of our elderly people, and the sustainability of our natural assets.

### **School Aids**

As Turkish Aerospace, it is a prerequisite for us that every child is educated in an equal and fair environment in order to be prepared for the future. With the support of our employees, we contributed to the painting and floor renovation works in the Çankaya Primary School's Kindergarten, and renewed the Çankaya Nene Hatun Elementary School's Kindergarten and Şehit Erhan Ar Gökyüzü Project classes in 2021. We continue to determine the schools in need at the beginning of the academic year and provide clothing, stationery, and projection support.

### **Book Donation**

Considering the importance of reading books in the education of our children and young people, we established a library and donated a wide range of books to Beypazarı Şehit Hacı Kazım Anatolian High School, which did not have a library, with the support and participation of our employees.

### **Nursing Home Visits**

We visited and provided financial support to the Süleyman Demirel Nursing Home of the Ministry of Family and Social Services with the support of our employees to meet the needs of elderly people, who are one of the most important assets of our society.

### **Support for Areas Affected From Wildfires**

With the support of our employees, we donated 1,111 saplings to the "Breath for the Future" campaign launched by the Ministry of Agriculture and Forestry in order to grow our forests damaged by fires in the summer of 2021 in various regions of Türkiye, especially Hatay, Trabzon, and Kahramanmaraş, where the effects of the climate crisis were deeply felt.

We provided donations, which were collected through the aid campaign for the forest fires in the Manavgat district of Antalya, to the Turkish Red Crescent and the Tema Foundation in order to meet the immediate needs of our citizens affected by the fire and the teams working in the region.

### **Technology Support to Children's Homes**

We provided technological devices to 250 children who live at the Ankara Children's Homes Site affiliated with the Ministry of Family Work and Social Services through a campaign launched to touch the lives of our orphaned children growing up under the auspices of the state, to bring them hope and to raise future generations under the best conditions.

### **Ramadan Box Donation**

We prepared solidarity boxes for families determined in coordination with Kahramankazan District Governor's Office during Ramadan and delivered the boxes to the families with the visits we paid along with our volunteer employees.

### **TADOK- TURKISH AEROSPACE NATURE PRESERVATION COMMUNITY**

We meet the feeding and care needs of dogs in shelters established with the efforts of TADOK volunteers and cats in cat houses in our campus.



# ENVIRONMENTAL MANAGEMENT AND CLIMATE CHANGE PRACTICES

## TURKISH AEROSPACE INCORPORATES SUSTAINABLE DEVELOPMENT GOALS INTO ITS BUSINESS PROCESSES BY OBSERVING THE PRINCIPLES OF RESPONSIBLE PRODUCTION, VALUE CREATION, ENVIRONMENTAL PROTECTION, AND CONTINUOUS TRANSFORMATION AND IMPROVEMENT.

We carry out our environmental sustainability efforts in the fields of aviation, aerospace, and defense industry areas in accordance with our environmental and climate change policy. The policy is aimed at preventing pollution by reducing environmental impacts in all processes as per legal and other requirements based on the principle of continuous improvement as well as contributing to environmental sustainability by taking into account the fight against climate change.

We aim to improve our environmental performance by adopting the zero waste principle and adapting to new regulations in order to support environmental sustainability, ensure the effective use of our resources, prevent environmental pollution caused by our activities, combat climate change, and contribute to the circular economy.

We have prepared the Sustainability and Climate Change Handbook in order to fully address and communicate our current and future efforts in detail within the scope of environmental sustainability as well as combating and adapting to climate change.

### ISO 14001 Environmental Management System

As Turkish Aerospace, we received the ISO 14001 Environmental Management System Certificate on November 23, 2015. We successfully completed the document renewal audits conducted by Bureau Veritas, an accredited organization, between October 4 and 6, 2021. We have received the ISO 14001:2015 certificate, which will be valid until November 21, 2024, for our Environmental Management System.

We secure the sustainability of our Environmental Management System through the internal audit activities.





# ENVIRONMENTAL MANAGEMENT AND CLIMATE CHANGE PRACTICES

## WE TOOK IMPORTANT STEPS IN THE FIELDS OF CARBON MANAGEMENT, WATER MANAGEMENT, AND WASTE MANAGEMENT WITHIN THE SCOPE OF COMBATING CLIMATE CHANGE IN 2021.



### Environmental Sustainability and Climate Change Steps

We took important steps in the fields of carbon management, water management, and waste management within the scope of combating climate change in 2021.

- **Combating climate change and adaptation:** We have started our preparatory work for reporting on the Carbon Disclosure Project (CDP). We completed the negotiations with companies and the preparation of specifications for CDP Reporting in 2022.
- **Carbon management:** We have been calculating and verifying our greenhouse gas emissions arising from combustion on an annual basis since 2015. In 2021, we calculated our carbon footprint as 0.15 tCO<sub>2</sub>e/(m<sup>2</sup>). We have prepared our specifications and received offers from companies to perform Corporate Carbon Footprint calculation studies in accordance with

ISO 14064 Greenhouse Gas Inventory Standard. We have planned our work to calculate and verify our corporate carbon footprint in 2022.

- **Water management:** We have designed Zero Liquid Discharge (ZLD) systems to recover about 85% of the wastewater from our machines, machine tools, and equipment on site. We carry out dry landscape application works. We have recovered 45% of the treated wastewater by using it in irrigation. In order to reduce our water footprint, we initially plan to complete the Measurement and SCADA System for Mains Water Intended for Human Consumption in 2022, which we started to install in 2021 in order to create our current water map. We aim to conduct Water Safety Reporting within the scope of the CDP Water Program in 2022. We have established our procedure for the Management and Effective Use of Water Resources in order to reduce the use of and recover water.

- **Waste management:** We achieved an 8% decrease in the total amount of waste generated in 2021 compared to 2020. We achieved 99% recycling/recovery of our waste in 2021.
- **Circular economy and zero waste approach:** We send our hazardous waste to a licensed company for recovery. We re-use our surplus materials in different production areas. In 2021, we reused 91 different materials (computer equipment, cabinets, safes, chests, tables, metal parts, etc.) amounting to 8,483 kg in total in 69 different production points in our plant. Thanks to our Zero Waste Management System, we managed to recycle 59% of the waste materials in 2021.





# ENVIRONMENTAL MANAGEMENT AND CLIMATE CHANGE PRACTICES

**WE BECAME THE FIRST COMPANY AMONG THE INDUSTRIAL ORGANIZATIONS IN TÜRKİYE TO RECEIVE THE BASIC LEVEL ZERO WASTE CERTIFICATE** ISSUED BY THE MINISTRY OF ENVIRONMENT, URBANIZATION AND CLIMATE CHANGE.

## ENVIRONMENTAL MANAGEMENT

### Environmental Risks

By determining the environmental dimensions and current/potential environmental impacts of our activities, services, and products within the scope of ISO 14001 Environmental Management System, we define our important and urgent risks in our Enterprise Risk Management System and create action plans to reduce the level of our risks that require control application with the approval of our Environmental Management Chief.

### Environmental Goals

In order to monitor environmental performance indicators and measure the effectiveness of environmental management practices, we set environmental goals for each department every year and track progress of the goals at quarterly intervals. When determining our environmental goals, we observe that they are measurable, traceable, achievable, and related to the possible environmental impacts arising from our activities. In addition, we take

into account such elements as legal and other requirements, the environmental policy of our Company, and expectations of interested parties at the goal setting stage.

Our main environmental goals are as follows:

- Reducing paper consumption
- Reuse of materials and reducing consumption
- Increasing environmental awareness and participation in environmental trainings
- Waste recovery and waste reduction
- Energy efficiency

### Emission and Greenhouse Gas Efforts

Within the scope of the Regulation on the Control of Industrial Air Pollution, we make emission confirmation measurements every two years at the emission sources located at our plant site.

Our emission confirmation measurement and analysis results are in compliance with the limit values of the regulation. We implement the following measures in order to reduce and/or prevent emissions arising from our activities.





# AIR QUALITY AND GREENHOUSE GAS EFFORTS

**WE AIM TO REDUCE OUR CARBON FOOTPRINT AND INCREASE OUR CORPORATE RESILIENCE FOR THE PROCESS OF COMBATING CLIMATE CHANGE AND ADAPTATION** THANKS TO THE CORPORATE CARBON FOOTPRINT CALCULATION EFFORTS WE HAVE PLANNED FOR THE NEW PERIOD.



- We have flue gas treatment facilities to reduce sulfur and dust emissions caused by the combustion process in coal-fired boilers. After giving sodium bicarbonate to waste gases in a dry state, we pass it through gas bag filters and dispose of it outside.
- Thanks to our cogeneration facility, we have reduced the amount of electricity we receive from the grid and have met the vast majority of our electricity needs in our plant area from natural gas. We produce hot water and steam by taking advantage of the waste heat in our facility.
- We use wet scrubber systems, activated carbon filters, and other air filters to hold the volatile organic carbons released in the dyeing units in our production line.

- We prefer water-based paint instead of solvent in our new painting line projects and we are working to extend the application.
- We pass the process tanks containing inorganic chemicals through wet scrubbing systems before releasing their emissions into the atmosphere.
- We pass the process tanks containing organic chemicals through regenerative activated carbon purification systems before releasing their emissions into the atmosphere.
- We keep dust-containing systems, on the other hand, with bag filters for dust.

As per the Regulation on the Monitoring of Greenhouse Gas Emissions and the Communiqué on the Monitoring and Reporting of Greenhouse Gas Emissions, we prepare the confirmation reports for greenhouse gas emissions arising from combustion caused by emission sources such as natural gas, coal, diesel fuel, sodium bicarbonate and submit these reports to the Ministry of Environment, Urbanization and Climate Change.

The most important resource flow that causes our greenhouse gas emissions is originated from the consumption of natural gas with 69%. Our greenhouse gas emissions arising from combustion account for 72% of our total greenhouse gas emissions, while the purchased electricity accounts for 28%.

We aim to reduce our carbon footprint and increase our corporate resilience for the process of combating climate change and adaptation thanks to the corporate carbon footprint calculation efforts we have planned for the new period.

## Carbon Footprint (tCO<sub>2</sub>e/(m<sup>2</sup>))

2021

**0.15**



# WATER MANAGEMENT

IN 2021, WE REDUCED OUR WATER CONSUMPTION PER CAPITA BY 8% COMPARED TO THE PREVIOUS YEAR, **WHILE WE INCREASED THE TOTAL AMOUNT OF WASTEWATER WE TREATED BY 11.6%.**

## Management and Efficient Use of Water Resources

The main purpose of our water resources management is to use our water resources effectively and efficiently, and we observe the principle of water saving in all our activities. We evaluate all processes related to the management and efficient use of our water resources in a holistic approach in accordance with the principles of sustainability.

The activities to use our water resources efficiently are as follows:

- In new building projects, we select appropriate fixtures and equipment, explore rainwater collection, treatment, and use options, and evaluate wastewater recovery applications (greywater systems).
- We prefer dry-type industrial systems and equipment that do not require water consumption in our production activities.
- We continue our efforts to implement on-site recovery systems (zero liquid discharge-ZLD) to recover 85% of wastewater from our machines, machine tools, and equipment.

- We prefer dry landscape applications to reduce the amount of water for irrigation.
- We ensure the relevant irrigation water quality parameters of the wastewater that we treat at our Domestic Wastewater Treatment Plant, and prevent additional water consumption by using treated water in the irrigation processes of our gardens.

Within the framework of our water measurement and automation project, which we will complete in 2022, we plan to measure water consumption per building in our production areas as well as in the housing area on a daily basis using the SCADA system.

We have a drinking water treatment plant with a capacity of 360m<sup>3</sup>/hour in order to meet the needs for water intended for human consumption in our plant and housing areas. We operate a wastewater treatment plant with a capacity of 100m<sup>3</sup>/hour for the purpose of treating domestic wastewater.

We present the operational data of our treatment plants under the following subheadings.

## Data on the Treatment of Water Intended for Human Consumption

(m <sup>3</sup> )	2019	2020	2021
Total Treated Raw Water	1,248,840	1,374,600	1,485,460
Water Consumption	870,928	899,654	938,291
Irrigation Water (Housing Area)	84,580	132,680	127,510
Total Water Consumption	955,508	1,032,334	1,065,801
Total Water Consumption Per Capita (m <sup>3</sup> /Person)	91.89	92.64	84.86

In 2021, we reduced our water consumption per capita by 8% compared to the previous year.

## Data on the Wastewater Treatment

	2019	2020	2021
Amount of Treated Wastewater (m <sup>3</sup> )	387,485	287,440	320,868
Amount of Treated Water Used for Irrigation (m <sup>3</sup> )	41,890	127,800	143,284
Recovery Rate (%)	11	44	45
Amount of Treated Wastewater Per Capita (m <sup>3</sup> /person)	40.88	29.60	29.02

In 2021, we increased the total amount of treated wastewater by 11.6% compared to the previous year.



# WASTE MANAGEMENT

**WE AIM TO PREVENT AND/OR MINIMIZE THE AMOUNT OF WASTE ARISING FROM OUR ACTIVITIES** WITHIN THE FRAMEWORK OF THE LIFE CYCLE WITH OUR WASTE MANAGEMENT SYSTEM.



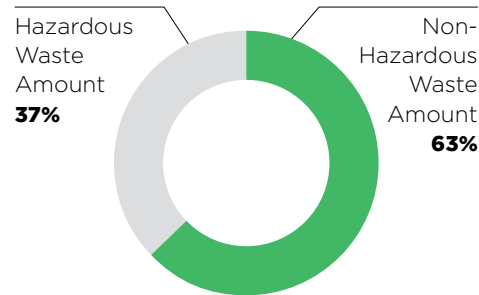
### Waste Management System and Recycling

We aim to prevent and/or minimize the amount of waste arising from our activities within the framework of the life cycle with our waste management system. In cases where the waste production is inevitable, we continue to work on reusing, recycling, recovering through other processes to obtain secondary raw materials, using as an energy source, or disposing of/having disposed of by other.

We always observe the zero waste philosophy and evaluate the suitability of scrap materials for reuse primarily within the Company. We collected about 7,400 tons of hazardous and non-hazardous waste in 2021, and decreased the amount of waste collected under our waste management system by 8% compared to the previous year.

The graph below shows the distribution of the collected waste by type.

### Distribution of Wastes by Type in 2021



In 2021, we achieved 99% recycling/recovery of wastes generated as a result of our activities. You can see the distribution of the collected hazardous and non-hazardous wastes based on the waste processing methods on the left side of the page.

### Distribution of Waste Types by Waste Processing Method in 2021

Waste Type	Recovery (%)
Non-Hazardous Waste	38%
Hazardous Waste	78.4%



Waste Type	Recycling (%)
Non-Hazardous Waste	62%
Hazardous Waste	21.1%



Waste Type	Disposal (%)
Non-Hazardous Waste	-
Hazardous Waste	0.5%



**Recovery:** It is the conversion of waste to another product or energy by applying certain processes to replace materials used in the market or in a facility (e.g.: producing biogas from organic waste)

**Recycling:** It is a waste recovery process in which waste is processed and converted into products and materials and re-incorporated into the production process (e.g.: paper waste is processed and re-used in paper production)

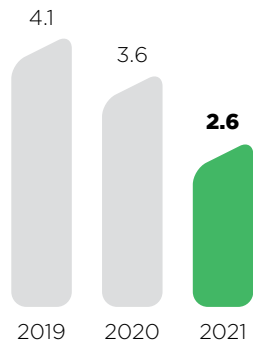
**Disposal:** It is the disposal/destruction of wastes by methods such as incineration and burying under the ground in cases where the recovery cannot be achieved.



# WASTE MANAGEMENT

AS TURKISH AEROSPACE, WE HAVE REDUCED THE AMOUNT OF HAZARDOUS WASTE BY NEARLY 35% IN THE LAST THREE YEARS.

### Change in the Amount of Hazardous Waste Between 2019 and 2021 (thousand tons)



As Turkish Aerospace, we have reduced the amount of hazardous waste by nearly 35% in the last three years.

### Zero Waste Applications and Recoveries

We launched our Zero Waste Project in March 2019 with the aim of using our resources efficiently, reducing the amount of wastes, establishing our effective waste collection system, and ensuring the recovery/recycling of our wastes. We became the first company among the industrial organizations in Türkiye to receive the Basic Level Zero Waste Certificate issued by the Ministry of Environment, Urbanization and Climate Change.

We have created our Zero Waste Management Plan within the scope of our Zero Waste Management System, which we established with the awareness of sustainable and cyclical economy. In line with the plan, we take the following actions:

- Within the scope of the Zero Waste Project, we handle 99% of our wastes by recycling and recovery methods.
- We send the organic wastes, leftover foods, to the Pet Shelter located on our Campus and use them to meet the food needs of stray animals.

### Savings Achieved with Zero Waste Management System in 2021<sup>(\*)</sup>

Type of Recyclable Waste	Saving From Storage (m <sup>3</sup> )	Energy Saving (MWh)	Greenhouse Gas Emission Reduction (ton)	Saved Tree (number)	Oil (barrels)	Saving From Raw Materials (kg)
Paper	300	51	22	2,100	-	-
Plastic	290	736	5.2	-	2,080	-
Glass	40	1.1	0.8	-	-	32
Metal	49	10.5	1.5	-	-	21
Total	679	798.6	29.5	2,100	2,080	53
Total Per Capita	0.06	0.07	0.003	0.19	0.19	0.005

<sup>(\*)</sup> We used the waste counter on the website [sifiratik.gov.tr](http://sifiratik.gov.tr) in the calculation of the data.

- We have opened our Wooden Cafe, which we have built of recycling materials entirely, in the area where our social facilities are located.
- We prefer products made of recyclable paper materials in the notebooks that we give to our newly recruited employees.
- We make in-house announcements online in order to prevent any paper waste.
- We carry out Zero Waste consciousness and awareness raising activities.
- We have made landscape products and social facilities such as cafes, park seating groups, tables and chairs, masjid, flower beds using wood and metal materials in our junkyard area.
- Our departments include the efficient use of our natural resources and improvements of waste management practices in their environmental goals.

- We reuse the surplus materials in our different production areas. In 2021, we reused 91 different materials (computer equipment, cabinets, safes, chests, tables, metal parts, etc.) amounting to 8.5 tons in 69 different production points of our plant.

We use the materials and parts that cannot be reused as waste and send them to our Temporary Waste Storage Area. Within the framework of our Zero Waste Management System, we recycled 59% of the waste materials in 2021.

The table on the next page demonstrates the savings in 2021 as a result of sorting our non-hazardous wastes at the source and recycle them.



# NEW ERA ENVIRONMENTAL AND CLIMATE CHANGE PROJECTS

**WITH THE CDP CLIMATE CHANGE PROGRAM, WE AIM TO REPORT ON OUR GOVERNANCE STRUCTURE, POLICIES, RISKS AND OPPORTUNITIES, GOALS AND STRATEGIES, EMISSION MANAGEMENT PRACTICES, ENERGY EFFICIENCY EFFORTS, AND SUPPLY CHAIN MANAGEMENT STRATEGIES REGARDING CARBON AND CLIMATE CHANGE ISSUES.**

## NEW PERIOD PROJECTS

### Environmental and Waste Management System Software

We aim to significantly save labor by digitalizing our environmental procedures related to waste management. We plan to carry out the procedures of our waste shipment, waste transportation requests, new Hazardous Waste Point requests, zero waste entries, waste container requests, and environmental targets entry via our Company Portal thanks to the Environmental and Waste Management System software.

### Sustainability Process and Climate Change Management

In the light of national and international developments, we aim to identify our risks and opportunities related to climate change and incorporate them into our business strategies and financial processes, and thus to reduce our carbon emissions arising from our activities.

Therefore, we will continue to work on ISO 14064: 2018 Corporate Greenhouse Gas Calculations and Validation and Carbon Disclosure Project (CDP) Reporting in 2022.

With corporate carbon footprint calculations, we aim to create our greenhouse gas inventory to calculate and report our greenhouse gas emissions and corporate carbon footprint in accordance with ISO 14064:2018 standard, determine our roadmap, set our future greenhouse gas reduction targets, create our greenhouse gas emission and monitoring plan, prepare for current and future legal regulations, and raise awareness among our employees about greenhouse gas emissions and climate change.

### CDP Climate Change and Water Program Reports

With the CDP Climate Change Program, we aim to report on our governance structure, policies, risks and opportunities, goals and strategies, emission management practices, energy efficiency efforts, and supply chain management strategies regarding carbon and climate change issues. Our goals include adapting to changing climate policies and legal regulations, creating proactive solutions by identifying climate related risks and opportunities, increasing our corporate awareness about the risks related to carbon and climate change, reducing greenhouse gas emissions arising from our activities, and contributing to a sustainable economy. We plan to transparently report our actions within the scope of water resources and efficient use of resources with the CDP Water Program.



# ENVIRONMENTAL AWARENESS

AS A CONSEQUENCE OF THE TRAINING ACTIVITIES, SURVEYS, AND CORPORATE COMMUNICATION ACTIVITIES THAT WE HAVE CARRIED OUT TO BUILD AND **RAISE THE ENVIRONMENTAL AWARENESS OF OUR EMPLOYEES, OUR ENVIRONMENTAL AWARENESS RATE INCREASED AT THE EMPLOYEE LEVEL IN 2021.**

As Turkish Aerospace, we integrate sustainability into all our business processes thanks to our ISO 14001 Environmental Management System applications, internal audits and external audits (ISO 14001 audits, ministerial audits, customer audits, etc.) carried out under the responsibility of our Environmental Management Unit, and environmental risk management activities. We organize environmental trainings and environmental awareness surveys in order to build and raise environmental awareness among our employees. We share all of our practices with our employees in a transparent way. As a result of our efforts in Turkish Aerospace, we managed to increase our environmental awareness rate at the employee level in 2021.

### Environmental Trainings

We have 4 separate environmental training modules within the scope of environmental legislation and ISO 14001 Environmental Management System in order to raise environmental awareness of our employees:

- **Environmental Audits and Environmental Obligations Training:** We provide information about our environmental policy, internal audits, external audits, environmental legislation, and legal environmental obligations.
- **Environmental Awareness and Environmental Management System Training:** We address the environment, environmental dimension and definition of environmental impacts, environmental pollution and its causes, types of environmental pollution and various environmental problems, transportation of pollutants and their effects on living creatures, global climate change and its effects, environmental problems, and solution systems, as well as the environmental management systems of our Company.
- **Zero Waste Management Training:** We provide information about zero waste definition, Zero Waste Regulation, recyclable non-hazardous waste, recyclable hazardous waste, zero waste management savings, and our zero waste practices within the scope of our Zero Waste Management System.
- **ISO 14001 Environmental Management System Training:** We provide information about the ISO 14001 Environmental Management System standard, definition of environmental dimensions and its effects, definition of environmental risks, our enterprise process management, preparation of environmental information forms, our enterprise risk management system within the scope of the ISO 14001 Environmental Management System standard.

### Green Flag League

We launched our Green Flag League, a fun and competitive application, on June 05, 2020, World Environment Day with the aim of ensuring waste reduction, increasing environmental consciousness and raising the level of awareness. Within the scope of the league, we evaluate the employees of our departments 4 times a year according to certain scoring criteria. We determine the League rankings of our departments based on the points they have received in each quarter of the activity period and their categories based on the score ranges.



We announce the Green Flag League rankings and scores through our internal portal, and we award the top three departments with an Environmental Success Certificate at the end of the period. We allow the top ranking department to hold our Green Flag, which symbolizes the outstanding success in the League that aims to raise environmental awareness, until the next period's scoring.

When we take into account the last quarter's performance of the Green Flag League, we have observed that it encourages our employees to participate more effectively in our environmental practices and contributes positively to our efforts in this regard.



# ENVIRONMENTAL AWARENESS

**WE RECEIVED A “GOLD” AWARD WITH OUR GREEN FLAG LEAGUE AND ZERO WASTE MANAGEMENT SYSTEM IMPLEMENTATIONS AT THE GREEN WORLD ENVIRONMENT AWARDS, ONE OF THE MOST PRESTIGIOUS ENVIRONMENTAL AWARDS IN THE WORLD.**



In its first year, the Green Flag League increased;

- The awareness of our employees on environmental issues by 12%,
- The participation of our employees in environmental surveys by 22%,
- The environmental target determination rate of our departments by 40%,
- The waste reduction by 26%,
- The number of environmental suggestion by 62%,
- The participation of our employees in environmental trainings by 59%.

### Environmental Awareness Surveys

We conduct Environmental Awareness Surveys 4 times a year in parallel with the Green Flag League. Despite the increase in the number of employees throughout our company, we have managed to increase our environmental consciousness and awareness rate by reaching more and more employees every year since 2019.

### Environmental Awareness Surveys

	2019	2020	2021
Survey Recipients	9,463	9,469	10,025
Awareness Rate (%)	75	87	91

### Environmental Awareness Efforts Received International Award

With our Green Flag League and Zero Waste Management System applications, we were ranked first out of 500 projects in the evaluation conducted by The Green Organization UK in 2020 and received the “Gold” award in the Waste Management category at the Green World Environmental Awards, one of the most prestigious environmental awards in the world.

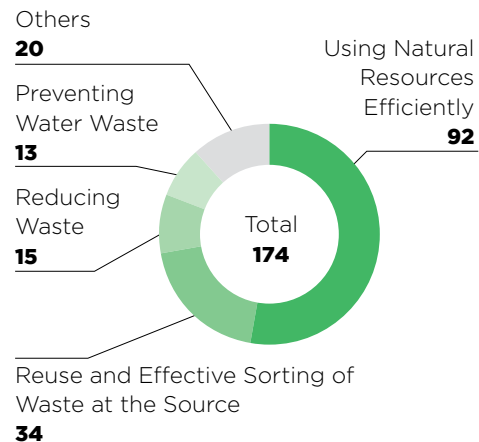


### Environmental Suggestions System

We encourage our departments to submit their suggestions regarding our environmental practices. In 2021, we enabled our employees to submit 174 environmental suggestions through our suggestion system.

### 2021 Environment Suggestions

#### Subject of Suggestion



### Corporate Communication Activities

In addition to our Green Flag League program, which we carried out in cooperation with our Corporate Communication Department to raise environmental awareness and attract public attention to sustainability, climate change, circular economy, resource efficiency, zero waste issues, we also carried out our corporate communication activities based on the themes of “Zero Waste Philosophy of Life” and “For a Sustainable World” and the slogan “Will I Save.”



# ENERGY MANAGEMENT

**WE ARE THE FIRST COMPANY AFFILIATED WITH THE TURKISH ARMED FORCES FOUNDATION (TAFF) WITH ISO 50001 ENERGY MANAGEMENT SYSTEM CERTIFICATE.**



## ENERGY MANAGEMENT

We define our energy policy as increasing the energy efficiency awareness of our stakeholders by complying with the relevant legal and other requirements, continuously improving our energy performance with our design and energy efficient purchasing activities that will improve our energy performance, reducing our energy costs, and ensuring long-term environmental and economic sustainability.

Our vision is to reduce consumption on site by identifying energy efficiency opportunities, choosing energy efficient equipment and technologies during the purchase of new products and processes, managing equipment in our buildings in an energy efficient way, raising energy efficiency awareness using our corporate communication power, and increasing our renewable energy usage rate in order to reduce energy consumption.

Our mission is to continuously improve our energy performance and reduce our energy costs, increase the awareness of our stakeholders about energy efficiency and ensure long-term environmental and economic sustainability of our activities.

### Energy Consumption

Although we increased our total indoor area by 55% in 2021 compared to 2019, we limited our energy consumption increase to a 25%. We ensured that our energy consumption remained below the growth rate of our Company by improving our energy performance with our energy management system activities and increasing awareness.

## Energy Consumption Distribution

(MWh)	2019	2020	2021
Natural Gas	213,077	279,931	324,986
Coal	21,935	13,655	19,577
Grid Electricity	78,337	47,793	46,986
<b>Total</b>	<b>313,349</b>	<b>341,379</b>	<b>391,549</b>

In our cogeneration plant, we obtain electricity and heat output from natural gas input.

- In 2021, we saved TL 21,962,008 by covering 59% of our total electricity consumption and 41% of our total heat consumption with the production at our cogeneration plant.
- As part of our work to prevent thermal losses of valves and surfaces, we achieve an average of 65,000 kWh of annual energy saving.
- We achieve an average of 480,000 kWh of energy savings annually as a result of our efforts to renovate the traps.

- In line with the suggestions of our employees, we have implemented the Condensate Recovery Project and we achieve an average of 560,500 kWh of annual energy savings.
- As a result of the improvement project of our cogeneration plant, we save an average of 429,521 kWh of energy annually.
- We have renewed the steam boiler economizer and we save an average of 1,646,275 kWh of energy annually.

### Lighting Tunnel Applications

We have installed a lighting tunnel in some of our buildings that allows us to transmit the sun's rays via a mirror assembly to the environment we want to enlighten. Thanks to lighting tunnels that look like LED armatures, we reduce our energy consumption and minimize our ambient lighting needs in the daytime.



# ENERGY MANAGEMENT

**WE SAVE 1,085,664 KWH AND 6,258,830 KWH OF ENERGY ANNUALLY THANKS TO THE 2 SOLARWALLS WE HAVE INSTALLED.**



## SolarWall Applications

In our company, we heat the fresh air received from outside with hot water received from heat plants in order to heat the space and use in our production processes. The SolarWall system allows us to preheat the cold and fresh air received from outside with solar energy by circulating the air in the channels inside. We save 1,085,664 kWh and 6,258,830 kWh of energy annually thanks to the 2 SolarWalls we have installed.

## Electricity Consumption

We provide our electricity needs both from the grid and from the electricity we generate from natural gas at our cogeneration plant.

## Electricity Consumption

(MWh)	2019	2020	2021
Grid Electricity Consumption	78,337	47,793	46,986
Cogeneration Electricity Consumption	38,487	65,643	75,571
<b>Total</b>	<b>116,824</b>	<b>113,436</b>	<b>122,557</b>

In order to forecast our future energy consumption in our major energy use areas, we first determine the key variables that affect our energy use and consumption. We use the regression analysis method to measure the correlation between our energy consumption and one or more energy variables, and to estimate our consumption.

We carry out the following activities aimed at improving our electricity consumption performance.

- As part of our lighting revisions, we save an average of 3,416,816 kWh of energy annually by replacing our low-efficiency sodium-vapor halogen-type armatures with LED-type ones.
- As a result of our Roof Skylight application, we save an average of 54,750 kWh of energy annually.
- We save an average of 336,000 kWh of energy annually by increasing the common curing in our autoclave units.

- As a result of our maintenance activities, we provide an average of 158,716 kWh of energy savings annually at points where we have identified inefficiencies through energy studies.
- Thanks to the automation software revision of air conditioning units and the construction of dumper car for the temper furnace, which we carried out in accordance with the suggestions of our employees, we save an average of 1,360,857 kWh of energy per year by shortening the usage time of our furnace.
- We save an average of 300,000 kWh of energy annually by preventing compressed air leaks.

## Energy Monitoring System

We believe that measuring and monitoring the energy consumption is a prerequisite for our energy management; therefore, we have identified regions with high energy consumption and various measurement points. We have procured and assembled hot water/warm water calorimeters, steam meters, compressed air flow meters, and energy analyzers to measure the results of consumption and improvements, and we have increased the number of meters to 1,172. We create energy consumption reports for each building on a monthly basis by identifying energy efficiency opportunities.

We continue our work to monitor the energy consumption of our machine tools. We have already installed energy analyzers on 107 critical machine tools. We plan to strengthen our energy measurement and monitoring infrastructure, and create machine tools based energy consumption reports.



# ENERGY MANAGEMENT

ACCORDING TO THE METERS, OUR TOTAL ELECTRICITY CONSUMPTION ACCOUNTED FOR 80.23% OF OUR INVOICED CONSUMPTION AS OF THE END OF 2020; HOWEVER, **WE MANAGED TO INCREASE THIS RATE TO 96.12% AT THE END OF 2021 AS A RESULT OF THE IMPROVEMENTS ON OUR ENERGY MEASUREMENT INFRASTRUCTURE.**

According to the meters, our total electricity consumption accounted for 80.23% of our invoiced consumption as of the end of 2020; however, we managed to increase this rate to 96.12% at the end of 2021 as a result of the improvements on our energy measurement infrastructure.

We commissioned our Energy Monitoring System, created the communication infrastructures of our monitoring and measuring devices, and strengthened our energy monitoring and measuring infrastructure.

By launching this program, we improved our competencies in following matters:

- Instant monitoring of our energy consumption,
- Identifying the factors that affect our energy consumption and opportunities to increase efficiency,
- Observing the effects of processes that increase energy efficiency,
- Reporting on our energy consumption.

## ISO 50001 Energy Management System

We started our ISO 50001 Energy Management System studies in July 2018 within the scope of energy management.

As a result of the ISO 50001: 2011 Energy Management System audits which were conducted by the BSI (British Standards Institution) in our company in two stages in 2019, we, as Turkish Aerospace, were entitled to receive the certificate held by a limited number of aviation companies in the world in our first certification process and without any findings, and we became the first among TAFF companies.

In October 2020, we completed the transition audits to the ISO 50001: 2018 Energy Management System standard without any findings and became the first TAFF company to have the ISO 50001: 2018 Energy Management System standard. In October 2021, we completed the ISO 50001:2018 Energy Management System follow-up audit without any findings and ensured to continue holding the certificate. As emphasized in the audit, we prevented 16 thousand tons of CO<sub>2</sub> emission as a result of our continuous improvement efforts carried out in 2021.

We carry out the following activities within the scope of our energy management system:

- We have established an Energy Working Group and we hold Energy Working Group meetings in 2-month periods and evaluate our energy performance.
- We document our records in accordance with the energy management system standard. We have created our procedures explaining the basic elements of the Energy Management System and the interaction of these elements with each other.
- We have determined our important energy usage areas based on energy consumption densities by monitoring energy consumption data. We work on reducing energy consumption in these areas based on the consumption data collected for these areas and various statistical methods.
- We have conducted an energy survey and created our action plans to identify improvement opportunities within the Company.
- We have carried out internal audits regarding the compliance of our Energy Management System with the regulations, our goals and objectives.
- We have determined energy efficiency as an evaluation criterion in our purchasing activities. We observe opportunities to improve our energy performance and operational control in the design of new, modified, and/or renewed plants, systems, equipment and processes that may affect our energy performance.
- In accordance with our Energy Policy, we identify risks by examining activities and processes that will make our energy management system effective and continuously improve our energy performance, and we plan actions related to these risks and work to eliminate risks.
- We procured and assembled energy monitoring equipment to achieve a more qualified monitoring of energy consumption.



# ENERGY MANAGEMENT

WE HAVE REPLACED 348 HALOGEN-TYPE ARMATURES WITH 360 MORE EFFICIENT LED LIGHTING ARMATURES. WE ALSO CARRIED OUT THE INSTALLATION OF LIGHTING AUTOMATION SYSTEMS. **WE AIM TO SAVE ENERGY WITHOUT HARMING COMFORT/SAFETY CONDITIONS.**

### Productivity Enhancing Projects

**Building Lighting Overhaul:** We have replaced 348 halogen-type armatures with 360 more efficient LED lighting armatures. We also carried out the installation of lighting automation systems. We aim to save energy without harming comfort/safety conditions.

	Previous Situation	Current Situation
Number of Armatures	348	360
Armature Power (W)	429	165
Annual Working Duration (hour)	5,600	5,600
Electricity Unit Price (TL/kWh)	0.66	0.66
Annual Energy Consumption (kWh/year)	835,060	332,640

Cooling Water Circulation Pump Replacement: We use closed-loop cooling water circulation for the air conditioning of our production areas.

	Previous Situation	Current Situation
Number of Pumps	4	4
Power (kW)*	163	120
Annual Working Duration (hour)	3,960	3,960
Electricity Unit Price (TL/kWh)	0.66	0.66
Annual Energy Consumption (kWh/year) <sup>(*)</sup>	645,163	473,458

<sup>(\*)</sup> The total of data received from 4 pumps.

### Saving Calculation

Total Energy Saving (kWh/year)	171,706
Total Monetary Saving (TL/year)	113,720
Total Project Cost (TL)	328,734
Payback Duration (year)	2.89



# SUSTAINABLE GROWTH PERFORMANCE

**IN 2021, TURKISH AEROSPACE GENERATED 53.29% OF ITS REVENUES FROM DOMESTIC SALES AND 46.71% FROM FOREIGN SALES, REACHING TL 13.9 BILLION SALES REVENUE.**

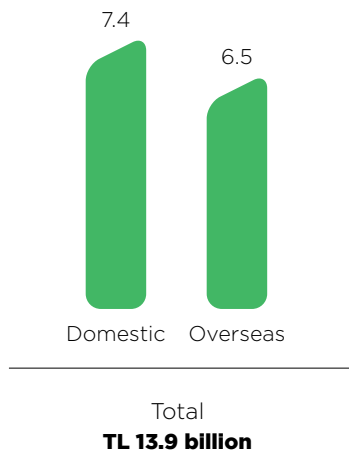
Export volume in 2021:  
**365,090,906**  
USD

### Sales Revenues\* (TL)

	2021
Domestic	7,401,536,393
Overseas	6,488,443,659
<b>Total</b>	<b>13,889,980,052</b>

<sup>(\*)</sup> Consolidated financial data of Turkish Aerospace.

### Sales Revenues\* (TL billion)





# PRODUCTS AND SERVICES

**WE ARE AMONG THE TOP 100 PLAYERS IN THE AEROSPACE INDUSTRY ON A GLOBAL SCALE** WITH THE INDIGENOUS PRODUCTS AND SOLUTIONS WE HAVE DEVELOPED, AND WE ARE THE LEADING TECHNOLOGY CENTER OF OUR COUNTRY IN THIS FIELD.

Turkish Aerospace is the leading technology center of Türkiye in the fields of design, development, manufacturing, integration, modernization, and after-sales services of aerospace platforms such as airplanes, helicopters, Unmanned Aerial Vehicle (UAV) Systems, and satellites.

We aim to shape our wide product range according to the most current requirements in global markets and to provide the most suitable designs to our customers. We stand out in global markets with our indigenous products and solutions. We are among the top 100 players in the aerospace industry on a global scale.

We have classified our products and services into 5 different groups depending on our project topics, including aircrafts, helicopters, UAV/UCAVs, space systems, and aircraft structures.

## AIRCRAFT GROUP



### TF National Fighter Aircraft

Having developed it as a 5+ Generation Multi-Role Combat Aircraft, we have equipped the National Fighter Aircraft with superior combat capabilities for the requirements of both air-ground and air-air combats. As Turkish Aerospace, we have designed the National Fighter Aircraft powerful and agile with high survivability.



### HÜRJET Jet Trainer and Light Attack Aircraft

We have designed the HÜRJET Jet Trainer Aircraft with single engine and tandem cockpit to play a critical role in modern warplane training with its high performance. With the light attack configuration we have developed, we have increased the operational capabilities and payload capacity of HÜRJET.



### HÜRKUŞ Advanced Training Aircraft

We have specially designed the Hürkuş Training Aircraft according to modern and global military training aircraft requirements. We offer a cost-effective solution for the most challenging tasks with HÜRKUŞ, which has a new generation digital cockpit, a unique high tandem seating configuration, a best-in-class pilot vision, an in-aircraft oxygen generation system, and a high-performance engine.



### HÜRKUŞ-C Light Attack Aircraft

We aimed to provide a low-cost, flexible solution against asymmetric threats in the combat areas of today's world with a light attack and armed reconnaissance variant in HÜRKUŞ-C. Maintaining the advanced training capabilities that HÜRKUŞ has, we have equipped HÜRKUŞ-C with 7 external load stations on it, a payload capacity of 750 kg, and the ability to perform the most difficult tasks in difficult geographies, day/night and at high altitude.



# PRODUCTS AND SERVICES

**WE PROVIDE USERS WITH FLEXIBLE AND ADAPTABLE WEAPON CONFIGURATION SOLUTIONS ON THE BATTLEFIELD WITH THE MULTIROLE COMBAT HELICOPTER T129 ATAK,** WHICH HAS MODERN AND ADVANCED SYSTEMS OPTIMIZED FOR “HOT AIR AND HIGH ALTITUDE” PERFORMANCE REQUIREMENTS AGAINST DIFFICULT GEOGRAPHICAL AND ENVIRONMENTAL CONDITIONS IN DAY AND NIGHT OPERATIONS.

## HELICOPTER GROUP



### **T129 ATAK** **Attack and Tactical Reconnaissance Helicopter**

We provide users with flexible and adaptable weapon configuration solutions on the battlefield with the MULTIROLE COMBAT HELICOPTER T129 ATAK, which has modern and advanced systems optimized for “hot air and high altitude” performance requirements against difficult geographical and environmental conditions in day and night operations.



### **T625 GÖKBEY** **Multirole Utility Helicopter**

We have designed T625 GÖKBEY for superior performance and quality of use with advanced avionics, taking into account the operational requirements of today as well as of the future. With T625 GÖKBEY, which has a high payload capacity and a wide cabin space, we offer easy configuration for civilian and military users around the world to perform various mission profiles.



### **MULTIROLE HEAVY COMBAT HELICOPTER**

We designed the Multirole Heavy Combat Helicopter with a high ammunition carrying capacity, of which we are the main contractor and which we indigenously developed, to perform all challenging tasks, including the ones in hot weather and at high altitude under day/night and icing conditions.



### **T70 UTILITY HELICOPTER**

We aim to address the utility helicopter needs of our country with the Turkish Utility Helicopter Program. We project that the T70 Utility Helicopter will significantly meet the domestic needs of the Turkish industry in the military and civilian fields.



# PRODUCTS AND SERVICES

**WITH THE AKSUNGUR UAV SYSTEM, WE OFFER A MEDIUM-ALTITUDE LONG-ENDURANCE UNMANNED AERIAL VEHICLE (UAV) SYSTEM SOLUTION** THAT PERFORMS DAY/NIGHT INTELLIGENCE, SURVEILLANCE, RECONNAISSANCE, AND ATTACK MISSIONS WITH EO/IR, SAR, AND SIGINT PAYLOADS, AND VARIOUS AIR-TO-GROUND WEAPONS.

## UVA/UCAV GROUP



**ANKA**  
**Medium Altitude Long Endurance Unmanned Aerial Vehicle (UAV) System**

We ensure that the ANKA group, which we have developed to meet the needs of different users day/night under all weather conditions, actively performs its reconnaissance, surveillance, target detection, identification, marking, destruction, relay, and intelligence missions with the high-tech payloads it carries. We have designed ANKA to be able to move autonomously even from remote points starting from the departure, perform its tasks according to pre-planned routes and conditions

with its system that has a domestic and wide satellite coverage power that we have integrated into the system. We have developed ANKA to be able to perform continuous tasks thanks to the countermeasures included in both flight and mission systems against electronic warfare applications such as intensive jamming. It has an ice protection system for safe flight in adverse weather conditions, such as icing. We offer a system having no foreign dependency with ANKA, in which we have developed all the important components including its modern and Certified Avionics architecture and software with the contributions of the domestic industry.



**AKSUNGUR**  
**High Payload Capacity UAV System**

With the AKSUNGUR UAV System, we offer a Medium-Altitude Long-Endurance Unmanned Aerial Vehicle (UAV) System solution that performs day/night intelligence, surveillance, reconnaissance, and attack missions with EO/IR, SAR, and SIGINT payloads, and various air-to-ground weapons.



**ŞİMŞEK**  
**High Speed Target Drone System**

We have developed ŞİMŞEK, which is used for shooting, testing, and training of air-air and ground-air air defense systems, to meet the need for a High Speed Target Drone that simulates a realistic threat with the flight features of combat aircraft and missiles. With ŞİMŞEK, which has full autonomous mission capabilities, we offer effective solutions for different tasks with very low and high altitude flight performance thanks to its payloads of score recorder, radar, and IR track enhancer.



## PRODUCTS AND SERVICES

**GÖKTÜRK-1 RENEWAL SATELLITE SYSTEM IS A NATIONAL SATELLITE SYSTEM THAT WE CONTINUE TO DEVELOP AND AIM TO MAINTAIN BY IMPROVING THE HIGH-RESOLUTION ELECTRO-OPTICAL REMOTE SENSING CAPABILITY GAINED WITH THE GÖKTÜRK-1 SATELLITE SYSTEM.**

### SPACE SYSTEMS GROUP



#### **EARTH OBSERVATION AND RECONNAISSANCE SATELLITES**

##### **GÖKTÜRK-1**

With the GÖKTÜRK-1 Satellite System, we make it possible to obtain high-resolution images from any region of the world without geographical restrictions. Operated and established by Turkish Aerospace, the Satellite Assembly, Integration and Test Center is a critical infrastructure for the production of observation and communication satellites in Türkiye within the scope of the GÖKTÜRK-1 Project.



##### **GÖKTÜRK-2**

We have carried out all the engineering activities in the design, production, and testing processes of Türkiye's first High-Resolution Earth Observation Satellite System (GÖKTÜRK-2) nationally. This system was placed into its mission orbit in December 2012. Within the scope of GÖKTÜRK-2 Project, we aimed to develop technologies and infrastructure for space and satellite systems, increase human resources, and address the observation and research needs of public institutions and organizations with national facilities and capabilities.



##### **GÖKTÜRK RENEWAL**

GÖKTÜRK-1 Renewal Satellite System is a national satellite system that we continue to develop and aim to maintain by improving the high-resolution Electro-Optical remote sensing capability gained with the GÖKTÜRK-1 Satellite System. We aim to form the GÖKTÜRK-1 Renewal Satellite System from a very high resolution electro-optical satellite along with fixed and mobile ground stations where command control and image processing activities are carried out.



##### **GÖKTÜRK-3**

With the Synthetic Aperture Radar (SAR) Earth Observation and Reconnaissance Satellite System (GÖKTÜRK-3), we aim to provide the ability to view any region on Earth with sub-meter resolution under night/day conditions and thus to obtain the SAR satellite images needed for both military and civilian applications.



# PRODUCTS AND SERVICES

**WE ARE DEVELOPING THE TÜRKSAT 6A SATELLITE, WHICH WE ENVISAGE TO BE THE FIRST DOMESTIC COMMUNICATION SATELLITE OF TÜRKİYE, WITH THE JOB SHARING THAT WE HAVE CREATED IN ACCORDANCE WITH THE COMPETENCIES OF OUR DOMESTIC INDUSTRIES AND INSTITUTES THAT SUPPORT AND COMPLEMENT EACH OTHER.**



## COMMUNICATION SATELLITES

### TÜRKSAT 6A

We are developing the TÜRKSAT 6A Satellite, which we envisage to be the first domestic communication satellite of Türkiye, with the job sharing that we have created in accordance with the competencies of our domestic industries and institutes that support and complement each other. Following the design activities of TÜRKSAT 6A Satellite, we carry out the assembly, integration, and test activities of the satellite in our Space Systems Integration and Test Center in cooperation with the project contractors.



## SMALL-GEO

Small-GEO is a concept of cost-effective communication satellites with a relatively reduced volume configuration that can fulfill traditional communication satellite functions, such as television broadcasting, multimedia applications, mobile and fixed internet access, and secure communication, without degrading performance.



## SPACE SYSTEMS ASSEMBLY, INTEGRATION AND TEST (AIT) CENTER

We have established the first and only full-scale Space Systems Assembly, Integration and Test (AIT) Center of Türkiye in our Akıncı Campus, similar to those in some other leading countries in the field of space.

With our expert engineers and technicians certified to work on space systems, we are able to perform assembly, integration, and test activities of multiple satellites simultaneously by providing services to national projects as well as international space/satellite projects at our AIT Center.



With our high-tech design AIT Center, we are moving Türkiye to the position of a versatile international player providing assembly, integration, and testing services for space systems.



# PRODUCTS AND SERVICES

WE HAVE PARTICIPATED AS AN INDUSTRIAL PARTNER IN THE A400M PROGRAM. IN ADDITION TO DESIGN AND MANUFACTURING ACTIVITIES, **WE PLAN TO CONTRIBUTE TO THE PROJECT DURING THE LIFE OF THE AIRCRAFT WITHIN THE SCOPE OF INTEGRATED LOGISTICS SUPPORT ACTIVITIES.**

## AIRCRAFT STRUCTURES GROUP



### B737MAX

As part of the B737Max Elevator & Tab activities, we produce half of the monthly needs as a second source supplier in the program.



### B787

We are the sole source supplier of Elevator and Cargo Panels for B787 aircrafts. We have also taken on the task of being the sole source supplier in the production of Tail Horizontal Attack Edges.



### SPIRIT AEROSYSTEMS

We maintain our deliveries by reaching a monthly production capacity of more than 45,000 units within the scope of the production of details and sub-assembly parts of Boeing platforms.



### LEONARDO AW139 HELICOPTER

Within the scope of the program, we carry out the production and deliveries of Helicopter Fuselages and Canopies.



### MILITARY PLATFORMS

#### AIRBUS A400M Military Transport Aircraft

We have participated as an industrial partner in the A400M program, which consists of Germany, Belgium (Luxembourg), France, Great Britain, Spain, Türkiye, and Malaysia. In addition to design and manufacturing activities, we plan to contribute to the project during the life of the aircraft within the scope of integrated logistics support activities.

Apart from its metallic and composite structural work packages, we also undertook the production of all interior and exterior lighting systems of the aircraft (except for the cockpit), first-degree design and supply of waste/clean water systems, as well as the cable equipment of the entire fuselage of the aircraft in the project.



### SIKORSKY H-60 HELICOPTER

As part of the program, we produce and deliver the business packages listed below.

- Cockpit
- Cabin
- Composite/Metal Stabilator
- Tail Strut and Tail Cone
- Composite Parts

### AIRBUS H-215M HELICOPTER

We produce the fuselage, tail, and canopy of H-215 helicopters. We aim to continue our strategic partnership as long as the H-215 continues to be present in the market.



### JSF/F-35 Joint Attack Aircraft

We provide high quality products at competitive prices in a timely manner to the JSF/F-35 program. The products we have delivered are listed below.

- F35A Mid-Fuselage
- Mid-Fuselage Metallic Components
- Composite Flow Inlets
- Composite Components External Load Carrier



### KAI-KUH HELICOPTER

In accordance with the agreement we have concluded with Korea Aerospace Industries Ltd (KAI), we are producing the KUH utility helicopter front fuselage.



## QUALITY MANAGEMENT

**WE HAVE STRUCTURED OUR QUALITY MANAGEMENT SYSTEM IN ACCORDANCE WITH NATIONAL AND INTERNATIONAL STANDARDS IN ORDER TO ACHIEVE EXCELLENT CUSTOMER SATISFACTION, PROVIDE HIGH QUALITY PRODUCTS, AND GIVE MAINTENANCE AND CONTINUOUS AIRWORTHINESS MANAGEMENT SERVICES.**

As Turkish Aerospace, we carry out design, production, and post-delivery activities of aircraft, helicopters, Unmanned Aerial Vehicle (UAV) Systems, space systems, National Fighter Aircraft (TF), and structural products intended for civilian and military use, while we adopt the continuous improvement and first-time quality approach without giving up the principle of full compliance with legal regulations and conditions. We aim to ensure the satisfaction of our stakeholders and achieve better.

We hold a Management Review (MR) meeting 2 times a year to ensure that our Quality Management System maintains its suitability to the purpose, adequacy, effectiveness, and compliance with our Company's strategic goals.

### Product and Service Quality Studies

We have structured our quality management system in accordance with national and international standards in order to achieve excellent customer satisfaction, provide high quality products, and give maintenance and continuous airworthiness management services.

In our Quality Management System, we have defined the systems, standards, organization, processes, procedures, and capabilities that we have created, developed, and effectively managed in our Company. We believe that these defined concepts are crucial to provide services that meet or exceed customer expectations and applicable legal and regulatory requirements, to ensure the production and maintenance of high quality products or to enable the continuous management of airworthiness.





# QUALITY MANAGEMENT

## WE HAVE THE DEFINITIONS, PROCESSES, AND PERFORMANCE OF OUR QUALITY MANAGEMENT SYSTEM VERIFIED AND CERTIFIED BY INTERNAL AND EXTERNAL AUDITS IN 2021.



We consider it as our primary priority to meet customers' expectations with high quality products without compromising on the principle of delivery in a timely manner. With the launch of our Quality Management System, we have documented and monitored how we meet the quality requirements of our customers by defining them in our Company's procedures.

We created our Quality Management System, which we have configured in accordance with national and international standards, in order to monitor, measure, analyze and continuously improve the processes that have been built, as well as to carry out the activities necessary to achieve the planned results.

We established and documented Quality Management Systems in accordance with the requirements of our customer and our obligations arising from international regulations. We are developing our processes within the framework of our continuous improvement policy as required by the standards.

We make our Quality Management System planning to cover our Quality Management System processes, the resources needed to achieve our quality goals, and the activities we carry out to continuously improve the system.

### Quality Management System

We have the definitions, processes, and performance of our Quality Management System verified and certified by internal and external audits in 2021. The System's compliance with the following standards and models of which was approved by accredited institutions, and we ensure that our Quality Management System is checked at certain periods as of 2021. We secure the effective implementation of the requirements of the management systems standards in our company and its continuity through audits.

### Certified Quality Management Systems

- **ISO 9001** Quality Management System
- **AS/EN9100** Quality Management System for Aviation, Space, and Defense Industry Organizations
- **AS/EN 9110** Quality Management Systems for Aviation Maintenance Organizations Requirements

- **AQAP 2110** NATO Quality Assurance Requirements for Design, Development and Production
- **AQAP 2310** NATO Quality Management System Requirements For Aviation, Space, and Defense Contractors

We also have the following certified management systems in order to ensure standardization in management systems.

### Certified Management Systems

- **ISO 14001** Environmental Management System
- **ISO/IEC 20000** Information Technology Service Management System
- **ISO/IEC 27001** Information Security Management System
- **ISO 45001** Occupational Health and Safety Management System
- **ISO 50001** Energy Management System

We continue to operate in accordance with the standards of Management Systems as well as the following regulations established by civil and military authorities.

### Civil and Military Approvals

- Design Organization Approval (DOA)/EASA-DGCA
- Design Organization Adequacy Approval (DOAA)/Presidency of the Republic of Türkiye Defence Industry Agency (SSB)
- Production Organization Approval (POA)/EASA - DGCA
- Production Organization Adequacy Approval (POAA)/SSB
- Type Certificate (EASA - DGCA)
- Maintenance Organization Approval (MOA)/DGCA
- Approved Training Organization (ATO) DGCA
- Continuous Airworthiness Management Organization (CAMO)/DGCA

### NADCAP Special Process Approvals

Turkish Aerospace carries out its activities within the framework of NADCAP (National Aerospace and Defense Contractors Accreditation Program) certification in 8 special processes including composite, chemical processes, heat treatment, non-destructive testing, surface strengthening, welding, measurement and inspection, structural assembly.



# AVIATION SAFETY

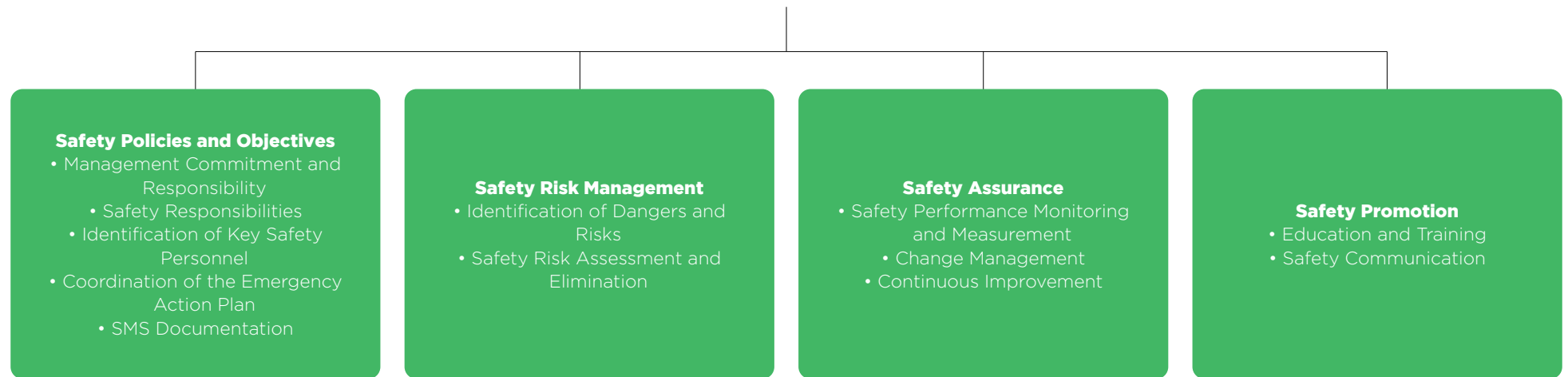
**AS TURKISH AEROSPACE, WE AIM TO SPREAD A POSITIVE SAFETY CULTURE AND AN EFFECTIVE SAFETY MANAGEMENT SYSTEM TO ENSURE FLIGHT SAFETY IN A SUSTAINABLE WAY.**



Turkish Aerospace continues its activities in a planned manner in order to establish and effectively operate the Safety Management System in all its aviation activities covered by ICAO Annex 19 and SMS.

Our Safety Management System's 4 main functions are as follows.

## ICAO Annex 19 and SMS Safety Management System





# AVIATION SAFETY

**WE HAVE DEFINED OUR SAFETY POLICY AS CONTINUOUSLY IMPROVING SAFETY PERFORMANCE** BY MANAGING AVIATION SAFETY RISKS WITH OUR STAKEHOLDERS IN AN ENVIRONMENT BASED ON A FAIR CULTURE IN COMPLIANCE WITH LEGAL REGULATIONS, REQUIREMENTS, AND OTHER CONDITIONS TOGETHER.

We have defined our safety policy as continuously improving safety performance by managing aviation safety risks with our stakeholders in an environment based on a fair culture in compliance with legal regulations, requirements, and other conditions. We implement our Safety Policy effectively by observing the principles below.

- We ensure that all management levels of our company and all our employees are aware of their responsibilities in achieving the highest level of safety performance and are committed to our safety policy.
- We ensure that a risk-based and effective Safety Management System is established and maintained for all our activities in the field of aerospace.
- We take the approach of creating, implementing, maintaining, and continuously improving our strategy and processes to achieve the highest safety performance.
- We create a corporate culture that encourages safety practices by

providing all the necessary resources and encouraging effective reporting and communication about safety.

- We ensure the continuity of our Safety Management System activities in accordance with all relevant national and international legal and other requirements, such as AS/EN 9110, EASA Part 21, SHY 21, SHY SMS, EASA Part 145, SHY-145, etc.
- We follow a hazard identification and risk management process, including a safety reporting system, to eliminate risks arising from hazards in our activities in order to continuously improve our safety performance, or to reduce the effects of these risks.
- We consider safety management as the main responsibility of all our employees.

We determine the legal safety obligations of our employees regarding the operations in their respective areas of responsibility.



**Reporting Culture:** We enable all of our employees to report anonymously or with user log-in through our Company's Safety Reporting System so that they can freely share safety hazards, risks, and other related issues.

**Information Culture:** We ensure that our employees who operate and manage the system have the most up-to-date information about the human, technical, environmental, and organizational factors that determine the safety of the system as a whole.

**Culture of Flexibility:** Regardless of the hierarchical structure of our company, we allow our employees to report directly to the relevant decision-makers in extraordinary situations.

**Learning Culture:** We collect, analyze, and disseminate relevant data and convert them into safety information in order to increase safety. We constantly inform our employees about issues related to safety. We support making the necessary changes by learning from all kinds of safety incidents.



# AVIATION SAFETY

WE STRIVE TO ESTABLISH A NATIONALLY AND INTERNATIONALLY RECOGNIZED SAFETY MANAGEMENT SYSTEM IN THE LIGHT OF THE OUR STRATEGIES AND POLICIES **IN ORDER TO ALLOW THE SYSTEM TO WORK CONSISTENTLY, FUNCTIONALLY, AND EFFECTIVELY IN SUCH A WAY AS TO COVER ALL THE AVIATION ACTIVITIES OF OUR COMPANY.**

**Culture of Fairness:** In addition to providing our employees with a fair and safe working atmosphere where they can share safety information, we also ensure that our employees have the knowledge and experience allowing them to clearly distinguish between what is acceptable and what is unacceptable.

At Turkish Aerospace, we aim to spread a positive safety culture and an effective Safety Management System to ensure flight safety in a sustainable way.

### Safety Management System (SMS)

**Safety Policies and Objectives:** We define our safety policies and objectives and our safety promotion components to cover the mandatory organizational regulations of the SMS. We place the safety risk management and safety assurance components at the heart of our Safety Management System.

At Turkish Aerospace, we transparently share our safety objectives set by our Safety Review Board with all our employees and periodically review them.

**Safety Risk Management:** In the process of hazard and risk identification, we effectively collect, record, evaluate, make applicable, and improve the feedback on hazards in our activities by jointly using the assessment methods of retrospective safety data and the collection methods of predictive safety data.

At Turkish Aerospace, we carry out Safety Risk Management through the Enterprise Risk Management System (ERMS) Safety Risk Assessment module, ensuring that the module is open to the participation of all our employees.

### Safety Assurance:

At Turkish Aerospace, we have identified 3 main elements of Safety Assurance: monitoring, measuring, improving, and tracking safety performance; change management; and continuous improvement of the SMS.

- **Monitoring, Measuring, Improving, and Tracking Safety Performance:** We use ICAO Document 9859 as a guidance document when determining performance indicators and acceptable safety levels within the scope of the SMS. We collect information through hazard/risk reporting, incident reports, audits, and reviews, as well as safety meetings to monitor and measure our safety performance.
- **Change Management:** We organize change management meetings within the scope of SMS for changes that have a safety impact. We evaluate the changes and their possible effects at the safety meetings held periodically.
- **Continuous Improvement of the SMS:** We create processes to identify possible causes of our safety performance that falls under the SMS standards and to eliminate the

causes, while we follow the approach of continuous improvement through internal evaluations, and internal and external audits.

### Safety Promotion:

At Turkish Aerospace, we aim to develop and promote a positive safety culture in order to achieve our safety goals within the scope of the Safety Management System. We ensure to achieve the values, attitudes, and behaviors that are considered as the main components of our positive safety culture through technical competence, effective communication, and information sharing supported with education and training. We guarantee to provide the resources required for the development of safety culture within the Company.

We strive to establish a nationally and internationally recognized Safety Management System in the light of our strategies and policies in order to allow the System to work consistently, functionally, and effectively in such a way as to cover all the aviation activities of our Company.



# TECHNOLOGY AND INNOVATION

**AT THE HEART OF OUR TECHNOLOGY AND INNOVATION APPROACH, THERE ARE TECHNOLOGIES OF THE FUTURE AND THE ACQUISITION OF TECHNOLOGIES THAT WILL ENSURE A COMPETITIVE ADVANTAGE IN AVIATION.**

Turkish Aerospace's Innovation and Technology Policy is defined as positioning innovation and technology as the main leverage to become a globally competitive "world brand aerospace company" in cooperation with all our stakeholders. In line with this policy, we carry out our activities with the strategy of becoming a company that decides the technologies needed for our current and potential products, follows innovative technologies, integrates them into products, conducts R&D activities/ have them conducted, and leads the aviation and space ecosystem. When creating our Technology Roadmap, we prioritize the technologies of future and the acquisition of technologies that will ensure a competitive advantage in aviation, as well as technological competencies that must be developed in accordance with our strategic goals and product requirements.

We carry out systematic studies based on technology and innovation for the acquisition of the technological competencies that we need in our indigenous products with domestic and national opportunities.

## TECHNOLOGY ROADMAP

At Turkish Aerospace, we create technology strategies that are compatible with our vision, goals, and competencies and that will provide a sustainable competitive advantage on a global scale, and we make plans for the acquisition of the technologies that we have determined. Through our Technology Roadmap and Acquisition Plan, we determine the technology issues that need to be monitored and acquired, while we create the right acquisition methods to allow the relevant technologies to provide a competitive advantage for our existing and potential products.

While determining the technology issues that will contribute to our sustainable development, we work with those who are experts in the relevant field, and we study and analyze the technologies that the world's leading aerospace and defense companies, research institutions, and universities are working on.



We shape our Technology Roadmap with steps that will allow us to develop materials, manufacturing, structural, aerodynamic, avionics, and aircraft and spacecraft systems as well as the information technologies that serve our indigenous platforms.

Closely following the technological developments that determine the future of our Company, we focus on automation and digitalization technologies, new materials, alternative energy sources, artificial intelligence, data analytics, and Industry 4.0 technologies, by which we will realize technological transformation.



# TECHNOLOGY AND INNOVATION

IN 2021, AS TURKISH AEROSPACE, WE CONDUCTED 120 R&D PROJECTS IN A WIDE RANGE OF AREAS, INCLUDING BASIC RESEARCH, **APPLIED RESEARCH, AND PRODUCT DEVELOPMENT STAGES, AND COVERING 9 LEVELS OF TECHNOLOGY PREPARATION.**

**Number of R&D Projects in 2021**

**120**

We have expanded our Technology Roadmap to include applications related to nano-doped composites, next-generation coatings, additive manufacturing, and thermoplastic composite materials, which are anticipated to be used more commonly in the aerospace industry in the future. We lead our investments and carry out R&D projects in order to acquire, localize, and integrate into our products the technologies in these fields.

## R&D PROJECTS

In 2021, as Turkish Aerospace, we conducted 120 R&D projects in a wide range of areas, including basic research, applied research and product development stages, and covering 9 levels of technology preparation.

We carry out our R&D activities in the Product Groups within the Company, in the Vice Presidency of Engineering, as well as in the Rotary Wing Technology Center, Advanced Materials, Processes and Energies Technology

Center, Indigenous Engineering Tools Technologies Center, and Advanced Aircraft Concepts Technologies Center. We follow the technological and scientific innovations developed on a global scale through the research and technology centers we have established, and we implement the acquired competencies through our R&D projects.

In 2021, we established the Functional Coatings and Transparencies Technology Center, the Advanced Composite Materials Technology Center, and the Additive Manufacturing Technology Center. We created a strong infrastructure for our projects within the scope of the collaborations with universities and Techno-SMEs for the technologies of the future.

Funded from our equity and/or R&D support funds, our technology center projects are led in accordance with the priorities set out in the Technology Roadmap that we created as a result of Technology Management processes.



### Completed/Ongoing R&D Projects as of the End of 2021

<b>Completed R&amp;D Projects</b>	<b>8</b>
Externally-Funded R&D Projects	-
Internally-Funded R&D Projects	8
<b>Ongoing R&amp;D Projects</b>	<b>112</b>
Externally-Funded R&D Projects	36
Internally-Funded R&D Projects	76
<b>Total</b>	<b>120</b>



# TECHNOLOGY AND INNOVATION

IN ADDITION TO OUR NATIONAL-SCALE R&D ACTIVITIES, **WE USE THE EXPERIENCE GAINED THROUGH OUR INTERNATIONAL-SCALE COOPERATION IN THE INDIGENOUS PRODUCTS THAT WE DEVELOP.**

## R&D AND INNOVATION COOPERATION

We know that we can reach the leading position we are aiming at in the aviation and defense industry with the contributions of all our stakeholders and researchers. With this notion, we aim to contribute to the Company and the aviation ecosystem of Türkiye by designing models for R&D and innovation collaborations.

As Turkish Aerospace, we define our R&D and innovation cooperation strategies in order to provide a sustainable competitive advantage in line with our vision and goals on a global scale. We continue our activities to manage internal and external relations in accordance with our cooperation strategies, and to create, set up, and operate cooperation projects/programs/mechanisms/models.

### University-Industry Cooperation Projects

In 2021, we improved our project cooperation with universities within the scope of our R&D Center activities. In

2021, we added 8 new projects to our university-industry cooperation projects, increasing the number of our projects to 22. We have received grants for our new 2 projects within the scope of the TÜBİTAK ARDEB 1004 Program.

### International Cooperation and Projects

In addition to our national-scale R&D activities, we also benefit from the experience gained through our international-scale cooperation and use it in the indigenous products that we develop. We continue to work, first of all, to meet domestic needs, and then to increase our exports by marketing our indigenous products with competitive prices and advanced technology together with our international solution partners.

### The ongoing projects of the accounting period of 2021 are as follows:

- The additive manufacturing with FIT AG,
- The signing of a cooperation agreement with "SIRIM," a Standardization and R&D organization affiliated with the Ministry of Economy of Malaysia,



- The signing of a cooperation agreement with the National Aerospace University-Kharkiv Aviation Institute in order to benefit from the experience of the Ukrainian National Aviation University, the leading aviation university in Ukraine, in the fields of propulsion and avionics,
- 1 European Union 7<sup>th</sup> Framework Project, 3 International Industrial R&D Projects Support Program (TÜBİTAK TEYDEB 1509) Projects, 2 Horizon

- Europe Project applications (while carrying out 1 HORIZON 2020-ECSEL project),
- The work of 7 ongoing projects within the scope of the cooperation we have established with the Airbus company.



# TECHNOLOGY AND INNOVATION

## WE CONSIDER R&D AND INNOVATION COOPERATION AS A TOOL THAT INCREASES OUR COMPETENCE AND CAPACITY TO IMPROVE OUR CORPORATE AND ENVIRONMENTAL PERFORMANCE ON THE WAY TO OUR SUSTAINABILITY GOALS.

### Entrepreneurship and Open Innovation Practices

As Turkish Aerospace, we support the development of ideas and products that contribute to the ecological environment and innovative production by focusing on “Sustainable Innovation.” We consider R&D and innovation cooperation as a tool that increases our competence and capacity to improve our corporate and environmental performance on the way to our sustainability goals. Within this framework, we implement young talent programs to train qualified human resources, and we provide maximum support for in-house entrepreneurship and open innovation activities to provide more employment and encourage innovation.

We conducted a competitor analysis to determine sectoral and technological trends, investigate the innovation vision and rhetoric of the companies operating in the aerospace industry. Within the scope of the Innovation Competence Inventory Study, we conducted interviews with our employees who put forward innovative ideas within the Company in order to identify our shortcomings in our existing innovation infrastructure. We provided “Innovation Awareness Trainings” to innovation supervisors and executives in the Company.

To develop new products, services, and business models that we will need in Turkish Aerospace more effectively, we conducted studies on in-house entrepreneurship and open innovation topics and organized “In-House Entrepreneurship and Open Innovation Roadmap Workshop.” We determined our short-, medium-, and long-term focus topics as well as the topics of our In-House Entrepreneurship and Open



Innovation Roadmap in the workshop in order to create our roadmap in the field of in-house entrepreneurship and open innovation.

We implement our innovation processes from marketing to production, from supply chain to sales, with the contributions of all our departments through our high-tech indigenous

products in the aerospace industry and our R&D cooperation activities. Thanks to our R&D and innovation strategies, we are able to expand our product portfolio in accordance with our sustainability priorities and thus increase our competitiveness by contributing to meeting the needs and expectations of all our stakeholders.



## TECHNOLOGY AND INNOVATION

**WE ALLOW OUR EMPLOYEES TO INPUT THEIR IDEAS IN OUR COMPANY'S SUGGESTION SYSTEM THROUGHOUT ALL PROCESSES, INCLUDING MANAGERIAL, OPERATIONAL AND SUPPORT PROCESSES RELATED TO THE PRODUCTION, DESIGN, SOFTWARE, AND PROCUREMENT ACTIVITIES.**

**Revenue from the Suggestions Defined in the Suggestion System in 2021**

**16.9**  
USD million

### SUGGESTION SYSTEM

We implement our Suggestion System in order to put forward ideas for improving the current situation, evaluate the suggestions received, and process the appropriate ones upon the approval of relevant experts on the issues that directly or indirectly concern our business processes. We encourage our employees to participate in the Suggestion System by rewarding the best suggestions.

We allow our employees to input their ideas in our Company's Suggestion System throughout all processes, including managerial, operational and support processes related to the production, design, software, and procurement activities. Thanks to the suggestions of our employees, we not only achieve financial gain, but also derive technical advantages in matters such as reducing the weight of the indigenous aircraft and nationalizing the materials used in the aircraft.

In 2021, we achieved a total revenue of US\$ 16.9 million thanks to 808 suggestions accepted out of total 1,675 suggestions inputted in our Suggestion System by our employees.

### LIFT UP INDUSTRY-ORIENTED UNDERGRADUATE GRADUATION PROJECTS

As part of our efforts to prepare young talents for the industry, we continue to improve our activities within the Industry-Oriented Undergraduate Graduation Project in quantity and quality every year, and allow our specialists to act as industry consultants under the guidance of academic advisors of undergraduate seniors. We have branded our program, which we have prepared for young engineer candidates, with the name of "LIFT UP" in 2020.

As part of the LIFT UP Program, we support students by providing the following facilities.

- We cover the project team's expenses related to machinery-equipment, consumables, purchase of services, travel, and other expenses within the scope of the project budget we allocate.
- We welcome students to our Company's campuses on specific days of the week to ensure that they are familiar with and gain experience in the field work.
- We provide students with the opportunity to benefit from the infrastructure in our facilities throughout the project.
- We offer industrial consultancy to project teams through our employees who are experts in their field.
- We encourage students to carry out their studies efficiently and in a way that also meets the needs of our Company under the guidance of industry consultants.



Within the scope of our LIFT UP Program, we have carried out 254 projects for 6 periods and have supported a total of 722 students to step into the working life as a LIFT UP graduate.



# TECHNOLOGY AND INNOVATION

**AS TURKISH AEROSPACE, WE PARTICIPATE IN NATIONAL AND INTERNATIONAL FAIRS AND CREATE THE OPPORTUNITY TO PRESENT THE INVENTIONS OF OUR ENGINEERS TO OTHER STAKEHOLDERS IN THE ECOSYSTEM IN WHICH WE OPERATE.**

**Number of Patent Applications in 2021**

**84**

## PATENT ENGINEERING

In order to protect the Company’s intellectual property rights, we continue our activities to obtain patents for products and designs that we have developed in the field of the aerospace industry in many branches of technology, from composite manufacturing systems to exhaust systems, from attack helicopter wing design to canopy mobilization systems. Since 2011, we have made a total of 249 patent applications and 72 utility model applications, and completed 53 patents and 35 utility model registration processes.

As Turkish Aerospace, we completed a total of 84 patent applications in 2021, including 51 national and 33 international patent applications, and completed the patent registration procedures of 20 of patent applications.

With our patent and utility model applications, we are at the leading position in the industry by taking first place in the field of aviation and space technologies in our national portfolio. In 2021, we were also entitled to be the patent leader in the patent applications published on additive manufacturing technologies.

As Turkish Aerospace, we participate in national and international fairs and create the opportunity to present the inventions of our engineers to other stakeholders in the ecosystem in which we operate. In 2021, we participated in Istanbul International Invention Fair (ISIF), where more than 250 inventions were exhibited, with 35 inventions. We received a total of 33 awards including 18 bronze, 11 silver, 3 gold medals, and the “WIPO Best Domestic Invention” award at ISIF with our inventions evaluated by the international jury board consisting of those who are experts in their field.

## LOCALIZATION ACTIVITIES

We systematically follow the current situation and technological trends in the world within the framework of our vision of becoming a “world brand aerospace company” that has indigenous products and has reached global competitiveness. In particular, we are working on technologies that will contribute to our competitiveness and capabilities that are not currently available in Türkiye.

In addition to our R&D activities in engineering and technical issues for high-tech products, we also contribute to the industrial development of Türkiye at all stages, from production processes to the tests of the final products. Therefore, we identify critical components and develop

processes to produce them, if possible, within the Company. If not, we aim to develop processes that will allow the domestic industry to realize all possible stages, from raw materials to the production of the necessary component.

Within the scope of our indigenous product programs, we create our localization and nationalization strategies based on the indigenous product for each system/subsystem/material, and work on subsystem, equipment, and material basis. We prepare “Localization Roadmaps” for systems/subsystems/ components and materials that we consider as critical.

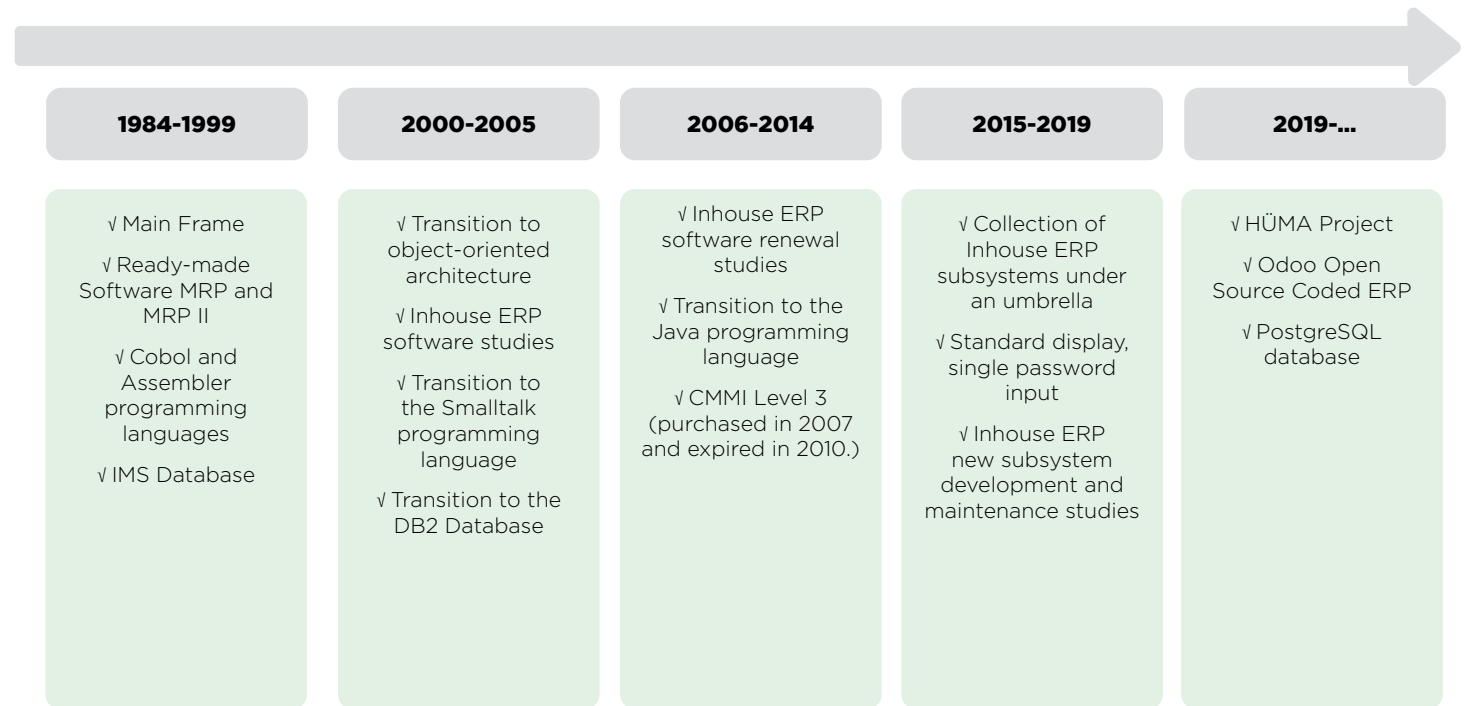


# INFORMATION TECHNOLOGIES

**AT TURKISH AEROSPACE, WE HAVE DEVELOPED AND IMPROVED OUR INTEGRATED MANAGEMENT SYSTEM OVER THE YEARS, WHICH ALLOWS US TO USE OUR RESOURCES IN THE MOST EFFICIENT WAY.**

We operate our Information Security Management System (ISMS) in accordance with the ISO/IEC 27001 standard, and certify it through internal and external audits conducted at regular intervals. Under the leadership of our Senior Management, we set our ISMS targets, proactively manage our information security risks, periodically evaluate our ISMS performance, and carry out studies for sustainability and the application of current technologies.

## Deep-Rooted ERP History





# INFORMATION TECHNOLOGIES

**SINCE 2021, TURKISH AEROSPACE HAS BEEN WORKING WITH SCRUM, ONE OF THE AGILE METHODS INSTEAD OF WATERFALL METHOD, AS AN INFORMATION MANAGEMENT SYSTEM FOR ITS SOFTWARE DEVELOPMENT ACTIVITIES INCLUDING ANALYSIS, DESIGN, CODING, AND TESTING PHASES.**

### Advanced Engineering Software

Thanks to our advanced engineering software, we can study the real-life performance of our products that we are in the process of development, and diagnose the shortcomings and weaknesses of products before even producing them. By using advanced engineering software, we shorten the product development time, reduce physical prototype costs, and improve product quality.

### Product Lifecycle Management - PLM

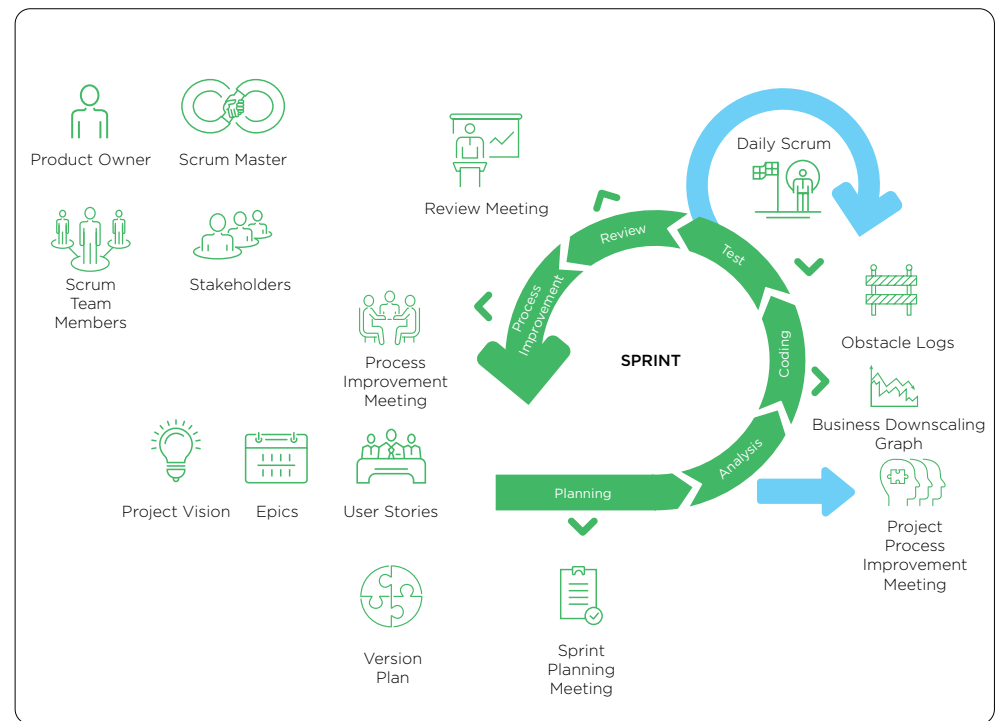
We use the Product Lifecycle Management (PLM) System, which allows us to manage all the data generated during the process from the design to production, from commissioning to decommissioning of our products, to maintain our activities such as design, production, analysis, documentation, and reporting by working together with our different business units. Thanks to the PLM System, we are able to integrate people, data, processes, and the organization of our Company by creating a product information backbone. It helps us protect the knowledge, experience,

and intellectual property, while providing joint access to all information, data, and processes related to our products from a single pool.

### Software Life Cycle

Since 2021, Turkish Aerospace has been working with scrum, one of the agile methods instead of waterfall method, as an information management system for its software development activities including analysis, design, coding, and testing phases. Software development phases could be applied once in the waterfall method and any changes to the requirements would lead to the increase in time and cost as the phases progress; therefore, we have changed the method. Thanks to the SCRUM system, which allows us to incrementally improve software development phases by repeating them more than once in intervals called sprints, we can respond more quickly to the software needs of our employees and organizational units.

### Software Development Process (SCRUM)





# INFORMATION TECHNOLOGIES

**WE HAVE DEVELOPED OUR BUSINESS INTELLIGENCE PLATFORM, KOKPIT, IN ORDER TO INCREASE OUR CAPACITY TO ACCESS AND ANALYZE DATA QUICKLY IN LINE WITH THE OPPORTUNITIES OFFERED BY CURRENT DATA SCIENCE TECHNOLOGIES.**

## **Engineer Productivity and Workforce and Workload Sustainability**

As part of our engineering work, we have commissioned the MIT system to track the Main Business Package, Engineering Business Package, and Engineer-level business detailing. We record the planned and realized activities and daily works of our engineers in the MIT system, so that we can plan the workload of all engineers on the basis of operation items on the system and calculate engineer efficiency.

## **Production Sustainability**

In addition to the module we use at the stage of converting design data into production data, we also prepare planning for outsourcing companies.

We create the product tree structure within this system in a way that is correlated to the design product tree structure, and we use this data to provide input for our Production Resource Planning.

## **Traceability**

With all our systems, we meet the traceability requirements that are the basic requirement of the aviation industry. Thanks to the traceability of parts and materials, we can track all the parts that are on the final product and need to be tracked to the lowest level of the product tree, and we can track the processes throughout the product lifecycle of these parts and materials. We are able to access the lowest level as well as the latest product in the product tree.

## **Product Nonconformity Management**

We record all nonconformities that occur during our part production in accordance with our quality standards. We carry out all the stages from identifying nonconformity to creating a solution and, if necessary, projecting the solution into production through the nonconformity management system. We also evaluate the measures and actions that we should take as a result of nonconformity based on the relevant nonconformity record.

## **Data Science**

We have developed our business intelligence platform, Kokpit, in order to increase our capacity to access and analyze data quickly in line with the opportunities offered by current data science technologies. Thanks to the data and analysis we have achieved, we effectively manage our sustainability goals by establishing a relationship between our past performance and future goals. Thanks to our Kokpit business intelligence platform, which allows us to regularly monitor our sustainability performance and proactively evaluate risks and opportunities, we gain an advantage over the competition by making quick decisions.



# SUPPLY CHAIN MANAGEMENT

IN THE SELECTION AND EVALUATION PROCESSES OF OUTSOURCING COMPANIES THAT WILL BE INCLUDED IN OUR SUPPLY CHAIN, WE OBSERVE THE CRITERIA OF QUALITY SYSTEM, QUALIFIED WORKFORCE, TECHNOLOGICAL INFRASTRUCTURE, AND FINANCIAL COMPETENCE **WITHIN THE FRAMEWORK OF INTERNATIONAL STANDARDS IN ADDITION TO THE SUSTAINABILITY GOALS AND POLICIES OF OUR COMPANY.**

**Number of Suppliers We Worked With in 2021**  
**1,030**

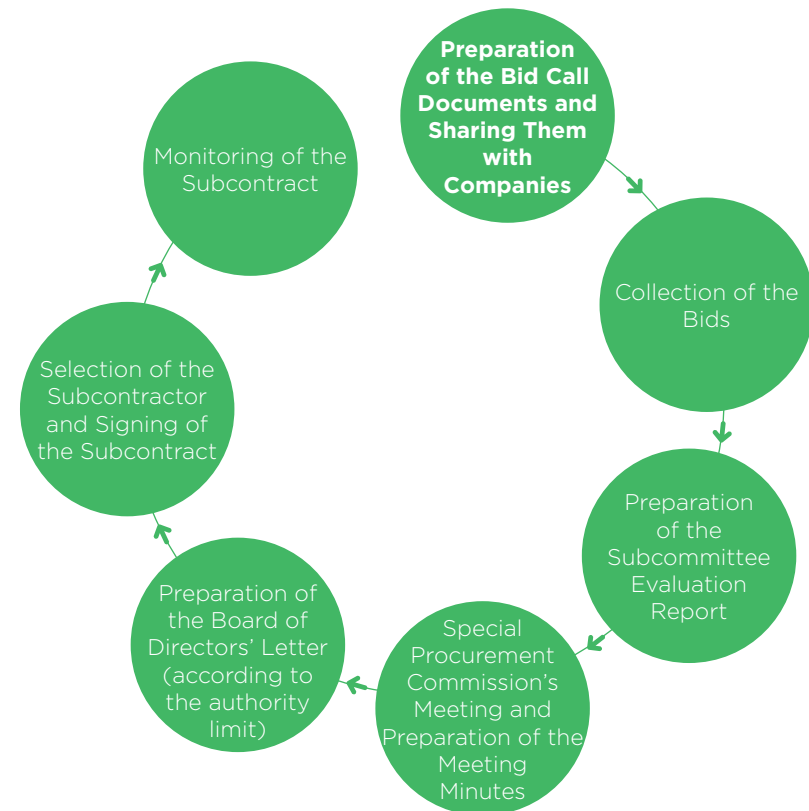
As Turkish Aerospace, we act in line with our sustainability approach that we follow in all our fields of activity while creating and managing our wide supplier ecosystem. In the selection and evaluation processes of outsourcing companies that will be included in our supply chain, we observe the criteria of quality system, qualified workforce, technological infrastructure, and financial competence within the framework of international standards in addition to the sustainability goals and policies of our company.

In all material, equipment, and service purchases from domestic and foreign sources in accordance with the needs of our company, we secure the sustainability of material supply by evaluating multiple sources and meeting our needs in competitive and cost-effective ways, at the appropriate quality and in a timely manner, in accordance with our Company's procurement policy. In 2021, we worked with 292 domestic and 738 foreign suppliers.

### Supplier Selection Process

We receive offers from approved manufacturers for materials where approved manufacturers are indicated directly in the engineering documentation of the materials or on the platforms they refer to. In cases where the supply source is not clear, we manage our quotation process according to the approved source lists of the main contracting company of the program from which the material was purchased, or according to our own approved source lists.

### Bid Evaluation and Selection Process

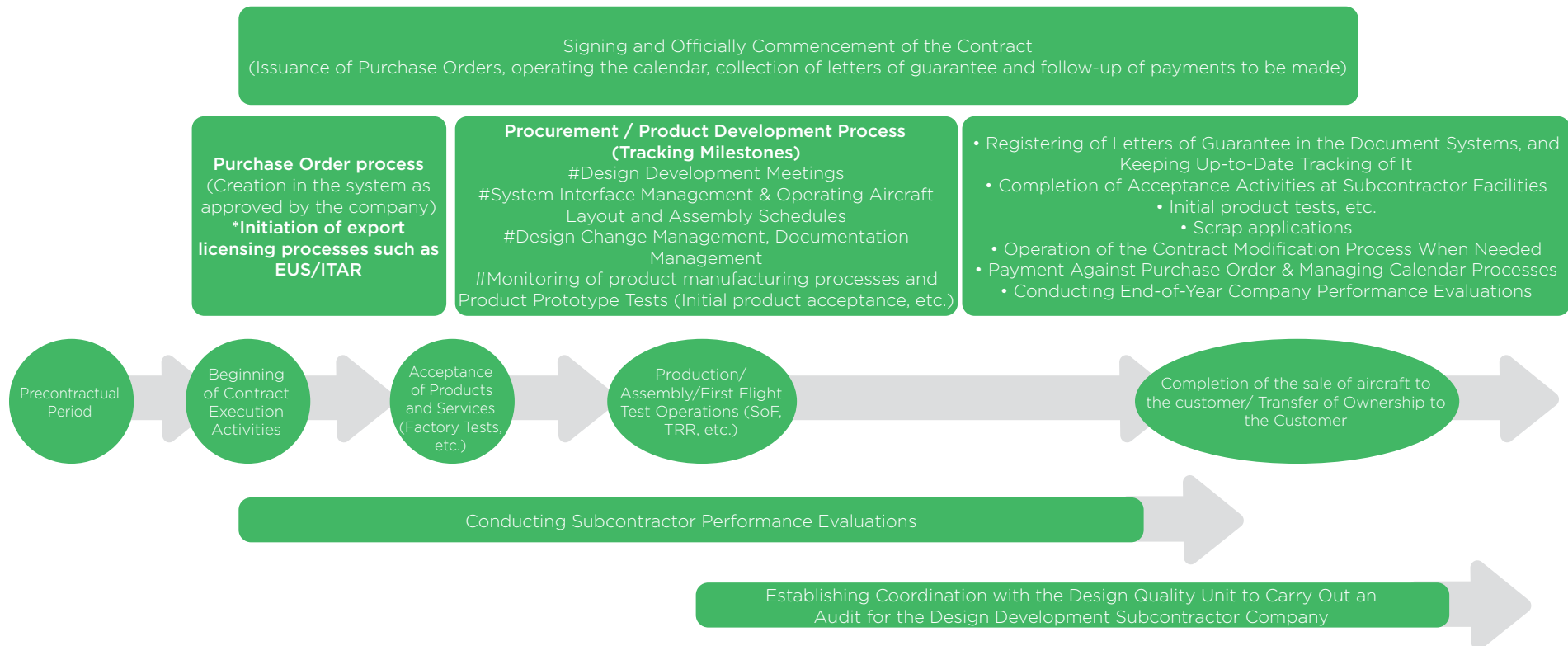




# SUPPLY CHAIN MANAGEMENT

**IN ALL MATERIAL, EQUIPMENT, AND SERVICE PURCHASES, WE SECURE THE SUSTAINABILITY OF MATERIAL SUPPLY** BY EVALUATING MULTIPLE SOURCES AND MEETING OUR NEEDS IN COMPETITIVE AND COST-EFFECTIVE WAYS, AT THE APPROPRIATE QUALITY AND IN A TIMELY MANNER, IN ACCORDANCE WITH OUR COMPANY’S PROCUREMENT POLICY.

## Procurement Contracts Management Activities





# SUPPLY CHAIN MANAGEMENT

## Subcontractor Performance Evaluation Activities

We evaluate the activities of subcontractor companies that we supply contractual products and/or services to within the scope of environmental control and fluid systems, propulsion systems, mechanical systems, avionics systems, and software, and we issue a "Subcontractor Company Performance Evaluation Report" for each company at the end of each year.

We evaluate subcontractor companies by taking the following basic criteria into consideration;

- Within the scope of the quality of the work it carries out, the hygiene in its facilities, compliance with documentation requirements and product specifications, the quality of the products and/or services it delivers,
- Within the scope of compliance of the contract with the agreed calendar in the project implementation calendar annex, the ability of the subcontractor to create a quick response/solution, timely notification of updates or possible delays in the project calendar, timely elimination of non-compliance in the product and compliance of product delivery with the actual calendar,
- Within the scope of the business relationship established with our Company, which is the owner of the contract, the quality of cooperation/communication, relations with its own

subcontractors, if any, participation in meetings on time and with a qualified workforce,

- Both technical and managerial competence of the workforce it allocates for the project, the presence of the necessary infrastructure for the execution of the work,
- Being able to comply with the fixed price set in the subcontracts without the demand for additional prices; carrying out billing activities without errors; preventing additional issues that will require a contract change to the maximum extent internally, however, keeping their offers reasonable and being open to negotiation in cases where changes are inevitable.

We score the subcontractor companies in accordance with the established basic criteria and determine their categories as Gold, Silver, Bronze, Yellow and Red companies.

In addition to category based assessments, we ensure that all issues that pose a risk in a calendar, commercial, or technical sense or that we have problems with are notified to our departments that prepare contracts and conduct the negotiation process through official correspondence within the scope of contract execution activities.

As Turkish Aerospace, we take care that all our related employees have equal knowledge and risk awareness about the performance of our Company's subcontractors. We take an inclusive approach by ensuring that the subcontractor's performance is monitored by all relevant departments in order to increase our effectiveness in the design and negotiation of contracts that we will make in the future and to manage our supplier selection process with the right decisions.

## Supply Chain Risk Assessment Activities

At Turkish Aerospace, we manage our supply chain risks via the Enterprise Risk Management System in accordance with the definition, scope, and principles set out in our Risk Management Procedure.

We carry out risk/opportunity assessments of raw material, semi-finished, and finished product suppliers in cooperation with our procurement departments under the categories of capacity, capability, financial competence, place/geographical location, information infrastructure, physical infrastructure, industrial security, legal regulations, contract, supply chain (subcontractor), logistics, human resources, meeting requirements (analysis and technical documentation), and single-source through our Procurement Risk Assessment module.

We evaluate the capacity of our working partners for the production and design areas, and identify the situations that may affect our activities. We check the capacities of our suppliers on a monthly basis or during work transfer processes with the help of data entries that they perform through the Outsourcing Portal. If we foresee bottlenecks in the medium and long term, we make risk entries and put in place joint control and improvement plans with our suppliers.

When evaluating the technical competencies of our suppliers, we determine areas that may affect the current or future activities, the situations that may affect information security based on their information infrastructures, and the aspects that may affect business continuity based on the physical infrastructures thereof. We evaluate the potential events that may occur in the locations of our suppliers, their industrial safety, contracts, export options and logistics activities, their human resources, their capacity to meet customer and authority requirements, and, most importantly, their single source status.

We carry out the processes of determining and defining risk categories in cooperation with our procurement departments and evaluate the risks of suppliers at Procurement Risk Assessment meetings. We evaluate our business partners by categorizing them into supply, subcontractor, subsystem, and prototype risk groups.



# SUPPLY CHAIN MANAGEMENT

IN SUPPLY CHAIN MANAGEMENT, WE FOLLOW MANY INDICATORS SUCH AS DELIVERY PERFORMANCE, QUALITY PERFORMANCE, SUPPLIER PERFORMANCE, DELAY TIME, AND THE NUMBER OF REPEATED ERRORS, **AND TAKE INTO ACCOUNT THE QUALITY PERFORMANCE INDICATORS IN OUR RISK ASSESSMENTS.**

## Quality Performance Indicators

At Turkish Aerospace, we follow many indicators such as delivery performance, quality performance, supplier performance, delay time, and the number of repeated errors in the supply chain, and take into account the outputs of Quality Performance Indicators while conducting risk assessments. If we observe a sudden negative change in indicators or a negative trend, we create control plans by identifying risks in order to take action immediately.

## Outsourcing Portal

We interact with all our domestic suppliers online and exchange mutual data through our highly functional Outsourcing Portal that we have developed. Thanks to our Outsourcing Portal, we secure the sustainability of all the systems we use within the scope of Supply Chain Management, and integration with our suppliers.

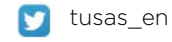
- **Order Management:** Yerli tedarikçilerimize açtığımız tüm siparişlerin takip ve yönetimini portal üzerinden gerçekleştiriyoruz.
- **Stock Management:** We manage all stock movements of 4,000 types of materials that we provide, located in the warehouse of 20 different suppliers through the portal. By this means, we ensure that the materials are used in the right quantities in production, and thus we prevent any material waste.
- **Nonconformity Management and Technical Support:** We ensure that nonconformities during production are reported through the portal, that our quality and manufacturing units examine the problems item-by-item, and that a technical support request is created during the production process.

- **Capacity Management:** We carry out workload and capacity analysis by defining the machine tool information and part routes used in our domestic companies on the portal.
- **Shipment Management:** We use a barcode system for all orders sent to our Company by our domestic suppliers. We track about 120,000 orders per year through this system. We manage the shipment process of the products to be delivered from 6 different industrial zones located in Ankara via the portal.
- **Delivery Performance Evaluation:** We evaluate our suppliers according to many metrics via our report cards that we prepare monthly. We allow our suppliers to follow their own performance metrics through the Outsourcing Portal. We are able to create quality, planning, and technical analysis with the data we have obtained through the portal.

## Sustainability of the Supply of Materials Used in the Product

Through our Purchasing Management System, we systemically manage supplier company information, purchase request processes, purchase order processes, and receipt processes, which are the acceptance stage of materials coming to our Company. During the evaluation of offers, we also take into account parameters such as the amount of energy consumption and the annual maintenance cost that we request from companies.

We systematically monitor the compliance of audits of suppliers with quality standards. We purchase products/services by cooperating with suppliers that meet our criteria. We carry out preliminary checks in accordance with the plans and standards that we have established to maintain the quality level. At the points where problems are detected during the preliminary control stage, we ensure that the supply quality standards are maintained by taking the necessary actions on the basis of the product and company.



**TUSAŞ - TÜRK HAVACILIK VE UZAY SANAYII A.Ş.**

Fethiye Mah. Havacılık Blv. No: 17 06980

Kahramankazan, Ankara/Turkey

Tel: +90 312 811 18 00

Fax: +90 312 811 14 25

[www.tusas.com](http://www.tusas.com)

Proudly produced by **FINAR**.  
[www.finarkurumsal.com](http://www.finarkurumsal.com)