



# SUSTAINABILITY REPORT 2023



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# Sustaining Our Values





## About the Report

**ASAŞ** proudly presents its fifth annual sustainability report, showcasing the company's environmental, social, and governance (ESG) performance metrics alongside key economic indicators for the fiscal year 2023. **Our sustainability report is anchored in our Responsible, People-Oriented, and Environmentally Conscious business approach, a core philosophy that reflects our sustainability strategy and informs all aspects of our operations.** Moving forward, we will continue to place sustainability at the core of all our initiatives and decisions. The report encompasses operations at our five production facilities in Akyazı, Sakarya, as well as our corporate headquarters in Istanbul. At the same time, while we maintain operations in Neuwied, Germany, this report's scope is limited to our activities in Türkiye. This report adheres to the Global Reporting Initiative (GRI)

Standards. This year's report highlights our alignment with the United Nations Sustainable Development Goals and outlines our key sustainability priorities, identified through an updated double materiality assessment. Comprehensive GRI (The Global Reporting Initiative) Content Index, ASI (Aluminium Stewardship Initiative) Index, and detailed sustainability performance metrics are provided in the Appendices for reference.

For inquiries, feedback, or recommendations concerning our sustainability report, please contact our dedicated sustainability team at [surdurulebilirlik@asastr.com](mailto:surdurulebilirlik@asastr.com) or [sustainability@asastr.com](mailto:sustainability@asastr.com).

**\*Reporting Consultant:** ZOA Sustainability Consulting [zoaconsulting.co](http://zoaconsulting.co) / [info@zoaconsulting.co](mailto:info@zoaconsulting.co)





# Message from the General Manager

## Dear Valued Stakeholders,

We navigated another year punctuated by climate-induced calamities, with global warming driving temperature records, exacerbating droughts, and intensifying natural disasters—a trajectory likely to steepen in the years ahead.

Our industry is directly impacted by both global and local developments. The year 2023 was marked by significant economic challenges stemming from the energy crisis precipitated by the Russo-Ukrainian War, volatile commodity prices, and tightening monetary policies in both Europe and Türkiye, resulting in elevated interest rates and constrained credit access.

Global economic headwinds intensified in 2023, characterized by a reversal of post-pandemic demand growth and deceleration in developed economies due to monetary tightening by major central banks, including the European Central Bank and the Fed. Both Türkiye and the global market faced significant challenges, including sluggish growth, persistent inflation, elevated interest rates, geopolitical tensions, and trade restrictions imposed by the U.S. and EU, collectively reshaping our industry's landscape. Key market segments, notably construction and packaging, experienced substantial downturns. And the transportation sector underperformed expectations, hampered in part by diminished incentives for electric vehicle adoption. Despite these headwinds, we remain optimistic about the future trajectory of aluminum demand, anticipating growth in its utilization in the coming period.

The European Union's impending Carbon Border Adjustment Mechanism is propelling carbon pricing to the forefront of business priorities. Given its classification as a key sector and inherently energy-intensive processes, the aluminum industry must implement significant improvements.

At ASAŞ, we embrace a holistic view of sustainability that transcends mere carbon reduction. Our approach permeates every aspect of our operations, from procurement to production, driving us to develop innovative solutions that enhance stakeholder value and establish leadership at target markets. We engage industry-leading consultants to conduct comprehensive environmental impact assessments for all prospective investments.

We align our strategic decisions with sustainability principles, embedding circular economy practices at the core of our business processes. Throughout the process, we design our projects to include short-, medium-, and long-term actions, sharing all our steps with the public in complete transparency. We reaffirmed our commitment to responsible production and transparency by successfully completing the rigorous ASI audit, a benchmark of excellence in our industry. In line with the European Green Deal, we are committed to taking decisive action, guided by precise targets, on our path to achieving net zero carbon emissions by 2050.





We continually enhance our project portfolio to minimize waste generation, optimize resource utilization, and maximize recyclability through secondary aluminum production, aligning with circular economy principles. As a result of these initiatives, all our production facilities have attained “Zero Waste” certification.

Driven by our commitment to value creation, reliability, and sustainable growth, we embrace a Responsible, People-Oriented, and Environmentally Conscious business model, advancing in partnership with our stakeholders across our entire value chain.

Our newly released 5th Sustainability Report serves as a testament to our responsible business practices, offering stakeholders and the public an unvarnished view of our past endeavors and forthcoming initiatives.

We extend our heartfelt gratitude to our employees, their valued families, and all our stakeholders for their unwavering commitment during this challenging year. We look forward to continued collaborative growth, anchored in responsible production and consumption practices.

**Derya HATİBOĞLU**  
**General Manager**





## 2023 Highlights

- We established our **digitalization roadmap** by conducting an **ASAŞ Digital Maturity Index** assessment with the active participation of all business units.
- We bolstered our **R&D** and Innovation budget by **24 percent** year-over-year to **57.82 million Turkish lira**.
- We expanded our intellectual property portfolio, securing **3 new patents, 1 utility model, and 9 trademarks/designs** registrations.
- We broke new ground in sustainable manufacturing through our Green Billet Project, becoming the first company in Türkiye to produce **aluminum billets** with a carbon footprint below **4 kg CO<sub>2</sub>e/kg Al**.
- We implemented an in-house mentoring project in 2023 as part of our **"Mentorship from Experience to Transformation"** initiative.

- We launched the **CNC Operator Development Program**, an initiative designed to enhance the competencies of our blue-collar employees.
- We delivered a total of **71,735 hours of training** to both white- and blue-collar employees through **ASAŞ Academy**.
- We championed workplace diversity, **with women constituting 38 percent of our STEM** workforce.
- We elevated our employee engagement score to **74 percent**.
- We conducted **69 HSE culture** assessments and **47 HSE field audits**.
- We became the first industrial company to secure **"Gold" Cycle Friendly Employer** accreditation.
- We recovered **96 percent** of our waste.

- We provided a total of **125 person-hours of training to our suppliers**.
- We achieved a company-wide domestic **Net Promoter Score (NPS) of 48.1**, complemented by a robust international **NPS of 38.9**.
- We diligently advanced our **decarbonization roadmap initiative**.
- We recorded Scope 1 and 2 emissions totaling **79,843** metric tons of CO<sub>2</sub>e, while our Scope 3 emissions reached **1,699,411** metric tons of CO<sub>2</sub>e, culminating in an overall carbon footprint of **1,779,253** metric tons of CO<sub>2</sub>e.
- We implemented energy efficiency projects that resulted in savings of **6,384.44 GJ of energy**.
- We were awarded the **I-REC Certificate**, which verifies that **100 percent** of the electricity we consumed in 2023 originated from renewable energy sources.



# ASAŞ at a Glance





## About ASAŞ

At ASAŞ, we take great pride in our journey since **1990**, steadily growing into one of the leading manufacturers in Türkiye and Europe. **With five cutting-edge production facilities situated in Akyazı, Sakarya, a dedicated workforce of nearly 3,000 employees, and a product portfolio utilized in over 90 countries worldwide, we have firmly established ourselves as one of Türkiye's most prominent industrial enterprises since our inception.**

Operating across a **1.3 million** square meter area, with 400,000 square meters of covered production space, our facilities in Akyazı and Karapürçek manufacture a diverse range of products, including **aluminum extrusion, composite panels, flat-rolled aluminum, PVC profiles, and roller shutter systems.** These products cater to a wide array of industries, such as construction, automotive, rail systems, commercial vehicles, energy, packaging, consumer goods, and boat and yacht building. By seamlessly integrating our innovative mindset with our extensive production expertise, we develop cutting-edge, industry-tailored solutions.

We serve a range of different industries, including construction, automotive, rail systems, commercial vehicles, energy, packaging, consumer products, and boat and yacht building. We established the industry's first ministry-approved R&D Center, embedding a culture of innovation into every aspect of our work.

We manufacture finished and semi-finished products for our customers. We also enhance our production expertise through design and product development initiatives, introducing our branded products to the marketplace. We offer a diverse range of products under our brand, including aluminum architectural systems (doors, windows, and curtain wall systems), aluminum composite panels, PVC door and window systems, aluminum design products (such as flagpoles, lighting poles, and furniture), as well as shutter systems, garage doors, and motor control systems.

Through ASAŞ GmbH, we aim to strengthen our commercial partnerships in Europe, deliver faster service to our customers, expand our operations in technological and value-added products, and pursue new opportunities.

### Headquarters

#### ASAŞ Alüminyum Sanayi ve Ticaret A.Ş.

Rüzgarlı Bahçe Mah., Kumlu  
Sok. No: 2 Asaş İş Merkezi,  
34810 Kavacık, Beykoz  
İstanbul / Türkiye

### Aluminum Extrusion and Composite Panel Manufacturing Plants

Küçücek İstiklal Mah.  
Kışla Alanı Cad. No: 2-2/1,  
54400 Akyazı - Sakarya /  
Türkiye

### Flat-rolled Products Manufacturing Plant

Yazılıgürgen Mah.  
Fabrikalar Cad. No: 50,  
54400 Karapürçek -  
Sakarya / Türkiye

### PVC Profile and Shutter Manufacturing Plant

Küçücek İstiklal Mah.  
Kışla Alanı Cad. No: 2-1/1,  
54400 Akyazı - Sakarya /  
Türkiye

### ASAŞ GmbH

Rasselsteiner Str. 101,  
56564 Neuwied / Almanya

For more detailed information about ASAŞ, please visit our website:

<https://www.asastr.com/home>



# Manufacturing Plants

## Aluminum Extrusion

Our integrated production facility is fully equipped to produce aluminum profiles from ingot to finished product. We deliver the highest-quality products at competitive costs to meet our customers' stringent project demands, all while investing in advanced, specialized technologies. We are industry leaders, delivering innovative products across diverse sectors, including automotive and rail systems.

In 2023, our integrated production facility produced approximately:

- Aluminum Billet: **88,000** metric tons/year
- Aluminum Extrusion: **65,000** metric tons/year
- Anodized Profile: **14,000** metric tons/year
- Machined Profile: **24,000** metric tons/year
- Powder-Coated Profile: **16,000** metric tons/year

## Composite Panel

Our Composite Panel facility utilizes advanced technology to manufacture sophisticated components with diverse physical and mechanical properties for both interior and exterior building facades, available in a wide variety of sizes and colors.

In 2023, our integrated production facility produced approximately:

- Aluminum Composite Panel: **4.8 million** m<sup>2</sup>/year

## ASAŞ GmbH

Our facility in Neuwied, Germany, with a closed area of 72,793 m<sup>2</sup>, built on an area of 880,028 m<sup>2</sup>, is a logistics and service center as well as a robotics center.

## Flat-rolled Products Manufacturing Plant

Our cutting-edge Aluminum Flat-Rolled Products Facility meets the rising demand for high-quality products in both the Turkish and global markets. Our integrated production facility processes various alloys in continuous production and performs precision rolling using advanced cold mills.

In 2023, our integrated production facility produced approximately:

- Sheet: **30,000** metric tons/year
- Foil: **33,000** metric tons/year
- Painted Sheet: **27,000** metric tons/year

## PVC Profile and Shutter Manufacturing Plant

The PVC Profile Production Facility manufactures high-quality doors, windows, and curtain wall systems. Our certified products cater to a wide range of industries, with a primary focus on the construction sector.

In 2023, our integrated production facility produced approximately:

- PVC Profile: **18,000** metric tons/year

## Shutters

Our Shutter Production Facility manufactures a wide range of products, including shutters, slats, roller shutter systems, and complementary accessories.

In 2023, our integrated production facility produced approximately:

- Shutters: **2,500** metric tons/year



## ASAŞ at a Glance



**5 production facilities**  
1.3 million m<sup>2</sup> total area



**100%**  
Locally owned and operated



**6 Continents**  
Product portfolio deployed in **90+** countries worldwide



**ASAŞ GmbH**  
Established on 880,000 m<sup>2</sup> campus



**10 Number**  
of R&D Projects Completed



**32%**  
Percentage of White Collar Women Employed



Ranked **61st** among Türkiye's Top 500 Industrial Enterprises (ISO 500)



**794,005,186 USD**  
Turnover



**79 Million TL**  
72th Company Spending the Most by Investment Amount



The Industry's first **R&D Center**



**2972**  
Employees



Kagider **First Gender Equality Model Certificate** in the Sector



**24,14**  
Hours of training organized by ASAŞ ACADEMY (person\*hour)



Recycled material usage rate: Aluminium Extrusion: **47%** Flat Rolled Products: **29%**



**ASI Performance**  
Standard certified across all facilities



# ASAŞ Milestones



## 1992

Launched our first aluminum extrusion line in Gebze and commenced production.



## 1997

Initiated PVC profile production in Akyazi, Sakarya.



## 1998

Relocated aluminum production lines from Gebze to Akyazi.

## 2014

Commenced production of flat-rolled aluminum products in Karapürçek, Sakarya.



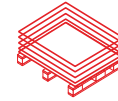
## 2008

Initiated aluminum shutter and roller shutter production.



## 2006

Started aluminum composite panel production in Akyazi.



## 2015

- Founded **ASAŞSANAT**.
- Established Türkiye's first Ministry-certified **R&D center** in the aluminum industry.



## 2016

Founded **ASAŞ ACADEMY**.



## 2017

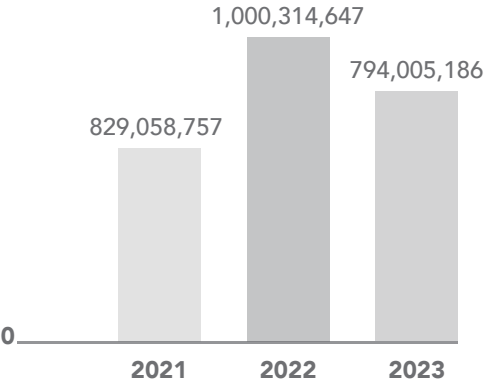
- Established **ASAŞ GmbH**.
- Founded **ASAŞ Basketball Club**.



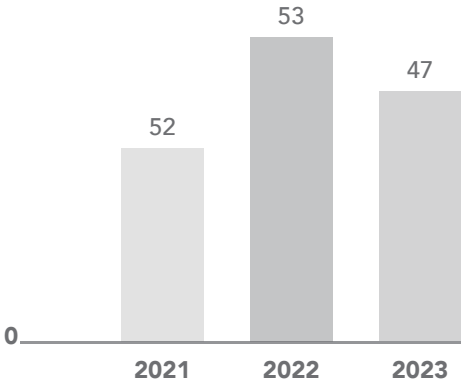
# Economic Performance

ASAŞ has remained steadfast in its operations since the day we were founded. We recognize our responsibility as an industry leader representing Türkiye on the global stage. Our manufacturing, job creation, **R&D efforts, and energy and environmental initiatives drive sustainable growth and generate economic value both locally and globally.**

Net Sales (USD)



Export Share



Geographical Breakdown of Sales



# Corporate Governance

At ASAŞ, we embrace a corporate governance approach that is equitable, transparent, accountable, and responsible. We uphold a corporate structure that reflects our values and ensures the long-term sustainability of our financial and operational success. We manage our corporate governance model in compliance with both national and international regulations and standards. Upholding the principle of transparency, we strive to provide all stakeholders with clear, accessible, and timely information about our activities. The Board of Directors is the highest decision-making authority in our company. The Board of Directors

consists of three members. The Board provides leadership in defining our company's key strategic goals, integrating economic, environmental, social, and ethical responsibilities into our strategies. It ensures the continuity of risk management and control systems, upholds the reliability of internal audits, ensures compliance with corporate governance principles, and establishes and monitors corporate objectives. Guided by the leadership and vision of our Board of Directors, we implement a sustainable management model across all our facilities and decision-making processes.



## Our Mission

We strive to integrate Aluminum and PVC into every aspect of life.



## Our Vision

We aim to add value for our stakeholders and lead target markets by creating innovative solutions through our expertise, knowledge, and technological capabilities.



## Corporate Values

At ASAŞ, the values we uphold serve as our most reliable guide:

- Respect Through Engagement
- Demonstrating ethical principles through exemplary behavior
- Striving for excellence through continuous improvement
- Customer focus by continuous value creation

ASAŞ has **identified five key objectives for sustainable growth** as part of our journey toward achieving our vision:

1. Embed sustainability into every strategic decision to achieve the net-zero carbon target
2. Establish ASAŞ as a leading employer brand in the industry
3. Achieve the fastest growth in the industry
4. Go lean to attain overall efficiency
5. Prioritize innovation in products and processes to outpace the competition

For more detailed information about ASAŞ's Management Policy, please refer to:

<https://www.asastr.com/corporate-/policies/management-policy/>

For more detailed information about our Corporate Values, please refer to:

<https://www.asastr.com/corporate-/mission-vision-values/>



## Committees and Boards



### Executive Board

The Executive Board, led by the General Manager, includes the Assistant General Managers of Flat-Rolled Products and Financial Affairs, the Directors of Internal Audit and Compliance, Energy and Sustainability, HR and HSE, Procurement, Information Systems, and the Marketing and Corporate Communication Group Manager. The Board meets monthly, with its primary responsibilities being the management of daily operations and the execution of strategic decisions. In addition, the Board sets strategies, oversees the budget, and monitors performance. It also makes and executes decisions to optimize the company's overall operations.



### Board of Ethics

The Board of Ethics investigates and addresses complaints and reports of ethical violations in alignment with ASAŞ's Code of Conducts. It is composed of members from Financial Affairs, Corporate Communications, Internal Audit, and Human Resources, and is chaired by the General Manager.



### Information Security Board

The Information Security Board develops information security policies, manages risks, conducts compliance audits, and plans actions as necessary. It identifies current or potential security breaches, initiates corrective and preventive measures, and ensures the effective implementation and continuous improvement of all activities under the Information Security Management Certificate (ISMS).



### Disciplinary Board

The Disciplinary Board oversees and enforces disciplinary actions when employees fail to adhere to established behavior standards. It ensures that all policies and regulations are upheld while maintaining confidentiality in every case brought before the Board.





## Committees and Boards



### Digital Transformation Committee

The Digital Transformation Committee evaluates projects on ASAŞ's digitalization roadmap. It is chaired by the General Manager and composed of the Chairman and members of the Executive Board.



### Occupational Health and Safety Committees

Separate Occupational Health and Safety (OHS) Committees are established at each manufacturing plant to assess potential risks, ensure safe working conditions, and monitor health and safety performance.



### Sustainability Committee

The Sustainability Committee was established to oversee, improve, and drive the integration and growth of our sustainability practices across the company. You can learn how the Sustainability Committee operates in detail in the "Sustainability Management" section.



### Energy Committee

The Energy Committee was established to strengthen energy management and sustainability efforts. It promotes awareness, provides training on energy efficiency, and oversees the company's energy-saving initiatives.



### Health Committee

The Health Committee provides material and moral support to employees and their families on health-related matters, aligning with ASAŞ's Human Resources Strategy and Corporate Values.

For more details on our Corporate Management, please refer to our Corporate policies.

<https://www.asastr.com/corporate-/codes-of-conduct/>

<https://www.asastr.com/corporate-/policies/sustainable-supply-chain-policy/>

<https://www.asastr.com/corporate-/policies/health-safety-and-environmental-policy/>

<https://www.asastr.com/corporate-/policies/scrapping-policy/>

<https://www.asastr.com/corporate-/policies/human-rights-policy/>

<https://www.asastr.com/corporate-/policies/management-policy/>

<https://www.asastr.com/corporate-/policies/quality-policy/>

<https://www.asastr.com/corporate-/policies/information-security-policy/>

<https://www.asastr.com/corporate-/policies/energy-policy/>

<https://www.asastr.com/corporate-/policies/human-resources-policy/>





# Risk Management and Compliance

## Risk Management

At ASAŞ, we proactively manage risks and seize opportunities to support our value-driven model for sustainable growth. Given the dynamics of the aluminum industry, we encounter a range of risks and opportunities across various sectors. With this awareness, we continuously monitor both external and internal uncertainties to identify and assess risks, convert appropriate risks into opportunities, and take proactive measures to control or eliminate potential threats.

We also conduct annual systematic **SWOT, PESTEL, and process-based risk analyses**. We then identify risks related to legal, compliance, financial, operational, and environmental/climate factors. Risk assessments encompass areas such as energy management, water management, evaluation of alternative products and processes, regulatory risks, competitor developments, carbon emissions management, talent acquisition and retention, sectoral contraction risks, supply chain disruptions, and challenges in raw material access. Additionally, SWOT analysis highlights potential opportunities within various sectors and business units. Potential opportunities being monitored include new product and alloy development, strategic partnerships, expansion into new markets and regions, rapid sectoral growth, agile transformation through organizational restructuring, and groundbreaking advancements in sustainability.

Annual strategy workshops identify key risks and opportunities that could significantly impact the entire organization. These are assessed for their potential impact, and items requiring inclusion in the strategic plan are adopted as strategic goals and assigned to the relevant units. The strategic management process and the Objectives and Key Results (OKR) system translate potential risks and opportunities into actionable plans.





## Risk Type / How We Manage It



### Legal Risks and Compliance

We continuously monitor legal and regulatory risks, including changes in regulations, legal actions, tax disputes, intellectual and industrial property infringements, unfair competition, and critical contractual issues with stakeholders. These risks are managed under the leadership and coordination of the relevant departments within our company. We ensure that our business processes comply with legal regulations and manage potential risks through annual audits conducted by the Internal Audit and Compliance Directorate, alongside all relevant departments.



### Financial Risks

We actively monitor and manage financial risks, including rising interest rates, high inflation, geopolitical challenges, supply chain disruptions, and labor market imbalances, which have become more pronounced due to the widespread impact of the global economic slowdown. To mitigate the adverse effects of commodity price fluctuations, manage risks effectively, and ensure the sustainability of our operations, we conduct in-house financial risk analyses for all processes on an annual basis. We also conduct long-term analyses (over five years) of profitability, investments, cost structures (including production and fixed expenses), and balance sheet positions (such as liquidity and debt), taking necessary actions based on the findings.



### Operational Risks

We identify and manage risks that could impact quality, efficiency, employee and customer satisfaction, information and system security, supply chain continuity, and occupational health and safety, ensuring all processes align with our quality standards. We regularly conduct risk assessments across all units involved in operational processes, directly or indirectly. These analyses are continuously updated based on market conditions, economic factors, and customer expectations. We prioritize risks, take immediate action on urgent issues, and develop strategic plans to address long-term risks.



### Environmental and Climate-Related Risks

The global climate crisis, increasingly intensifying worldwide, presents risks such as extreme rainfall, drought, and water scarcity, which we anticipate will impact raw material supply and production. To address these challenges, we actively monitor and take necessary measures. As an energy-intensive industry, we are focused on reducing our carbon and water footprints, while managing waste efficiently, thereby laying the foundation for a circular economy within the company. The Sustainability Committee regularly evaluates environmental and climate risks, updating our sustainability goals to mitigate them.

In 2024, we plan to establish a **Risk Management Committee** and align with the **ISO 31000 Corporate Risk Management Standard** to anticipate and manage both current and potential risks.

## Ethics and Compliance

At ASAŞ, we uphold the principles of integrity and transparency at every stage of our operations. Our core values include providing accurate, clear, and understandable information, acting with accountability, and rejecting unethical practices. All our activities align with internationally recognized ethical standards, and we prioritize honest and ethical conduct in all stakeholder interactions. We also ensure that these principles are embraced by all our stakeholders.

All stakeholders, particularly employees who witness or suspect violations of ASAŞ's Code of Conducts or legal regulations, including misconduct or abuse of position, are encouraged to report directly to the ASAŞ Ethics Hotline. We enforce a strict non-retaliation policy to protect employees and individuals who report ethical violations. The Board of Ethics, established to address ethical concerns or violations, is responsible for investigating and resolving complaints in accordance with ASAŞ's Code of Conducts, ensuring confidentiality throughout the review process. The Board of Ethics, chaired by the General Manager, comprises the Internal Audit and Compliance Director, the Human Resources Director, the Corporate Communications Group Manager, and a representative from Financial Affairs. The Internal Audit and Compliance Directorate regularly reports to the Board of Directors on ethical compliance activities and the outcomes of investigations.

When necessary, disciplinary measures are enforced based on findings from the Ethics Hotline investigations. Additionally, actions are taken to strengthen our internal control systems to prevent the recurrence of similar incidents. Every new employee receives orientation training on ethical behavior rules and is provided with a handbook titled "Code of Conducts and Implementation Guidelines." This comprehensive training covers both blue- and white-collar employees. In addition to communicating our Code of Conducts, we use various case studies to discuss the expected behaviors in real-life work situations. We also regularly display informational messages about the "Code of Conducts" on corporate computer screens.

In 2023, we received five reports of ethical violations and took appropriate action to resolve each case.

We maintain a zero-tolerance policy toward bribery and corruption, with measures in place to prevent such conduct. ASAŞ's approach to combating bribery and corruption is clearly outlined in the Code of Conducts.

In 2023, no lawsuits were filed against ASAŞ regarding bribery or corruption. Although one report was submitted related to these issues, a thorough investigation found it to be unsubstantiated.

For more details on our Core Business Ethics Values, Principles, and Responsibilities to Stakeholders, please refer to:  
<https://www.asastr.com/corporate/codes-of-conduct/>





## ASI Performance Standard Certificate

The ASI Performance Standard, a key certification for recognizing sustainability and environmental performance in the aluminum industry, promotes best practices in environmental, social, and governance (ESG) areas for aluminum producers, suppliers, and users.

ASI outlines 11 principles organized into three main categories, each aligned with global sustainability goals.

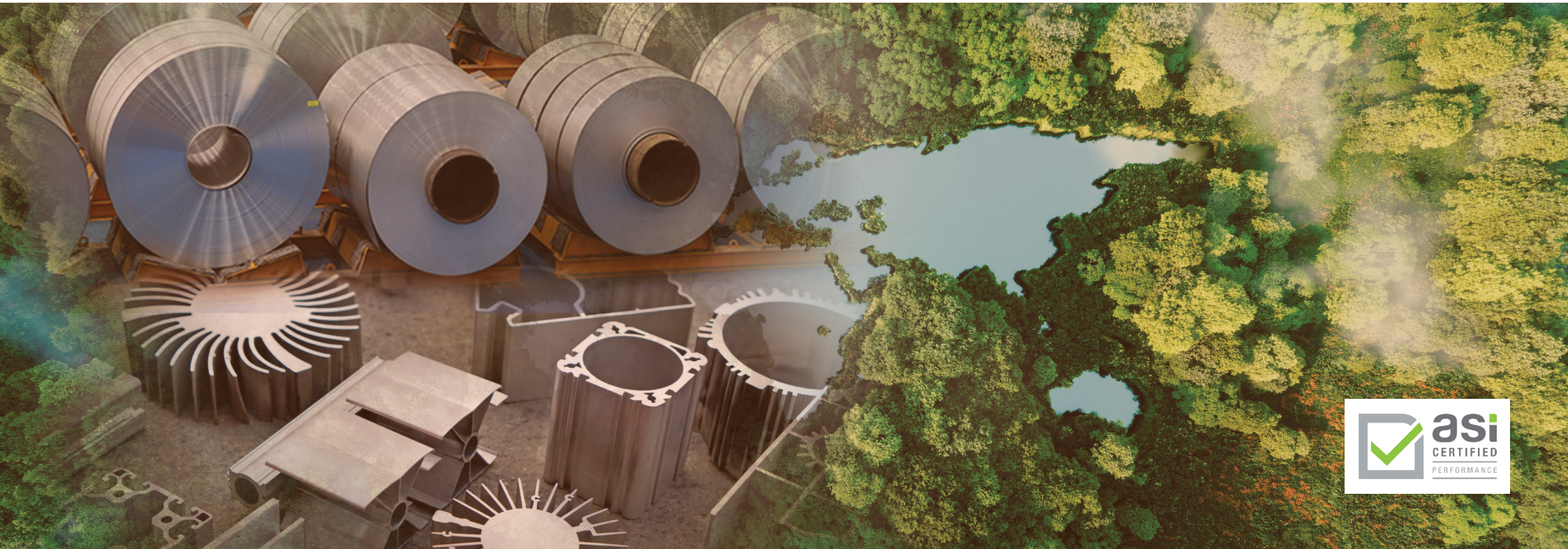
**Environmental:** Greenhouse Gas Emissions; Emissions, Effluents and Waste; Water Stewardship; and Biodiversity and Ecosystem Services

**Social:** Human Rights; Labor Rights; and Occupational Health and Safety

**Governance:** Business Integrity; Policies and Management; Transparency; and Material Stewardship.

We successfully passed the ASI certification surveillance audit, meeting all required criteria with no instances of

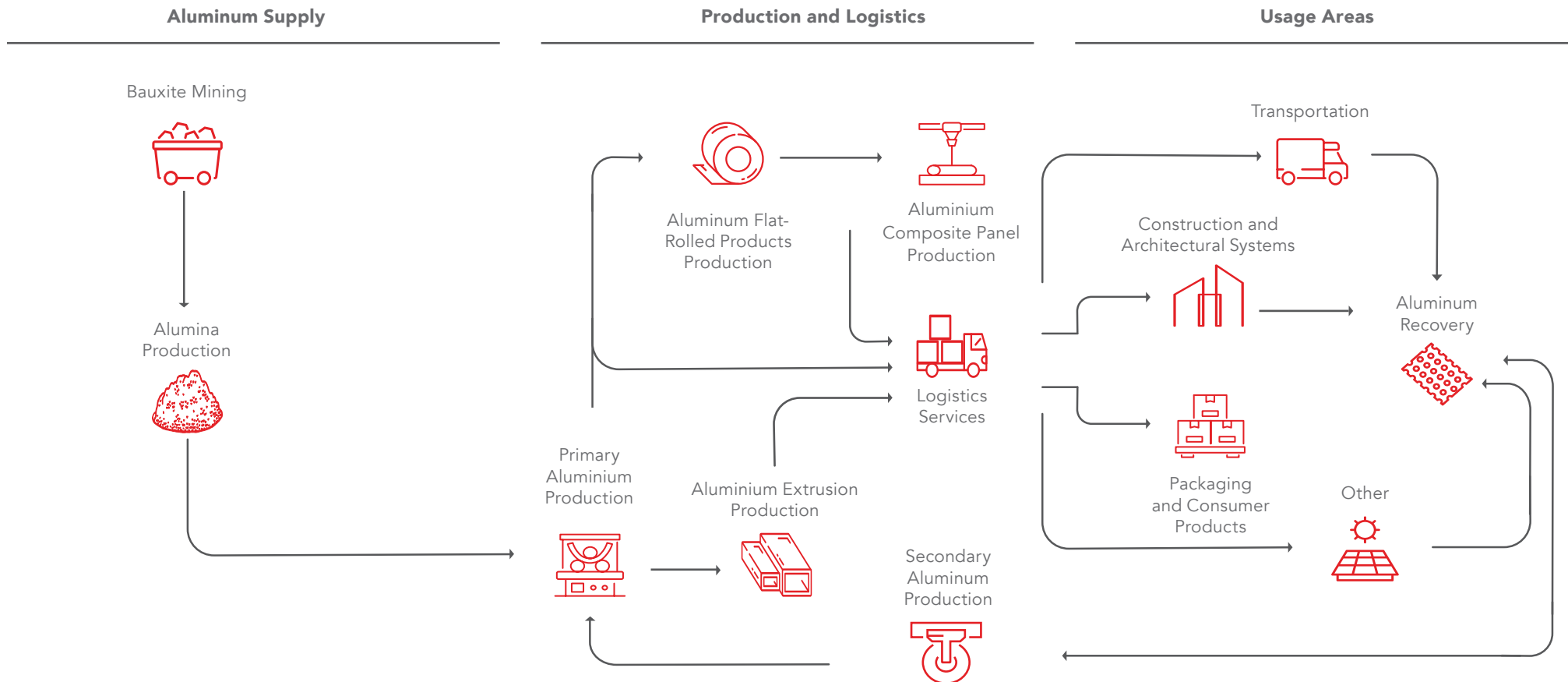
non-compliance, and earned the certification. This achievement reaffirms our sustainability commitments, enhances our performance in the aluminum industry, and strengthens our credibility with stakeholders. The certification further underscores our dedication to international green production and our contribution to sustainable aluminum manufacturing. For more details on our performance under the ASI Performance Standard, please refer to the ASI Index in the Appendices section of this report.



## ASAŞ Value Chain

At ASAŞ, we take responsibility for the “Production and Logistics” stages of our value chain, overseeing the entire process from laminated and belt production to fabrication and assembly, shutter/extrusion manufacturing, and final product shipment. Although we are not directly accountable for stages like raw material supply, recovery, or aluminum procurement, we collaborate closely with these areas to ensure high quality and efficiency in our operations. Our expertise in these fields enables us to drive growth and development that positively influences the entire value chain.

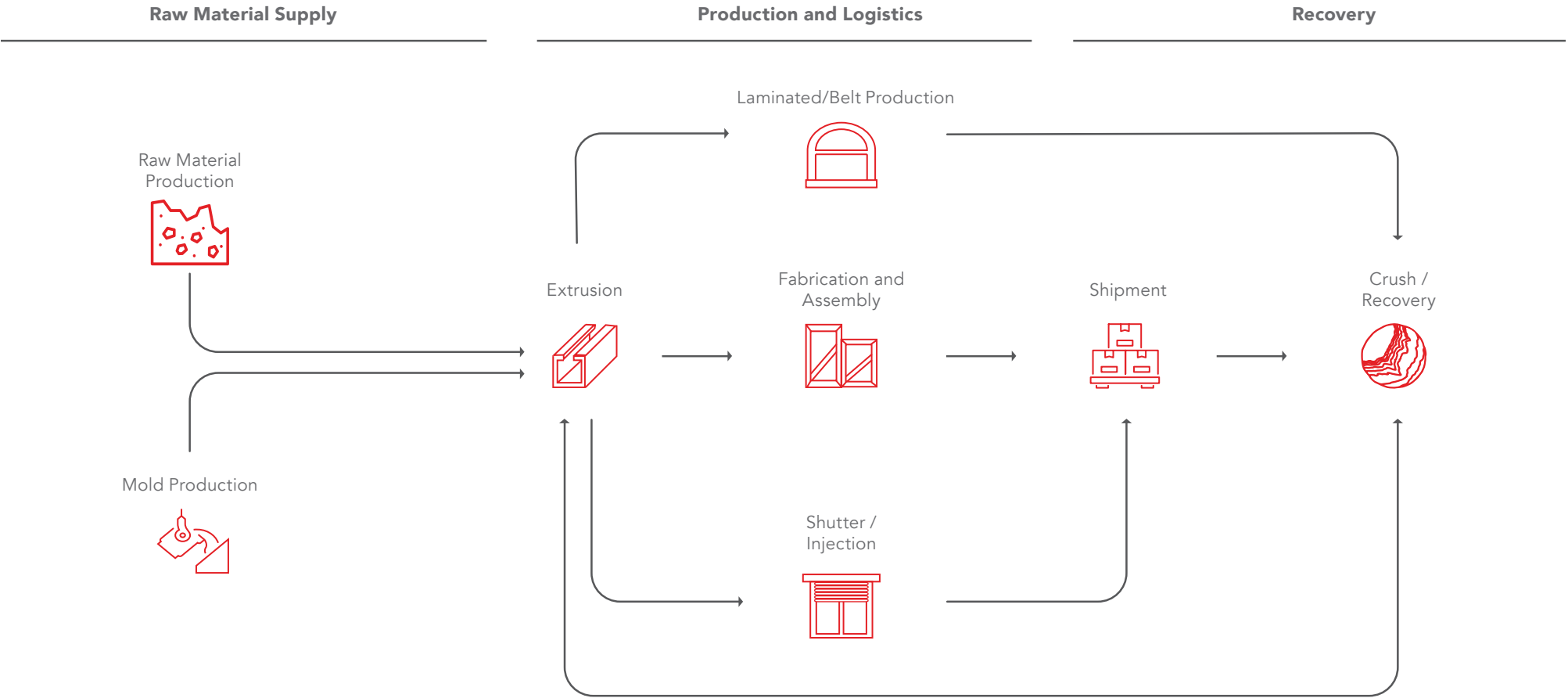
### Aluminum Extrusion, Flat-Rolled Products, Composite Panel Production





# ASAŞ Value Chain

## PVC Profile & Roller Shutter Production



## Industry Outlook and Trends

While aluminum remains a crucial component of the global economy, factors such as the energy crisis, inflation, and economic slowdowns in major economies have caused a temporary decline. However, aluminum consumption is expected to rebound in the near future. This anticipated growth is driven by the industry's potential to reduce greenhouse gas emissions and contribute to the EU's goal of net-zero emissions by 2050. **Currently, aluminum production is responsible for approximately 2 percent of the annual global human-generated greenhouse gas emissions.** <sup>1</sup> According to the International Aluminium Institute (IAI), converting raw bauxite into aluminum emits an average of 16.6 metric tons of CO<sub>2</sub>e per metric ton of primary aluminum. <sup>2</sup> Consequently, developing sustainable, lightweight, and recyclable products that align with customers' low-carbon objectives is becoming a top priority.

At ASAŞ, we closely monitor industry changes and take proactive measures to ensure the continuity of our operations. In our pursuit of sustainable growth and innovative solutions, we continually increase R&D investments and enhance our operational processes. To meet evolving customer expectations and align with global trends, we make significant strides in sustainability and digitalization, regularly updating our strategic plans to reflect these priorities.





## Addressing the Climate Crisis and Reducing Carbon Emissions

Climate change and global warming are pushing companies to prioritize robust climate strategies. Numerous regulations, particularly from the European Union, signal stricter climate targets in the near future. As aluminum is inherently recyclable, the industry plays a pivotal role in global sustainability efforts, resulting in increasing demand for low-carbon solutions from ASAŞ.

**In 2022, data from the International Aluminium Institute (IAI) highlighted a milestone: despite a rise in aluminum production, greenhouse gas emissions from the global aluminum industry remained stable.<sup>3</sup>**

This trend, alongside new regulations, intensifies the push for decarbonization as consumers embrace a broader sustainability agenda. Under the EU Green Deal, the European Union adopted an updated Emissions Trading System (EU ETS) and introduced the Carbon Border Adjustment Mechanism (CBAM) in 2023. While CBAM's reporting requirements are already in effect, its financial applications will begin in 2026, with significant implications for the aluminum industry.

Demand for low-carbon aluminum is projected to grow at a faster rate than overall aluminum demand. **A global report estimates that demand for low-carbon aluminum, which stood at 26 million metric tons in 2021, will reach 62 million metric tons by 2030.<sup>4</sup>** This surge highlights the need for aluminum companies to adopt strategies aligned with CBAM principles, advance a circular economy, and enhance decarbonization efforts. Reducing reliance on primary aluminum and increasing the efficiency of secondary aluminum production are key priorities.

Additionally, post-consumer waste recycling has become indispensable, along with implementing processes for the safe disposal or reuse of solid, liquid, and gaseous waste generated during production.

1-International Aluminium, Why the aluminium industry must be at COP28, (2023).

2-International Aluminium, Greenhouse Gas Emissions Intensity - Primary Aluminium, (2023).

3-International Aluminium, Aluminium industry reports decline in greenhouse gas emissions, (2024).

4-McKinsey & Company, Capturing the green-premium value from sustainable materials, (2024).



## Renewable Energy Production and Energy Management

One key action to reduce carbon emissions is to transition from coal-based energy to renewable sources, making renewable energy central to production processes and optimizing energy use. The ultimate goal is to make renewable energy the core of the production process while optimizing energy use. **China's significant investments in hydroelectric power, as the world's largest aluminum producer, and the growing use of renewable electricity in other regions underscore this shift.** <sup>5</sup>

To align with circular economy principles, it is essential to ensure that the energy used in aluminum and alloy production comes from renewable sources. Key steps include investing in renewable energy and improving energy and material efficiency at every stage of production.

## Key Opportunities in Aluminum-Utilizing Industries

Globally, the transportation industry is the largest consumer of aluminum, a trend expected to continue over the next decade. Demand for aluminum, particularly in the automotive sector, is projected to rise significantly with the transition to electric vehicles (EVs). **A global report forecasts that EV sales will surpass 30 million units by 2030.** <sup>6</sup> **Additionally, many countries have adopted plans to phase out the sale of non-electric vehicles by 2035.** <sup>7</sup> In line with these environmental policies, aluminum production for electric vehicles is expected to rise significantly.

Aluminum plays a crucial role in the construction industry, where it is used to design and produce complex structures and components. The packaging industry is another sector expected to drive aluminum demand in the coming years, with aluminum increasingly replacing plastic and glass in packaging solutions. **Currently, the packaging industry accounts for approximately 16 percent of global aluminum consumption.**<sup>8</sup> Therefore, initiatives in this sector, coupled with decarbonization efforts, are critical to reducing environmental impact.

5-International Aluminium, Aluminium industry reports decline in greenhouse gas emissions, (2024).

6-Deloitte, Electric vehicles, (2020).

7-European Parliament, EU ban on the sale of new petrol and diesel cars from 2035 explained, (2023).

8-Strategy&, Adapting to the shifting aluminum packaging market, (2024).





## R&D and Innovation

The world is rapidly transitioning toward new technologies, products, and business processes that emphasize R&D and innovation. These areas require increased investment to develop high-performance solutions that meet evolving customer demands at the highest standards. The production of specialized alloys, particularly for the automotive, defense, and aerospace industries, is becoming a priority as these sectors expand quickly.

While renewable energy investments are critical, fully phasing out fossil fuels may not be feasible in the short term due to fluctuations in solar and wind energy generation and the ongoing need for backup capacity. In response, the aluminum industry is introducing Carbon Capture, Utilization, and Storage (CCUS) technologies to address carbon emissions. **Further advancements are needed in alloy separation, classification, and purification methods.**<sup>9</sup> Several initiatives within the industry are exploring inert anode technologies, which have the potential to significantly reduce greenhouse gas emissions. Successfully implementing innovations like inert anodes could help aluminum companies lower their carbon footprint and gain a competitive edge. Progress in hydrogen use also stands out as a key development among other carbon-reducing production methods.<sup>10</sup>

## Digitalization

Digital transformation is another key area shaping the future of the aluminum industry. **This shift is not only revolutionizing the operational systems of production facilities but also enabling companies to respond more rapidly to customer needs.** Advances in machine software and data analytics facilitate real-time monitoring of production processes, enhancing efficiency and minimizing waste. Additionally, efforts to integrate artificial intelligence into aluminum production are expected to optimize production schedules. By increasing the digitalization of key equipment and processes, companies can improve efficiency and shorten lead times from order to delivery. As a result, the significance of digital manufacturing in the aluminum industry continues to grow.



<sup>9</sup>-International Energy Agency, Carbon Capture, Utilisation and Storage, (2024).

<sup>10</sup>-Constellium, World's First Successful Industrial-Scale Production of Aluminium Slab Using Hydrogen Combustion, (2024).



# Sustainability Approach at ASAŞ





# Sustainability Approach at ASAŞ

At ASAŞ, we shape our sustainability efforts around three main pillars that are integral to our sustainability outlook. With a comprehensive roadmap guiding us toward our sustainability goals, we aim to create lasting value for all our stakeholders.

SUSTAINABILITY APPROACH	HOW WE MANAGE IT
<div></div> <div><b>Responsible Business Approach</b></div>	<p>We take a comprehensive approach, not only monitoring our own practices but also ensuring that our stakeholders align with global standards. By engaging with stakeholders through a shared sense of responsibility, we work to foster practices that reflect global trends. Our goal is to establish a business model that is fair, equitable, and transparent.</p>
<div></div> <div><b>People-Oriented Business Approach</b></div>	<p>We prioritize creating a safe, healthy, and well-being-oriented work environment, recognizing that our employees are the driving force behind our sustainable growth. Additionally, we embrace our social responsibility by fostering local development through projects and initiatives that enhance community well-being and progress.</p>
<div></div> <div><b>Environmentally Responsible Business Approach</b></div>	<p>We strive to develop sustainable practices and innovative solutions, fully aware of our environmental responsibilities. Our commitment lies in reducing our environmental impact while upholding international standards.</p>



# Sustainability Management

At ASAŞ, we are committed to value-driven, reliable, and sustainable growth, with sustainability at the heart of our vision and strategic goals. **We embed sustainability into our core strategies by integrating environmental, social, and governance (ESG) criteria into every aspect of our operations.**

To achieve effective sustainability management and meet our goals, we continuously measure, report, and transparently share our performance. We adopt a holistic approach, aiming to minimize environmental impacts, fulfill social responsibilities, and ensure economic sustainability. To support ASAŞ's responsible, people-oriented, and environmentally conscious business philosophy, we integrate sustainability principles across all processes.

Our sustainability management focuses on key environmental areas such as emissions, energy management, circularity, waste management, water conservation, and biodiversity. In the social dimension, we prioritize employee health, safety, and well-being, and engage in projects to enhance our social contributions. We also champion diversity, equity, and inclusion in every aspect of our operations. Economically, we ensure financial stability by adhering to ethical business practices and pursuing long-term growth objectives.

**Through this approach, we embed sustainability into our business model, developing innovative solutions that create value for both our company and the wider world. We are dedicated to building a future that meets the needs of both current and future generations.**

The Sustainability Committee, composed of representatives from various departments, oversees sustainability initiatives at ASAŞ. The Committee drives our sustainability journey by shaping and managing the company's strategy while continuously monitoring and evaluating performance.

A key responsibility of the Committee is to set policies and targets across ESG areas. The Committee reviews company activities from a sustainability perspective, identifies areas for improvement, and tracks sustainability performance to ensure all operational processes comply with sustainability criteria.

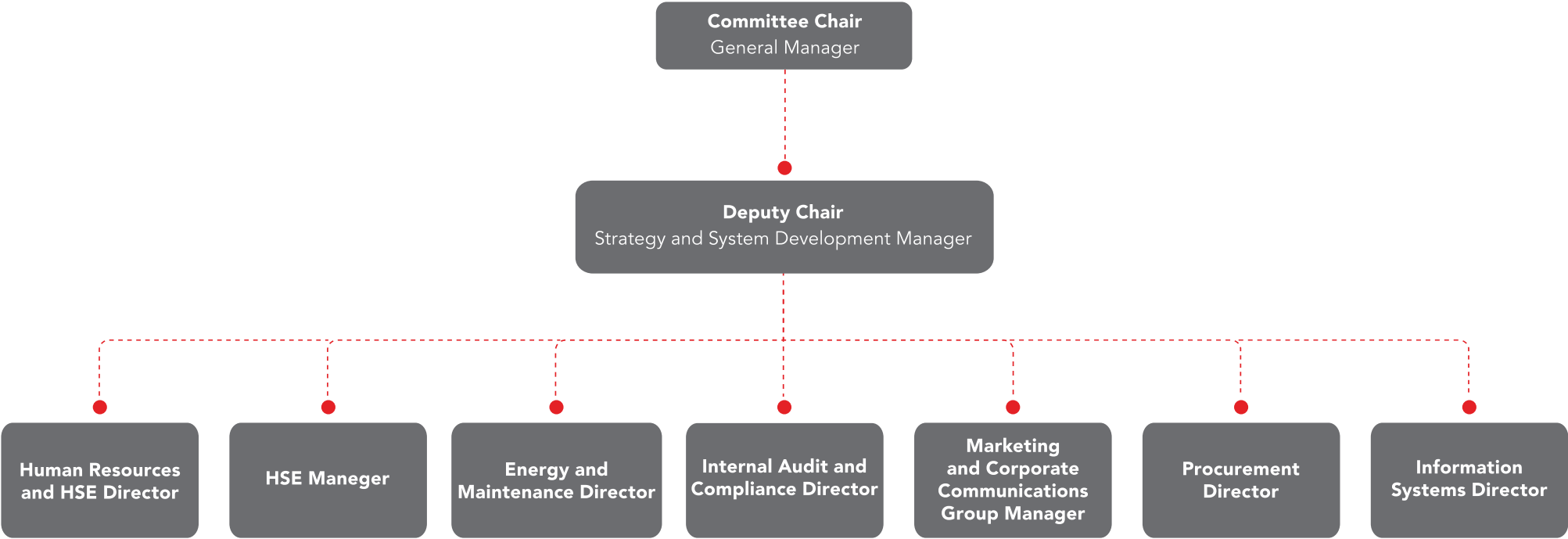
In addition to ensuring the effective implementation of sustainability goals defined by the Committee, it closely monitors global sustainability trends and developments. By evaluating new trends and best practices, the Committee supports innovative projects and encourages the adoption of best practices within the company. It also works to embed a culture of sustainability across all levels of the organization, raising awareness among employees and stakeholders alike.

To accelerate our sustainability efforts with a focus on green transformation, we established the Sustainability and Green Transformation Unit in 2023, which reports directly to the Energy and Sustainability Directorate.





# Sustainability Committee



# Stakeholder Engagement

We view strong and effective communication with stakeholders as a vital component of our sustainable business growth. All stakeholders we collaborate with play a critical role in our company's success and in achieving our sustainability goals. Therefore, we prioritize continuously strengthening these relationships by understanding stakeholders' needs and expectations and addressing them effectively.

We define stakeholders as individuals, organizations, or institutions impacted by our operations, those who can influence our sustainability objectives, or those whose decisions and actions affect company performance. Our primary stakeholders include employees, customers, suppliers, local communities, and public institutions.

Our Stakeholder Engagement Plan, developed in line with the International Finance Corporation (IFC) Performance Standards and global best practices, serves as the foundation for stakeholder relations, aiming to:

- Build and maintain constructive relationships, especially with communities affected by our operations,
- Ensure that environmental and social information is accessible to all stakeholders, encouraging engagement from impacted communities,
- Enhance the environmental and social performance of our operations through active stakeholder participation,
- Promote transparent, inclusive communication in alignment with sustainability principles, and
- Provide accessible communication channels for affected groups to voice concerns or complaints and manage these issues efficiently with appropriate responses.

Through our dynamic Stakeholder Engagement Plan, we regularly analyze stakeholder needs and expectations. It outlines the methodology for consultations, details past and future activities, and provides a framework for managing and addressing concerns or complaints. The plan also sets out how the stakeholder engagement process will be recorded, monitored, evaluated, and reported. Aligned with our communication strategy, we conduct engagement activities to gather feedback, suggestions, and requests from stakeholders, adjusting our actions as needed.

Beyond scheduled activities, we carry out targeted initiatives throughout the year, based on the specific needs of different stakeholder groups. To ensure the participation of our employees, we maintain regular communication and collaboration with worker/employee representatives.

For more detailed information about ASAŞ Stakeholder Engagement Plan, please refer to:

<https://www.asastr.com/corporate-/sustainability/stakeholder-engagement-plan/>





# Stakeholder Engagement

By engaging regularly with our stakeholders, we ensure an accurate understanding of their needs and expectations, managing this process effectively. For more details on our internal and external stakeholder activities, please refer to the “People-Oriented Business Approach” section of this report.

Stakeholder Group	Communication Channel	Frequency of Communication
Employees	Internal Communication Portal Email campaigns Anonymous complaint boxes Social media channels (LinkedIn, Instagram, X, YouTube) Traditional channels (face-to-face, industry publications, newspapers, magazines, etc.)	Continuous As needed (for announcements, special occasion greetings, etc.) Once every 15 days At least once per week At least once per month
Customers	Email campaigns Social media channels (LinkedIn, Instagram, X, YouTube) Traditional channels (face-to-face, industry publications, newspapers, magazines, etc.) Customer satisfaction surveys Field events Regional fairs	As needed At least once per week At least once per month Once per year At least once per year At least once per year
Suppliers	Social media channels (LinkedIn, Instagram, X, YouTube) Supplier assessments and training Regional fairs	At least once per month Periodically At least once per year
Local Community	Social media channels (LinkedIn, Instagram, X, YouTube) Traditional channels (face-to-face, industry publications, newspapers, magazines, etc.) Stakeholder Engagement Plan meetings Social and physical events	At least once per week At least once per week At least once per year At least once per year

# Stakeholder Engagement

Stakeholder Group	Communication Channel	Frequency of Communication
Public Institutions	Traditional channels (face-to-face, industry publications, newspapers, magazines, etc.) Meetings and interviews	At least once per month At least once per year
Organizations (industry associations, foundations, and NGOs)	Social media channels (LinkedIn, Instagram, X, YouTube) Traditional channels (face-to-face, industry publications, newspapers, magazines, etc.) Joint projects Meetings and interviews Fairs	At least once per week At least once per month As needed At least once per year At least once per year
Dealers	Dealer meetings, dealer representative meetings, and one-on-one interviews Dealer satisfaction surveys Dealer training and field demos	Periodically Once per year At least once per year
Educational Institutions	Dealer training and field demos Joint projects Articles and publications, academic research Educational and technical support	At least once per year At least once per year At least once per year



## Materiality Analysis

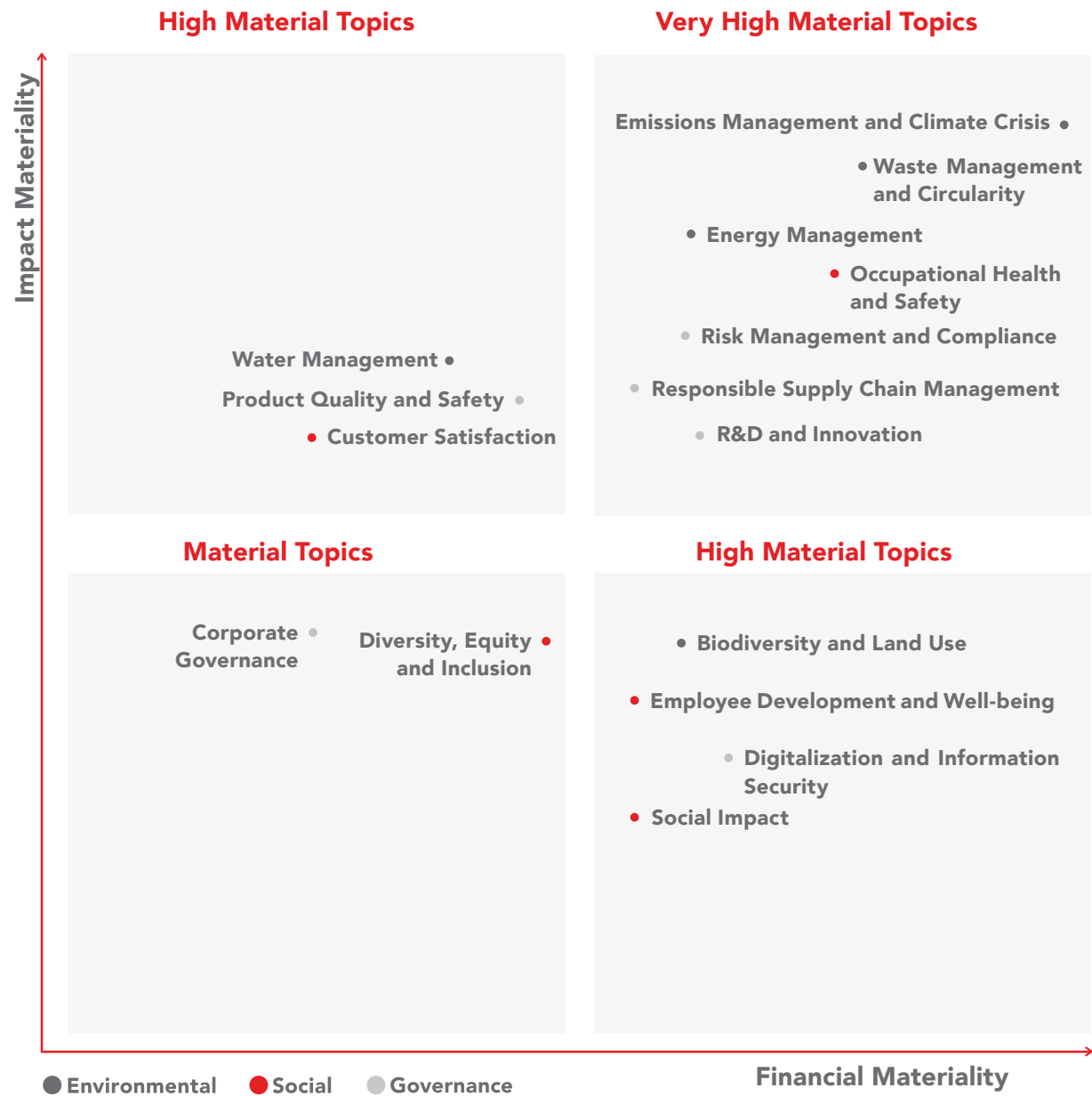
This year, ASAŞ renewed its materiality analysis using a double materiality perspective. This approach evaluates not only ASAŞ's impact on the environment and society but also how environmental and social factors affect ASAŞ. To better understand the views and expectations of our diverse stakeholder groups, we conducted surveys and one-on-one interviews.

Through these efforts, we engaged key stakeholders, including employees, customers, suppliers, organizations, public institutions, and the local community, gathering a total of 179 stakeholder opinions for the analysis.

For the financial materiality aspect of the double materiality analysis, we considered management perspectives alongside the results from the risk and opportunity analysis and external trend analysis. On the impact materiality side, we focused on impact analysis, stakeholder feedback, external trend analysis, and competitor analysis.







By synthesizing this data, we identified the issues that will be categorized as very high material, high material, and material for the coming period. This process revealed 16 key material issues for ASAŞ. **The top material issues included Emissions Management and the Climate Crisis, Waste Management and Circularity, Occupational Health and Safety, Energy Management, Risk Management and Compliance, Responsible Supply Chain Management, and R&D and Innovation.**







## ASAŞ's Contribution to the Sustainable Development Goals











Material Topic	Importance for ASAŞ	Link to Sustainable Development Goal	Relevant Report Section
<b>Emissions Management and Climate Crisis</b>	Addresses the management of greenhouse gas emissions and other air pollutants generated during operational processes, along with opportunities to reduce these emissions. It also focuses on mitigating air pollution and improving air quality.		Environmentally Responsible Business Approach
<b>Waste Management and Circularity</b>	Covers comprehensive waste management practices, covering hazardous, toxic, and chemical waste. Efforts to minimize waste at the source, explore recycling and reuse options, and ensure safe disposal are emphasized. Circularity involves ensuring that products are reused rather than discarded after their life cycle, with aluminum's recyclability playing a key role in efficient resource use and supporting the circular economy.		Environmentally Responsible Business Approach
<b>Occupational Health and Safety</b>	Includes adherence to occupational health and safety standards, measures aimed at protecting employee health and safety in the workplace, and efforts to prevent workplace accidents and reduce occupational diseases.		People-Oriented Business Approach
<b>Energy Management</b>	Energy management encompasses optimizing energy use for both environmental and economic efficiency, reducing climate change impacts, and incorporating alternative energy sources like solar power to manage resources sustainably.	 	Environmentally Responsible Business Approach
<b>Risk Management and Compliance</b>	Risk management focuses on identifying, analyzing, prioritizing, and mitigating potential risks while ensuring compliance with legal, environmental, and social standards.		ASAŞ at a Glance

## ASAŞ's Contribution to the Sustainable Development Goals

Material Topic	Importance for ASAŞ	Link to Sustainable Development Goal	Relevant Report Section
<b>Responsible Supply Chain Management</b>	Responsible supply chain management entails monitoring the use of natural resources, minimizing environmental impacts in raw material and product distribution, and enhancing supply chain traceability. Social aspects include upholding human rights, ethical production, and fair working conditions. On the social side, it emphasizes respect for human rights, ethical production, and fair working conditions.		Responsible Business Approach
<b>R&amp;D and Innovation</b>	Refers to innovative solutions developed for operational business processes, products, and production infrastructure. These processes include efforts to increase efficiency, improve production techniques, and reduce environmental impacts. R&D collaborations and projects also lead to the development of new products/processes.	 	Responsible Business Approach
<b>Water Management</b>	Covers the management of water usage and consumption throughout operations and the value chain, as well as the watershed-based impacts of water usage, wastewater management, and circular water use.		Environmentally Responsible Business Approach
<b>Product Quality and Safety</b>	Ensures full compliance with quality standards and safety requirements (including chemical safety) during the design and production phases of products.		Responsible Business Approach
<b>Customer Satisfaction</b>	Refers to the process of satisfying customers by meeting their demands, needs, and expectations.		Responsible Business Approach
<b>Biodiversity and Land Use</b>	Encompasses the preservation and improvement of biodiversity, the sustainable use of natural resources and work site, and minimizing environmental impacts within the company's operational areas.		Environmentally Responsible Business Approach



## ASAŞ's Contribution to the Sustainable Development Goals

Material Topic	Importance for ASAŞ	Link to Sustainable Development Goal	Relevant Report Section
<b>Employee Development and Well-being</b>	Involves developing practices to improve employee satisfaction, performance, and well-being, as well as enhancing their workplace experiences.	 	People-Oriented Business Approach
<b>Digitalization and Information Security</b>	Involves the development of digital technologies, investments in automation to increase efficiency, and implementing cybersecurity measures in business processes.	 	Responsible Business Approach
<b>Social Impact</b>	Focuses on developing projects that address community needs and create positive social impact, establishing mutually beneficial relationships with local communities, and supporting socio-economic development.	  	People-Oriented Business Approach
<b>Diversity, Equity, and Inclusion</b>	Refers to preventing discrimination based on gender, age, ethnicity, religion, and/or sexual orientation, and ensuring equal opportunities for all. It advocates for fair and equal opportunities for everyone in the workplace and society.	 	People-Oriented Business Approach
<b>Corporate Governance</b>	Ensures an effective leadership structure with a fair, transparent, and accountable corporate governance mechanism.		ASAŞ at a Glance



# Responsible Business Approach





# Responsible Business Approach

## Customer Experience and Satisfaction

At ASAŞ, we remain committed to delivering an exceptional customer experience through our customer-centric approach. We work diligently to understand our customers’ needs, provide tailored solutions, and consistently exceed expectations. Recognizing that high-quality service is essential to creating an outstanding customer experience, we have implemented a system that enables us to offer on-site, real-time solutions to any issues that may arise during production. To this end, we developed the ASAŞ System to create an innovative ecosystem focused on people and customers, with continuous improvement as a core goal.

The ASAŞ System incorporates a variety of innovative management tools, specifically designed to meet the needs of ASAŞ and its customers, enhancing overall business performance. Our integrated audit structure ensures the sustainability of the system, allowing us to adapt to evolving needs, track performance outcomes, and promote a culture of clear development objectives.

Customers	2021	2022	2023
Number of domestic customers	681	657	634
Number of international customers	534	555	515
Number of customers in the free trade zone	8	10	7

We manage our customer processes under the following categories:

### Customer Relationship Management (CRM)

- We use CRM software to gather and analyze customer data, which strengthens corporate memory and supports better planning. In 2023, we upgraded to a more comprehensive and effective CRM system to enhance customer relationship management. Looking ahead, we plan to implement the CRM Marketing module or explore alternative tools to measure customer experience more effectively through brief, shipment-specific surveys. Additionally, we collaborate with IPSOS to conduct an annual general survey at the end of each year.

### Customer Services and Support

- Customer complaints are handled via the QDMS complaint management system, ensuring prompt responses. Our quality and technical support teams provide assistance with any product or service issues that customers may encounter.

### • Customer Satisfaction Measurements

We conduct an annual survey to measure customer satisfaction and track the Net Promoter Score (NPS). Consistent management of this process began in 2023.

### • Continuous Improvement and Training

Each year, we hold regular meetings with our customers at different locations both domestically and internationally. These meetings introduce new dealers to our products and provide updates on existing offerings.

### • End-to-End Customer Experience Management

We review the customer experience holistically, identifying key pain points and areas of satisfaction. Based on these insights, we develop improvement plans, action steps, and KPI targets.

### • Digital Transformation

To streamline customer interactions, we have introduced several digital transformation initiatives, including an Online Order Portal, online order tracking systems, and regular customer reporting.

Customer Experience Metrics	2023
Participants in the customer experience survey	116
Customer satisfaction - Domestic NPS	48.1
Customer satisfaction - International NPS	38.9

\*Note: Regular NPS tracking began in 2023, so no data is available for 2021 or 2022.

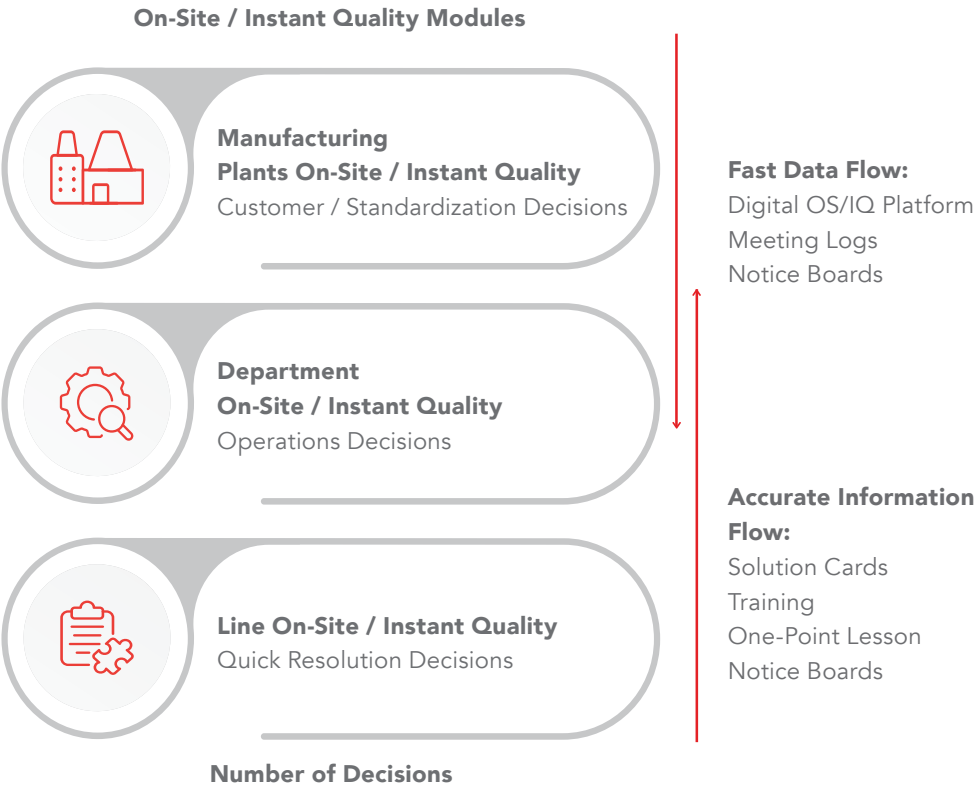




# On-Site / Instant Quality

Customer focus, one of our core corporate values, is at the heart of every process. To uphold this, we have implemented the On-Site / Instant Quality (OS/IQ) approach, designed to standardize our internal and external customer focus and enhance our responsiveness. The OS/IQ approach accelerates information and data flows, supports value-driven management, and provides communication, analysis, and monitoring tools to streamline decision-making.

Through regular OS/IQ meetings at all levels of the organization, we evaluate customer-focused topics with input from all relevant stakeholders, from the production line to senior management, ensuring lasting solutions that drive customer satisfaction.



# Responsible Supply Chain Management

At ASAŞ, we take a sustainability-driven approach to our supplier relationships and supply chain management. We are committed to ensuring the long-term sustainability of our supply chain while actively contributing to the continuous development of our suppliers.

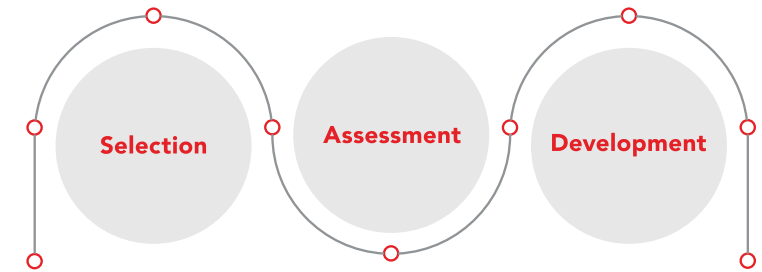
Accordingly, we manage this critical part of our value chain through three key processes: Selection, Assessment, and Development.

## Supply Chain Management Processes

Before partnering with any suppliers, we conduct a comprehensive review using the ASAŞ Supplier Selection and Assessment Form. Key sustainability criteria, such as ethical business practices, respect for human rights, improved working conditions, and environmental management, are central to our supplier selection process.

In 2023, we carried out eight supplier audits, focusing on both operational and technical business processes. We also promote transparency and openness in our supplier relationships, requiring all suppliers to ensure product traceability. This enables us to address critical issues such as environmental responsibility, the sustainable use of natural resources, and the prevention of illegal activities. We continuously improve and enhance our supply chain management. We collaborate with suppliers to align on shared goals in quality, efficiency, cost-effectiveness, and sustainability. Through transparent communication, we encourage knowledge sharing and consistently monitor supplier performance. Additionally, we evaluate their sustainability practices, identify areas for improvement, and provide guidance to help enhance their operations.

In 2023, we delivered a total of 125 person-hours of training to eight suppliers, covering various topics such as quality and kaizen. We plan to expand these efforts in the coming years.



Number of Suppliers	2021	2022	2023
Total Number of Suppliers	2,408	2,552	2,477
Total Number of Domestic Suppliers	2,153	2,248	2,212
Total Number of New Suppliers	915	967	876

Supplier Audits	2021	2022	2023
Number of Audited Suppliers	8	14	8

Supplier Training	2021	2022	2023
Number of Suppliers Trained	-	6	8
Training Hours Provided (Person-Hours)	-	105	125

For more detailed information about ASAŞ's Sustainable Supply Chain Policy, please refer to:

<https://www.asastr.com/corporate-/policies/sustainable-supply-chain-policy/>



# Digitalization and Information Security

At ASAŞ, we view digital transformation as a strategic priority to achieve our sustainability, efficiency, and customer satisfaction goals. **Our approach to digitalization is holistic, reshaping business processes with modern technologies to ensure operational excellence.**

We define our digital strategy by conducting a comprehensive digital maturity assessment involving all business units. This assessment outlines our current level of digital maturity and sets short-term goals to be achieved. By closely monitoring technology trends and adopting advanced digital solutions such as big data, data analytics, artificial intelligence, and machine learning we optimize business processes and enhance efficiency.

By effectively integrating OT/IT data, we ensure seamless end-to-end data flow. Advanced analytics enable us to strategically analyze this data, helping us enhance traceability and control, contributing to our operational excellence.

Our digital transformation strategy is built on the goal of establishing sustainable systems and ensuring agile management. By streamlining and integrating processes, we aim to boost operational efficiency, achieve sustainable profitability, gain a competitive edge, and minimize resource usage through our digitalization projects.

## 2023 Developments in Our Digitalization Journey:

### • Digital Maturity Index:

In 2023, we measured ASAŞ's Digital Maturity Index and established a roadmap with full participation from all business units. Based on this, we identified our current digital maturity level and set targets to be achieved within a year. We then developed a digitalization roadmap with prioritized projects aligned with these goals.

### • Change Advisory Board (CAB) Platforms:

We enabled real-time monitoring of current status by digitizing CAB platforms, where we manage shared objectives with business stakeholders in alignment with company strategies and departmental priorities by bringing transparency to the request collection, evaluation, operation, and reporting/measurement processes.

### • ASAŞ Vision Platform:

We launched the ASAŞ Vision platform, which consolidates, models, and visualizes data from various sources in real-time. The platform enables real-time visualization and distribution of data collected from machine lines. It also provides quick analysis of past data and allows users to make forward-looking insights. In areas like energy savings, process efficiency, and cost reduction, the platform adds significant value to the company. We maintained our efforts to roll out the platform company-wide in 2023.



**• PVC Profile Facility Master Data Modeling:**

We are currently developing a digital platform to reduce off-system Excel usage at the PVC - AS30 production facility and to ensure faster, complete setup of material codes through the system. The project will reduce the time required to prepare material master data for order entry from an average of seven minutes to just 0.5 minutes.

**• MII (Manufacturing Integration and Intelligence) Tool Failure Notification and Reporting Screen Development:**

We digitized manual tool notification processes within our MII system, improving the speed and accuracy of communication between production and quality teams, leading to a reduction in customer complaints and scrap rates.

**• Flat-Rolled Production Digitalization – Phase 1:**

This project focuses on real-time monitoring and tracking of furnace temperatures at the casting facility. The system will enhance process accuracy, measure furnace efficiency, and detect potential failures.

**• Extrusion Press Digitalization:**

By digitizing extrusion presses, we will track heat treatment furnace temperatures in real-time, preventing potential quality issues. Once completed, the system will collect the necessary data for analyzing quality problems and enable real-time monitoring of eccentric press downtimes and stoppages.

**• End-User Service Management:**

Our IT unit implemented the ME Endpoint Application to manage processes from a single platform, offering remote assistance, patch management, application deployment, asset management, and vulnerability management.

**• Self-Service Portal Applications:**

We launched Self-Service Portal tools to help end users resolve issues quickly without relying on IT support. With these tools, users can manage their passwords independently, reducing the reliance on IT technicians.

**• Digitalization and Sales Force Projects:**

In 2023, we developed concept designs for TVS (Quotation System) digitalization and Salesforce projects, aiming to use them as references and expand them in future initiatives.

**In 2023, we measured ASAŞ's Digital Maturity Index and established a roadmap with full participation from all business units.**



# Our Information Security Approach

At ASAŞ, we aim for the effective utilization of both our tangible and intangible assets, leveraging digital transformation to turn our intellectual capital into a sustainable competitive advantage. Our key priorities in this context include:

- Managing information system and security risks effectively,
- Raising awareness about information systems and security,
- Enhancing the company's trust among stakeholders, and
- Ensuring full compliance with legal requirements and other obligations related to information systems and security

We continuously enhance our information systems and security processes, seamlessly integrating updates into our existing operations, in alignment with the objectives outlined in our Information Security Policy. By adhering to these policies, we implement projects that ensure robust cybersecurity measures, safeguarding our digital infrastructure and data.

In 2023, our Network and Cybersecurity unit completed significant infrastructure improvements, elevating our cybersecurity to the highest standards and ensuring compliance with key regulations such as GDPR, LPPD, and ISO 27001. To safeguard our systems against modern cyber threats, we integrated the latest products and solutions recommended by global audit firms into our infrastructure.

## • Information Systems Infrastructure Optimization

We carry out analysis, improvement, and development projects for the continuous improvement and optimization of the technological infrastructures necessary for sustainable systems. As data pools grow, we stay at the forefront of technological advancements, upgrading our existing systems to ensure optimal functionality.

## • Cybersecurity Project

The Trellix All Security – Cybersecurity Project was launched to enhance ASAŞ's information security by focusing on protecting critical data and preventing security breaches. We designed the project to offer comprehensive security solutions to safeguard user data and prevent data leaks.

As part of the Trellix All Security Project, we implemented advanced security solutions including data loss prevention systems, threat intelligence, disk encryption, device control, and network security. Additionally, we ensure automated data classification and protection through our data classification and data loss prevention policies. This project has significantly minimized user-based data leaks and enhanced ASAŞ's overall information security by fostering the widespread adoption of security policies.

## • ASAŞ GmbH Cybersecurity Project

This project was initiated to secure operations at our manufacturing plant in Germany. Under this project, we activated the Germany Firewall system, applied client endpoint and web security solutions, and implemented 802.1x WiFi security authentication. Additionally, we created GDPR-compliant security policies and introduced the WEB Security, Sandbox, and IPS/IDS modules to further enhance data and system security.

For more detailed information about ASAŞ's Information Security Policy, please refer to:

<https://www.asastr.com/corporate-/policies/information-security-policy/>



## R&D and Innovation

The aluminum industry is rapidly evolving in response to advancing technologies and growing environmental demands. At ASAŞ, we leverage our R&D and innovation capabilities to address both environmental and economic challenges while staying aligned with industry changes.

**Optimizing energy usage, raw materials, and processes used in aluminum production is essential to reducing environmental impacts and lowering costs. Our innovative approach integrates new technologies, delivering solutions that set us apart in the industry.** By managing R&D and innovation with a strategic mindset, we use our technological investments to develop projects that serve various industries. We offer cutting-edge solutions to our customers, combining advanced technology, a continuously improved infrastructure, and a commitment to product and service quality. By analyzing industry trends, we focus on materials science, production technologies, recycling methods, and energy efficiency, positioning ASAŞ as a preferred supplier for strategic industries.

Our facility, home to Türkiye's first official R&D center in the industry, operates with 67 highly skilled technicians and engineers. The 3,119-square-meter center is equipped with laboratories and testing facilities dedicated to product and process development, alloy advancement, and offering tailored solutions to customers. In 2023, ASAŞ's 67-strong R&D team successfully developed numerous new projects for aluminum extrusion, composite panels, PVC profiles, roller shutter systems, and flat-rolled products using their advanced testing and simulation capabilities.

We also maintain ongoing collaborations with prestigious national and international universities. In 2023, we participated in 15 major fairs and conferences to advance our R&D and innovation efforts.



## Events We Have Participated In - R&D & Innovation Collaborations

Events Participated in 2023	Key R&D and Innovation Collaborations in 2023
1. TMS 2023 Annual Meeting (The Minerals, Metals & Materials Society)	1. SALIENT Project (EU Project) Consortium Meeting at Month 6
2. ALUS'11 11th International Aluminum Symposium	2. FORGE Project (EU Project) 2nd Review Meeting
3. SOLAREX International Solar Energy and Technologies Fair	3. MARBEL Project (EU Project) 5th Consortium Meeting
4. Added Value with Innovative Production: TÜBİTAK YAY-YÜKA Platform Workshop	4. SALEMA Project (EU Project) General Assembly Meeting
5. TALSAD - EU Green Deal and the Aluminum Industry	5. RETROFEED Project (EU Project) 7th General Assembly Meeting
6. Ministry of Industry and Technology's "Industry on Campus" Program	6. ENERMAN Project (EU Project) 2nd General Assembly Meeting
7. Horizon Europe Info Days - Cluster 4: "Digital, Industry, and Space"	7. SALIENT Project (EU Project) Consortium Meeting at Month 12
8. Clean Aviation Partnership and Hydrogen Energy Info Day	8. 1st Period Evaluation Meeting with TÜBİTAK Project Observers under the 1004 BATEG Project Toplantısı
9. Connect4Tech "Hydrogen Technologies"	9. Sakarya University Technopark Artificial Intelligence and Image Processing Technologies Meeting
10. NOW! 2023	10. SIRO Energy under the 1004 BATEG Project
11. European Innovation Council (EIC) Info Day	11. ENERMAN Project (EU Project) General Assembly Meeting
12. NCP-EEN EU Brokerage Event	
13. CADEM - The Transformative Impact of PLM on Railway Systems Digitalization	
14. Towards The Green Future: The European Green Deal Brokerage Event	
15. Green Transformation Project Launch Event	

In 2023, ASAŞ increased its R&D budget by 24 percent year-on-year, reaching 57.82 million Turkish lira. We implemented 10 R&D and innovation projects and registered nine designs and brands. On a related note, in 2022, the Ministry of Industry and Technology conducted a thorough audit of ASAŞ’s R&D Center and relevant projects. We had successfully passed that audit. The audit committee advised, among other items, prioritizing high-quality projects as R&D projects and handling relatively lower-quality projects outside the R&D center. Accordingly, although the total number of projects declined compared to the previous year, we achieved a significant increase in the number of high-quality projects. Compared to 2022, the number of registered patents increased to three, the number of registered utility models to one, and the number of registered brands/designs to nine. Furthermore, in 2023, the R&D-focused project count per person was 1.45.

R&D and Innovation Indicators	2021	2022	2023
R&D and innovation expenditure (TRY)	22,406,830.7	46,362,262.1	57,820,381.5
R&D expenditure aimed at improving environmental performance (TRY)	4,759,776.10	18,449,958.77	21,107,148.86
Number of R&D and Innovation employees	88	85	67
Completed projects	19	18	10
R&D-focused projects per person	1.56	0.93	1.45
In 2023, ASAŞ increased its R&D budget by 24 percent, reaching 57.82 million Turkish lira.			

ASAŞ operates an open-access system for all employees via the Recognition and Reward System (RRS) and Project Management System. All employees in departments such as R&D, Sales, Production, Human Resources, and IT can register and manage their projects through this system. Within this framework, in 2023, 1,574 ideas were submitted, 1,465 ideas were approved, 69 projects were completed, and 81 projects are still ongoing.

The idea development process is fully transparent, encouraging employees to submit suggestions for process improvements in areas that have not yet been addressed, with the exception of topics like wage demands. Ideas are evaluated through the Recognition and Reward System (RRS) and are financially rewarded at regular intervals based on their scores. Through the Project Management System, we also develop initiatives that focus on enhancing efficiency, promoting sustainability, and strengthening our Health, Safety, and Environment (HSE) culture.

## Key Figures for 2023;



1,574

Submitted Ideas



1,465

Approved Ideas



81

Ongoing Projects



69

Completed Projects



## Our Innovation Culture

At ASAŞ, we believe that continuous improvement is driven by innovation. With this belief, we foster an innovation culture throughout our business processes under the theme “Value-Creating Innovation.” Our sustainability-focused innovation processes allow us to generate value-adding ideas, products, and solutions, creating the ideal environment for innovation. To embed this culture and translate it into performance, we engage employees through the Idea Management System and the **ASAŞ Project Management System**. The “Aces of ASAŞ” Project Contest recognizes and rewards the top-performing projects each year, while the **ASAŞ Recognition and Reward System** honors contributions beyond routine tasks. Our vision for the **ASAŞ Innovation Ecosystem** is to build a broad pool of knowledge and resources, enhance collaboration with stakeholders, and enable diverse teams to achieve outcomes greater than individual efforts.

**Throughout 2023, we focused on several key innovation initiatives, including data governance, infrastructure upgrades, and Industry 4.0 transformation steps such as AR/VR, Digital Twin, IoT, and AI.** These initiatives not only enhanced efficiency and sustainability in our current processes but also created collaboration opportunities with new product groups and customers. Working with the R&D and Energy Directorates, we integrated the degreasing system into our existing monitoring system and completed the integration of innovative sensors and analyzers as part of an EU project. In coordination with different departments and the R&D Directorate, ASAŞ actively participates in innovative projects within the scope of EU Framework Programs, focusing on energy savings, process efficiency, and contributing to both corporate and engineering culture.

As part of our 2023 innovation efforts, we pursued R&D activities in fields such as automotive, railway systems, and modular structures, launching projects like alloy acceleration and caustic recycling. Each project detailed below represents significant progress toward our sustainability and efficiency goals.



## R&D and Innovation Projects

### ASAŞ Green Billet Project

We initiated the Green Billet Project to reduce carbon emissions and produce aluminum billets with a low carbon footprint. Successfully completed in 2023, this project marked a first in Türkiye, producing aluminum billets with a carbon footprint of less than 4 kg CO<sub>2</sub>e/kg Al using the 6082 alloy. This achievement was further validated with an Environmental Product Declaration (EPD). The project has significantly contributed to ASAŞ's sustainability goals and has driven increased demand for this product in the European market. Looking ahead, we plan to apply similar processes to other alloys, expanding our range of green alloys. ASAŞ remains the first and only manufacturer in Türkiye to produce green billets using the 6082 alloy.

**ASAŞ became the first company in Türkiye to produce aluminum billets with a carbon footprint below 4 kg CO<sub>2</sub>e/kg Al through the Green Billet Project.**

### MARBEL Project (EU Project)

The MARBEL Project focuses on developing innovative, lightweight batteries for the electric and hybrid vehicle market. As part of this project, we developed the 6xxx series alloy specifically for battery carrier profiles. ASAŞ's engineering expertise allowed us to successfully produce and weld these profiles in-house. The next phase of the project will involve assembling the battery carrier with modules and conducting final tests. These efforts aim to deliver a 20 percent reduction in system weight, a 25 percent reduction in charging time, and extend the battery lifespan to 300,000 kilometers.

### SALEMA Project (EU Project)

The SALEMA Project seeks to reduce the use of critical raw materials in Europe's aluminum industry and establish a sustainable aluminum ecosystem. We are currently developing 6xxx series alloys for automotive components and exploring alternatives to critical materials like magnesium (Mg) and silicon (Si) to enhance material performance. The project also promotes the circular economy by increasing scrap usage and reducing dependence on critical raw materials, further boosting ASAŞ's competitiveness in the European market.





### RETROFEED Project (EU Project)

The RETROFEED Project aims to retrofit essential equipment to allow for alternative raw materials and implement an advanced monitoring and control system. At ASAŞ, we introduced smart reinforcement applications, enabling the use of painted scrap in the melting process and variable raw materials. These efforts have helped us produce green aluminum alloys, reduce emissions, and lower our carbon footprint. As a result, ASAŞ was awarded the Special Jury Award for “Eco-Friendly Practices” at the Istanbul Chamber of Industry’s 2024 Green Transformation Project Competition. These efforts to produce green aluminum alloys not only provide a competitive advantage in key industries but also help reduce energy consumption.



ASAŞ was awarded the Special Jury Award for “Eco-Friendly Practices” at the Istanbul Chamber of Industry’s 2024 Green Transformation Project Competition for its RETROFEED Project.

### High-Speed Design and Manufacturing of Alloys

This project is focused on improving our extrusion processes and developing new alloys to meet growing global demand. Using newly designed alloys, we increased production speeds from 18 m/min to 35 m/min, resulting in a 70 percent increase in capacity.

### TÜBİTAK 1832 Project

The TÜBİTAK 1832 Project focuses on developing environmentally friendly, high-voltage, high-energy-density LMFP batteries using sustainable local resources for electric vehicle applications, further strengthening ASAŞ’s leadership in local eco-friendly battery technologies.

### Carbon Black-Coated Aluminum Foil Current Collectors

We are collaborating with POMECA on the Carbon Black-Coated Aluminum Foil Current Collectors Project, aiming to produce carbon black-coated aluminum foil from recycled materials and implement it using 100% locally sourced resources. The raw materials used in the project are derived from organic sources such as hazelnut and walnut shells, while the aluminum metal is cast with at least 30 percent secondary-scrap content.

Among ASAŞ’s sustainability-driven innovations, the ASAŞ Vision expansion project plays a key role. It facilitates real-time data collection and visualization, monitoring parameters that affect product quality and machine efficiency, and managing potential deviations to ensure sustainable quality and optimal capacity utilization.

Looking forward, ASAŞ will prioritize data governance, strong infrastructure, and the use of big data, data analytics, and AI tools. We also plan to increase scrap usage and reduce dependence on critical raw materials through the industrial production of innovative alloys. ASAŞ remains committed to sustainability in producing key components for the automotive industry, such as batteries and crash systems, as well as in alloy development processes.

ASAŞ remains committed to spearheading sustainability-driven R&D and innovation initiatives, catalyzing both our corporate growth and the broader aluminum industry’s advancement in sustainability and operational efficiency.

# People-Oriented Business Approach





# People-Oriented Business Approach

**At ASAŞ, we center our work around respect for people and the “ASAŞ is Mine culture.**

As employees who proudly say “ASAŞ is Mine,” we are:

- Guided by our core values,
- Committed to lifelong learning,
- Firm believers in the power of teamwork,
- Focused on employee satisfaction and delivering high-quality service, and
- Filled with pride and excitement to be part of ASAŞ.

Our employees are at the heart of our corporate values. While pursuing our business goals, we aim to create an inclusive work environment where everyone operates under fair and equal conditions, maximizing their potential and contributions. Our strategies prioritize inclusivity and diversity, ensuring equal opportunities at every level of the organization.

**We strive to build a workplace that fosters employee happiness and success, offering continuous support for career development.** Embracing diversity strengthens our culture, and we bring together individuals with varied talents, skills, and perspectives to drive creativity and innovation. We also prioritize continuous learning and professional development, providing training opportunities to enhance both personal and career growth.





# Employee Engagement

At ASAŞ, our work culture revolves around maximizing employee happiness, engagement, and well-being. **Through a people-centered approach, we implement strategies and practices to support the professional and personal development of our employees, boost motivation, and nurture loyalty to the company.**

We conduct an annual Employee Engagement Survey to gather feedback on areas such as engagement, the physical work environment, communication, teamwork, work processes, brand focus, mission alignment, and performance management. **In 2023, our engagement rate was 74 percent.** Based on the survey results, we identify areas for improvement and initiate projects to enhance employee satisfaction and retention. These insights shape our strategic decisions and business processes.

In addition to the annual survey, we collect feedback through the 360-Degree Evaluation, the “ASAŞ is Mine” Survey, and the HR On-Site / Instant Quality (OS/IQ) practice. We then translate this feedback into actionable steps that elevate the employee experience at ASAŞ.

Engagement Survey	2022	2023
Employee engagement/ satisfaction survey results	75%	74%

Employee health and well-being are fundamental to our collaborative culture. We continuously add value to our employees through initiatives like the Life At ASAŞ Platform, wage management, health and well-being programs, and recognition and reward programs.





### Life at ASAŞ Platform

We launched the Life at ASAŞ Platform to unite employees under the ASAŞ umbrella, fostering stronger social relationships, promoting interaction, and encouraging shared experiences outside of work. This platform regularly organizes events such as sports activities and social responsibility projects to boost employee motivation and foster collaboration. These initiatives enhance communication and teamwork across different departments and levels while promoting creativity and innovation. In 2023, around 150 employees participated in various volunteer activities, alongside widely attended events such as the Basketball Shooting Tournament and Chess Tournament.

Key Volunteer Activities Organized by the Life at ASAŞ Platform in 2023:

- Basketball Shooting Tournament
- Chess Tournament
- Abant Nature Walk
- Cycling Event
- Kerpe Diving Event
- Eskişehir Çifteler Diving Event
- Orienteering
- Decathlon Corporate League Basketball Match

### Wage Management

We categorize employees into two groups for wage management: blue-collar and white-collar. For white-collar employees, salary increases are determined using a matrix that factors in performance and market median for the respective job level. Instead of a standard increase rate, we apply personalized rates based on this matrix. For blue-collar employees, wages are set above the minimum wage, taking into account performance, regional employment conditions, development status, and local living standards.

### Employee Health

We provide a variety of benefits to support the health and well-being of our employees. Our health insurance and stress management programs are designed to protect both physical and mental health, with comprehensive services extended to employees' families. Additionally, we offer psychological support through stress management programs and have provided periodic psychologist and dietitian services to employees since 2021.





### Incentives and Recognition Programs

At ASAŞ, we highly value employee achievements and have established incentive and recognition programs to boost motivation. These programs allow us to recognize the contributions employees make to the company and reward their performance. Our recognition initiatives spotlight exceptional performance and are designed to inspire and motivate employees. We also organize award ceremonies and special events for individuals who meet specific achievement criteria.

### The Golden Ball Project

At ASAŞ, we implement a range of projects designed to enhance employee well-being, all rooted in our commitment to equal opportunity. **One such project is the Golden Ball Project in 2014 launched to support employees wishing to have children by offering in-vitro fertilization (IVF) treatment.** The project aims to help employees realize their dream of parenthood.

Each year, we announce the program and collect applications, which are evaluated based on predefined criteria such as the length of marriage, financial status, age of the spouses, and years of employment at ASAŞ. **The treatments are conducted by leading healthcare institutions in Türkiye, with ASAŞ covering medication expenses.** To date, the Golden Ball Project has supported 10 families.

In addition, we encourage our employees to pursue postgraduate and doctoral studies by offering financial incentives and granting additional annual leave to our R&D team members.

ASAŞ's people-oriented philosophy lies at the heart of our sustainability approach. We continually invest in our employees' future by introducing initiatives aimed at improving engagement. Recognizing that our commitment to fostering a supportive work environment has established ASAŞ as an industry leader and innovator, we are dedicated to implementing initiatives in the upcoming period to further elevate our employee engagement scores.





## Employee Development and Well-being

At ASAŞ, we view every employee as a critical asset to our success. To ensure the long-term sustainability of our human resources and address the evolving talent needs of the organization, we have initiated the implementation of talent management practices. We designed personalized development plans for our employees.

We provide tools such as mentorship programs and performance evaluations to support employees in achieving their career goals. **Through various communication and development activities, we nurture team spirit, enhance career growth, and boost motivation among our workforce.** Our recruitment processes are managed through new-generation, digitalized channels. We accompany employees on their career journeys through development programs tailored to different target audiences and our **Digital Academy Platform**.

### Performance Management System

In 2023, we adopted the **OKR (Objectives and Key Results) methodology**, a new-generation performance management system that enables agile goal-setting. This methodology is designed as a flexible, transparent, and dynamic system that clearly delineates the priorities and provides actionable pathways for individuals and teams to achieve their objectives.

The performance cycle begins with the Strategy and System Development unit creating the company's objective card. These objectives are then cascaded to all departments in collaboration with the Human Resources Directorate and Strategy and System Development unit. Once the objectives are distributed to all directorates, in the first quarter of the performance year, all employees hold one-on-one meetings with their managers to set their objectives. These objectives are determined in consideration of the company card, and individual and team priorities. If there is a joint project or process in progress, team-based objectives can also be set.

Mid-year, employees meet with their managers again to review their OKRs and provide feedback. At the end of the year, the company objective card outcome is published based on the company's performance. Employees then work with their managers to finalize their performance scores. These performance scores feed into many human resources practices and provide data for decision-making. The OKR methodology supports both individual and team goals. When a project or process requires the participation of multiple individuals, teams are formed, and project-specific objectives are set, with the team leader guiding the efforts toward these goals.

### Blue-Collar Performance Management

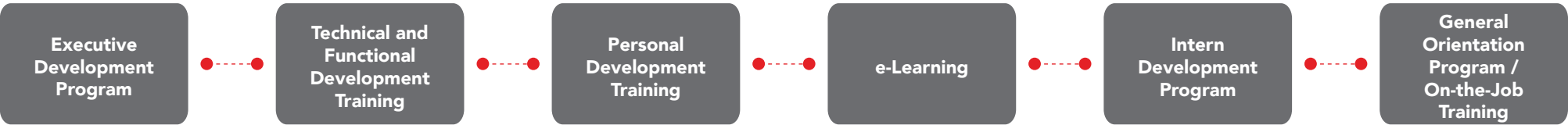
We designed a performance system that can be tracked annually with a view to ensure a fairer assessment of our field employees' performance. **This method evaluates blue-collar employees based on annually set KPIs.** KPI review meetings with manufacturing plant managers are held every October to assess performance. Our aim is to maintain a transparent and fair performance management process, while also identifying employees' areas for development and providing the necessary support.



ASAŞ Academy

At ASAŞ, we embrace continuous learning and development as part of our culture. We are deeply committed to supporting our employees in their growth journey and helping them reach their full potential. By investing in their professional and personal development, we create numerous opportunities for career advancement and success. To this end, we established the ASAŞ Academy to offer tailored training programs that equip employees with new skills. Using various learning methods, such as internal training courses, online resources, workshops, and conferences, we design training opportunities that align with the specific needs and interests of our employees.

This approach fosters an innovative, solution-oriented, and analytical workforce that embraces continuous improvement and adaptation to change. ASAŞ Academy focuses on learning and knowledge sharing, aiming to provide employees with a comprehensive and effective educational experience. To achieve this, we collaborate with expert trainers and experienced academics. ASAŞ Academy focuses on learning and knowledge sharing, aiming to provide employees with a comprehensive and effective educational experience. To achieve this, we collaborate with expert trainers and experienced academics.



ASAŞ Academy Training Statistics	2021	2022	2023
Total Training Hours for Blue-Collar Employees	38,610	66,798	51,017
Total Training Hours for White-Collar Employees	14,252	15,588	20,718

ASAŞ Academy Training Statistics	2021	2022	2023
Average Training Hours per Employee	18.52	27.35	24.14

ASAŞ Academy Initiatives

Student Scholarships

We align with our “**Respect Through Engagement**” principle by supporting the development of not only our employees but also their children. Since 2017, we have offered both “support” and “merit” scholarships to university students. For the 2023-2024 academic year, 58 students will benefit from these scholarships.

Educational Institution – Industry Collaborations

ASAŞ Academy values input from all stakeholders, particularly the younger generation. We develop partnerships with universities to support students’ professional development, enhance their industry knowledge, and introduce them to career opportunities and the business world. These collaborations include career days, training programs, field visits, and more. In 2023, the average training hours per employee reached 24.14.



## Learning Management System (LMS)

ASAŞ's Learning Management System is a new-generation digital platform that facilitates our digital transformation. The LMS allows us to plan, track, and report on the training and development processes of our employees, partners, and dealers. It provides a unified platform for managing e-learning and classroom-based training, ensuring an effective learning experience.

## Solid Steps to the Future

We continue to invest in developing emerging talent through our Solid Steps to the Future Program, which was launched in 2021 to shape a more promising future. This year, we expanded our efforts by implementing three comprehensive 16-month programs designed to equip young professionals, primarily engineers, with essential competencies and skills for successful career trajectories. This talent development initiative underscores our commitment to nurturing the next generation of industry leaders. **About 35 young professionals participated, and we plan to continue this program annually.**

## Young ASAŞ Program

We successfully concluded our comprehensive talent development initiative, designed to empower high-potential employees who excelled through rigorous assessment and training. This program focuses on fostering personal growth, honing critical competencies essential for our organization's future, and nurturing the next generation of leadership talent. We aim to conduct the Young ASAŞ Program on an annual basis. **In 2023, 12 young colleagues began their journey with the Young ASAŞ Program.**

## Internal Mentoring: "Mentorship from Experience to Transformation"

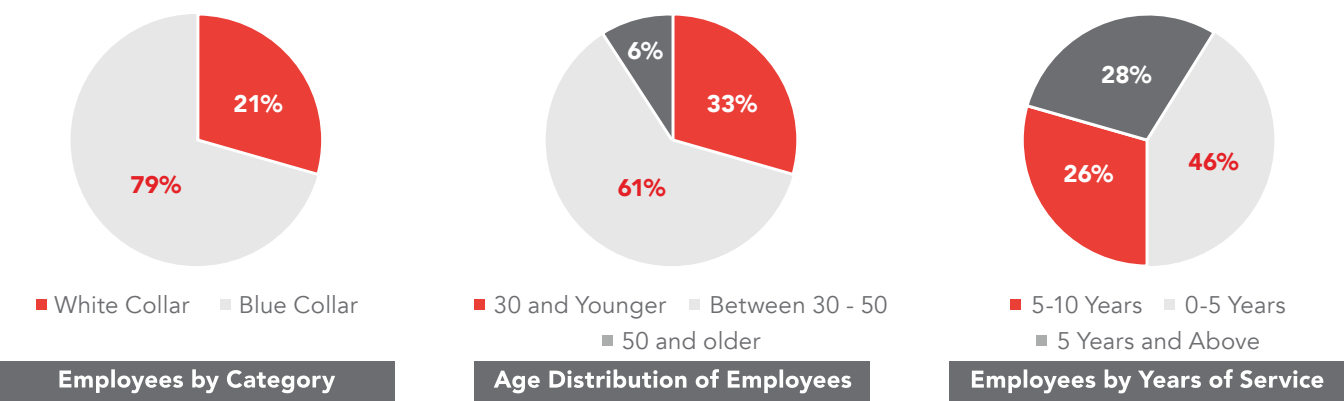
We launched an internal mentoring program as part of the "Mentorship from Experience to Transformation" initiative, targeting office workers. Our initiative facilitates knowledge transfer between senior executives and emerging talent at ASAŞ, embedding experiential learning into our corporate culture while fostering professional relationships. **In 2023, 14 high-potential employees successfully completed the inaugural six-month mentoring program under the guidance of seasoned managers.** In addition to these initiatives, we offered a range of training programs in 2023, including the Leadership Development Program, the Blue-Collar Team Leaders Program, and the CNC Development Program. We also launched the CNC Operator Development Program to enhance the competencies of our blue-collar employees. On the field side, we launched the CNC Operator Development Program, a new initiative aimed at improving the competencies of our blue-collar employees. Additionally, we completed the Leadership Development Program, aimed at improving the skills of managers, over a three-month period with participants from different levels. The training provided a case-based learning environment covering topics such as coaching, feedback, and team management. Basic Management Skills training was also offered to newly appointed managers.

All new ASAŞ employees start with a two-day orientation program, which includes Occupational Health and Safety (OHS) training, as well as "ASAŞ is Mine" HR and Health/Safety/Environment (HSE) training. After orientation, employees proceed with on-the-job training in their respective departments. We remain committed to investing in employee development as part of our strategy to build a resilient organization.

# Diversity, Equity, and Inclusion

ASAŞ is deeply committed to fostering a culture that recognizes the value and equality of all employees. Regardless of race, color, age, nationality, gender, or belief, our vision is rooted in fostering a sense of belonging for all employees, preparing the organization for future needs, and becoming one of the most preferred companies. To achieve this, our policies are designed to respect human rights, promote diversity and inclusion, and ensure equal rights for all employees. We incorporate this philosophy into all aspects of our business operations. **In recruitment, we evaluate candidates purely based on their competencies, without regard to gender.** Additionally, we actively work to increase female representation in blue-collar positions through targeted efforts in local channels. Our compensation policy is built on principles of fairness and transparency, with salaries determined by the market value of the role and the individual’s competencies. This approach fosters talent development within the company and supports employees in advancing their careers. As of 2023, our workforce includes 2,341 blue-collar and 631 white-collar employees, totaling 2,972.

Employees by Category	2021		2022		2023	
	Female	Male	Female	Male	Female	Male
White-Collar	197	391	196	430	205	426
Blue-Collar	45	2,220	45	2,341	50	2,291



We embrace diversity and foster a culture where employees from various age groups and educational backgrounds learn from one another. Under the ASAŞ umbrella, we offer career opportunities to young talent, with professionals aged 30 and under making up 33 percent of our workforce. We are committed to ensuring equal opportunities throughout all processes, beginning with recruitment. By embracing differences, we also support the inclusion of disadvantaged groups. As of the end of 2023, our workforce includes 93 individuals with disabilities, five of whom are women.

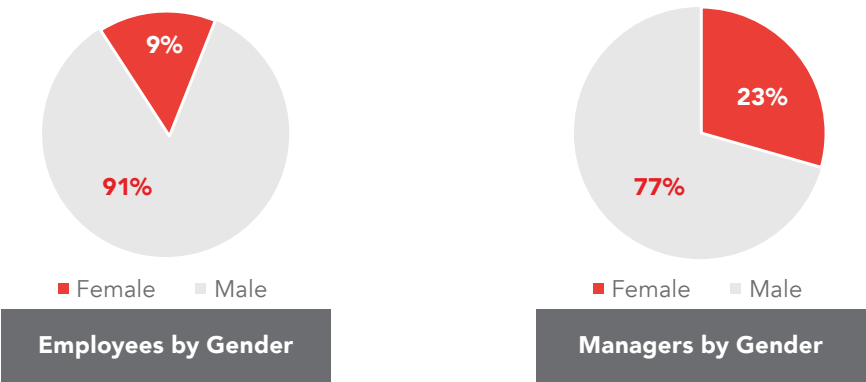




Empowering Women in the Workforce

At ASAŞ, we believe that offering equal rights and opportunities to men and women in both work and social life—and supporting their development equally—creates more productive environments. We design our processes with the understanding that sustainable success comes from a diverse workforce, bringing together a wide range of expertise, disciplines, and perspectives. We work to increase women’s employment and competencies. We are aiming to increase the number of women in both management and production roles. Our goal is to provide opportunities in traditionally male-dominated fields, allowing women to gain valuable professional experience. We firmly believe that anyone, with the right training and competencies, can perform any job. The dedication of our female employees—working as CNC Operators, Press Operators, Packaging Staff, and more—reinforces this belief daily. In 2021, ASAŞ became the first company in its industry to receive the Equal Opportunity Model Certificate from the Women Entrepreneurs Association of Türkiye (KAGİDER), recognizing our HR policies and practices that prioritize women’s employment.

Although our white-collar workforce is relatively gender-balanced, increasing female representation in senior management, particularly at the director level, is a top priority. To achieve this, we aim to boost internal promotions and balance them with external hires for leadership roles. In 2023, 19 percent of promotions at ASAŞ were awarded to women. Moving forward, we are committed to implementing strategic initiatives to further increase the number of women in management positions.



Total Training Hours by Gender	2023	
	Female	Male
Number of employees who received leadership training by gender	14	20
Total leadership training hours (person-hours)	1,231	

ASAŞ is committed to developing leadership skills across its workforce. To encourage the advancement of women in senior management, we offer specialized leadership training opportunities aimed at increasing female representation in leadership roles. We also ensure that female employees receive their legal maternity leave rights, support requests for unpaid leave, and offer flexible work arrangements for those returning part-time after maternity leave.

Equal Opportunity Indicators	2021		2022		2023	
	Female	Male	Female	Male	Female	Male
Employees in STEM roles	26	51	27	53	28	46

Additionally, ASAŞ employs 74 professionals in STEM (Science, Technology, Engineering, and Mathematics) fields, 28 of whom are women. We are dedicated to increasing female representation in these roles and improving gender balance in STEM. Through our diversity and inclusion policies, we actively support the participation of more women in STEM fields and ensure equal opportunities for all.

In 2023, women accounted for 38 percent of STEM employees at ASAŞ.

## Our Approach to Human Rights

ASAŞ is firmly committed to upholding human rights. We implement policies based on the Human Rights Principles outlined in the United Nations Global Compact.

We maintain a zero-tolerance policy for human rights violations, including child labor, forced labor, slavery, and human trafficking. Our commitment to transparency and accountability extends to sharing our human rights policies with stakeholders and encouraging their feedback. In this respect, we follow both local and international legislation and strive to align with global human rights standards. We engage in active dialogue and collaboration with our employees, stakeholders, and communities, taking their feedback into account.

ASAŞ will continue to play a leading role in diversity, equity, and inclusion, by integrating an inclusive culture across all aspects of our business, ensuring a safe and respectful working environment where all employees can realize their potential.

For more detailed information about ASAŞ's Human Rights Policy, please refer to:

<https://www.asastr.com/corporate-/policies/human-rights-policy/>





## Health, Safety, and Environment (HSE) Culture

ASAŞ takes a holistic approach to health, safety, and the environment, prioritizing these areas across all activities. **Aware of our responsibilities towards our customers, employees, and the environment, we continuously strive to improve our HSE (Health, Safety, and Environment) performance. In this regard, we apply our occupational health and safety (OHS) policies with a commitment that goes beyond legal requirements.** We rigorously enforce hygiene standards across all our workplaces, conduct regular health screenings, and launch awareness programs to foster a health-conscious culture among employees. Prioritizing ergonomics, we develop supportive policies that promote both physical and mental well-being. Our safety protocols are continually updated, and we create comprehensive emergency plans to ensure employee safety and mitigate risks. These plans are reinforced through regular drills, encouraging active participation from all employees. All of our facilities are ISO 45001-certified.

We extend our HSE (Health, Safety, and Environment) approach to all employees, promoting collaboration with our stakeholders. Encouraging employee involvement, we integrate a safety culture into every aspect of our business processes. **This integrated approach allows us to continuously raise occupational health and safety standards, creating a safer and healthier work environment at ASAŞ.**

We are determined to achieve our zero-accident target and relentlessly strengthen our commitment to occupational health and safety. In 2023, we set ASAŞ Group's accident frequency rate target at 12.18 and the accident severity rate target at 0.37. However, actual figures were 21.14 and 0.48, respectively, primarily due to accidents resulting in lost workdays. Factors such as increased employee turnover and accelerated investment processes contributed to the higher accident numbers. In line with our challenging targets that push us to improve and progress, we pursue our efforts for continuous improvement in occupational health and safety. We analyze the reasons for missing our targets and take the necessary actions to achieve better outcomes.

For more detailed information about ASAŞ's Health, Safety and Environmental Policy, please refer to:

<https://www.asastr.com/corporate-/policies/health-safety-and-environmental-policy/>



At ASAŞ, we designed the HSE culture with the motto **“Health comes first!”** to ensure safe working environments. Our model, consisting of five main modules, aims to create a workplace where HSE is an integral part of daily life and is considered in all processes. This working environment is cultivated by senior management committed to HSE issues, managers who exhibit high awareness of hazards and risks and set an example, and employees who participate in HSE activities and look out for one another.

**HSE Culture Modules:**

- Looking Out for Colleagues
- Employee Participation
- Management Commitment
- Hazard Awareness
- Leading by Example

**HSE Culture Objectives:**

- Sustainably achieve the zero-accident target
- Create a healthy and safe working environment
- Implement our “Respect Through Engagement” value
- Set an example for other companies
- Foster a workforce that embraces the “ASAŞ is Mine” culture

**In 2023, as part of our efforts to strengthen HSE culture, we conducted 69 HSE culture evaluations and 47 HSE field inspections.** In line with our sustainability goals, we will be spreading and instilling the HSE culture across the company. By digitizing the HSE processes, we will manage these processes more systematically, swiftly, and effectively. In line with our sustainability goals, we are spreading and instilling the HSE culture across the company. We are digitizing the HSE processes to manage these processes more systematically, swiftly, and effectively.

**For example, we have implemented a digital contractor management system and launched the Occupational Safety Information Management System (IBYS) to streamline health and safety management.** Previously, manual reports created additional workload and led to issues such as oversight and data inconsistencies. To address this, we digitized yellow card and near-miss reports, ensuring more accurate and timely reporting.

**In 2023, we conducted 69 HSE culture evaluations and 47 HSE field inspections.**





## HSE Culture Strengthening Activities

### Enhance Safety Culture through Training

We understand that safety training is a critical component of our journey towards achieving a zero-accident workplace. As in previous years, in addition to the mandatory safety training required by law, we provided sessions on key topics such as fire safety, working at heights, machine safety, legal and criminal liabilities, lockout/tagout/tryout (LOTO), and accident prevention.

### Occupational Safety Awareness Week

We celebrated the Occupational Safety Awareness Week, held annually from May 4 to 10, in a festive atmosphere. In collaboration with our safety partners, we organized demonstrations of personal protective equipment (PPE), job-specific risk assessments, and additional training sessions. To further engage employees, we held an Occupational Safety Competition across the company, rewarding the top three participants with surprise prizes.

### Safety Precautions for Working at Heights

To improve working conditions at heights and prevent potential work accidents, we installed standard-compliant lifelines on crane tracks, crane bridges, around machines and equipment requiring work at heights, and vertical ladders used to access these areas. We have thus significantly reduced the risk of falls from heights.

### Proactive Safety Approach

We drafted a company-wide Explosion Protection Document, identifying hazardous areas. We created zone maps for hazardous areas and checked the compliance of our equipment. For each non-compliance identified, we ensured that corrective measures were taken.

### Online Safety Training

Employees who have completed two years with the company receive comprehensive 360-degree Occupational Health and Safety (OHS) training through our e-mobile system on the Qlik platform. We also provide short, focused training sessions on specific risks, brief training programs, and training on ergonomics on the e-mobile system, enabling employees to access their training modules quickly and securely via smartphones or computers.

### Digital Near-Miss Reporting System

To prevent unsafe conditions and incidents, we implemented an online system for employees to report near-miss situations. In 2023, we received 1,225 near-miss reports and took prompt action to resolve each case. To encourage participation, we implemented an incentive system and conducted evaluations following every report.



## HSE Risk Analysis and Management

At ASAŞ, our Health, Safety, and Environment (HSE) Directorate is committed to developing comprehensive strategies and policies to cultivate a safe and healthy work culture. To this end, we implement risk assessments and preventive measures across our facilities to prevent work accidents and occupational diseases.

Risk analysis teams at each ASAŞ manufacturing plant utilize the Fine & Kinney Method to systematically identify potential hazards, assess their severity, and determine the necessary preventive actions. Risk analysis by the Fine & Kinney Method defines the sources of hazards and identify the risks associated with them. This allows us to pinpoint areas that need improvement and take action accordingly. Once risks are scored, we prepare corresponding short-, medium-, and long-term action plans, ensuring a structured response to potential dangers. Risk assessments are regularly updated based on the workplace's hazard classification. For high-risk workplaces, assessments are renewed every two years, for hazardous workplaces every four years, and low-risk workplaces every six years.

In addition to these regular intervals, risk assessments are also conducted following significant changes or events in the workplace. These include relocation of workplace relocations or structural modifications, technological upgrades or changes in materials and equipment, shifts in production methodologies, occurrences of work-related accidents, occupational illnesses, or near-miss incidents, legislative changes affecting workplace exposure limits, insights derived from workplace measurements and health surveillance data, and the emergence of external hazards with potential workplace impact.

**We analyze our OHS risks using the Fine & Kinney method and prepare short-, medium-, and long-term action plans based on risk scores.**

During risk analysis field visits, any identified non-compliance is recorded in the Quality Document Management System (QDMS), with follow-up actions assigned to responsible individuals. This process guarantees the elimination of risks and continuous improvement in workplace safety. To further enhance efficiency and minimize risks, we utilize advanced systems such as MEDITEK, PERFEKTIV, eBA, Qlik, and Ensemble, along with near-miss reporting and action tracking.

To ensure the effectiveness and sustainability of our OHS policies, we conduct regular audits and evaluations. Our Occupational Health and Safety Committees implement decisions and conduct consistent improvement activities to make our work environments safer and healthier. Each of our factories appoints Occupational Health and Safety Committee Members, and every two months, meetings are held under the leadership of the manufacturing plant directors, who serve as the employer's representatives. The meeting decisions are documented in minutes. In the event of an emergency (work accident, near-miss, fire, etc.), the committee convenes immediately without waiting for the next scheduled meeting. These emergency meetings enable quick and effective interventions, ensuring that any negative situation is brought under control and resolved as swiftly as possible.



## HSE Training Programs

At ASAŞ, we are committed to achieving sustainable success in occupational health and safety (OHS) by regularly organizing comprehensive training programs that continuously enhance employees' knowledge and awareness. ASAŞ Academy, responsible for managing all training processes, plays a critical role in planning and implementing OHS-related training initiatives.

**For new employees, we conduct mandatory OHS training sessions that last two full days (12 hours total) before they start their duties.** In addition to this, employees receive training based on specific safety instructions from the HSE Directorate or their respective departments. The HSE Directorate also delivers 20-minute quick training sessions on a monthly basis. Through the OHS 360 Program, we ensure that these trainings are repeated at legally required intervals.

The OHS training provided by the HSE Directorate covers a range of important topics, including:

### General Topics:

- Overview of labor legislation
- Employees' legal rights and responsibilities
- Workplace cleanliness and organization
- Legal consequences of work accidents and occupational diseases

### Health-Related Topics:

- Causes of occupational diseases
- Principles of disease prevention and application of preventive techniques
- Biological and psychosocial risk factors
- First aid
- Harmful effects of tobacco products and passive exposure

### Technical Topics:

- Chemical, physical, and ergonomic risk factors
- Manual lifting and carrying
- Fire and explosion hazards, and fire prevention and protection
- Safe use of work equipment
- Working with display screen equipment
- Electrical hazards, risks, and precautions
- Causes of work accidents and prevention principles and techniques
- Safety and health signs
- Use of personal protective equipment (PPE)
- General occupational health and safety rules and safety culture
- Evacuation and rescue procedures

We also organize OHS training and awareness programs for contractors to ensure that all members of our workforce adhere to the same high safety standards. In 2023, the average training hours per employee was 14.53 hours, and 1.50 hours for contractors.

ASAŞ continuously updates and improves its OHS training programs, fostering a culture of safety in all work areas. These programs not only promote safe working habits among both employees and contractors but also play a significant role in reducing workplace risks. Our commitment to achieving ongoing success in occupational health and safety remains unwavering.

## Social Impact

At ASAŞ, we place our mission to contribute to society at the core of our responsibilities. Beyond our business processes, we aim to generate positive social, cultural, and economic impacts through initiatives in art, sports, and education. Our goal is to contribute to the cultural and social development of society, fostering meaningful change across all sectors.

ASAŞ is committed to developing long-term, sustainable social investment projects. Through these initiatives, we aim to reach diverse segments of society, creating lasting positive changes in people's lives.

### ASAŞART

In 2015, we established ASAŞART to enhance our support for the arts and create a lasting cultural impact. Our goal is to bring together artists, academics, and students under one roof to encourage education, design, and production. Key Activities under ASAŞART include:

#### Art Workshops:

ASAŞ production facilities and the art workshop, scheduled to be completed this year, are made available to creative, teaching, or studying artists. We encourage the use of various materials and techniques in these efforts.

#### Art Competitions and Exhibitions:

ASAŞART supports and encourages artists through sculpture competitions and exhibitions. These events not only provide artists with opportunities to express themselves but also foster public interest in the arts. For more information, please visit the ASAŞART Website and the Sculpture Competition Terms and Conditions.

For more information, you can visit the ASAŞANAT website:

<https://www.asasarchitecture.com.tr/home-page/>





**Nature and Animal Lovers Community**

At ASAŞ, we believe that a connection to nature enhances motivation and positivity in both personal and professional life. To foster this connection, we are establishing a Nature and Animal Lovers Community. The community will carry out volunteer work focused on protecting nature and animals. Uniting under the ASAŞ umbrella, volunteers will implement various environmental awareness-raising projects. Confident that the number of volunteers will grow day by day, our goal is to spread the love for nature and animals.

**Dedicated Areas for Stray Dogs**

We are creating dedicated living areas for stray dogs in Akyazı, particularly in the industrial zone. Sustained by the ASAŞ Animal Lovers Club, the project collaborates with the Akyazı Municipality and a local association to provide food for stray dogs and to ensure their care, neutering, and medication. Volunteers, along with municipal and association workers, are setting up kennels and cleaning the area. The project provides a safe and healthy environment for stray dogs while reinforcing a love for nature and animals among our employees.

**Earthquake Relief Efforts**

We have always prioritized supporting those in need during difficult times in our country. In response to the February 6th earthquakes in Türkiye, ASAŞ contributed to social solidarity and mobilized relief efforts to support affected communities. We provided essential items, including Tiny Houses, container homes, and furniture, to families whose homes were damaged in the earthquake. Volunteer teams composed of ASAŞ employees also participated in search and rescue operations in the earthquake zone.

**Local Community Support**

ASAŞ maintains strong partnerships with local communities, offering recurring support to those in need. Based on consultations with village heads, we coordinate assistance for urgent needs, including unfinished houses. Through collaborations with the Gendarmerie, municipalities, and schools, we also provide scholarships to students in need in the areas where we operate. Consistent with our sustainability philosophy, we contribute to the well-being of local communities.

## Support for Sports and Youth

At ASAŞ, we believe that investing in the potential of young people, who are the future, is the key to building a sustainable society. In that mindset, we established the ASAŞ Basketball Club to leverage the unifying power of sports to support the social lives and physical health of young people. Our club, based in Sakarya along with our facilities, includes over 300 licensed athletes and features seven teams, including five male and two female. Adamant to support young talents, we are proud to announce that one of our athletes has joined the national women's team.

## Cycle-Friendly Employer (CFE) Certification

ASAŞ was awarded the Gold Level Cycle-Friendly Employer (CFE) certification by ENVERÇEVKO, the National Coordinator for CFE in Türkiye and a member of the European Climate Foundation (ECF), making us the first industrial company in Türkiye to earn this recognition. Our goal is to improve employee health and working conditions while also reducing our environmental impact. Correspondingly, we promote the use of bicycles on our 1-million-square-meter manufacturing plant campus. By encouraging bicycle use, we reduce the overall carbon footprint of our manufacturing plant while offering a practical mobility solution for employees' daily needs.

We have implemented several initiatives so far to integrate bicycles into the daily operations of our company. In addition to the 320 bicycles and numerous parking spaces available to employees across the campus, we have constructed an 8-kilometer bicycle path that facilitates travel between production facilities. We view the CFE certification as a powerful tool for creating healthier individuals and communities, and we aim to raise awareness among local employers about the environmental and socio-economic benefits of commuting by bicycle. In this context, in collaboration with the Sakarya Metropolitan Municipality, we plan to build a bicycle path that will link Sakarya and Akyazı with key transportation hubs, and establish a 24-hour bicycle repair workshop. Last but not least, ASAŞ Academy provides cycling lessons for our employees.



**ASAŞ received the Gold Level Cycle-Friendly Employer Certification, becoming the first industrial company in Türkiye to earn this distinction.**

## Academic Support

At ASAŞ, we are committed to preparing future professionals through our Human Resources Recruitment and Employer Branding initiatives. Accordingly, we organize voluntary seminars and training sessions for engineering and administrative faculties at nearby universities. These sessions cover crucial topics like CV writing, interview techniques, interview simulations, and career awareness, helping students navigate the job market and advance their careers.

Additionally, our R&D unit actively engages in university courses on R&D and engineering management, offering their expertise to help train the next generation of R&D engineers. ASAŞ is dedicated to creating and improving social investments that benefit all segments of society, in line with our sustainability principles.



A full-page background image of a dense, lush green forest. Sunlight filters through the thick canopy of trees, creating a dappled light effect. The trees have thick trunks and are covered in moss and vines, suggesting a tropical or subtropical environment. The overall tone is vibrant green with warm, golden light from the sun.

# Environmentally Responsible Business Approach



# Environmentally Responsible Business Approach

At ASAŞ, we are committed to strengthening corporate resilience in response to global environmental, social, and economic crises. We take a leading role in promoting sustainability-focused transformation within the aluminum industry. Acknowledging the environmental impact of our sector, we adopt an environmentally responsible business approach that seeks to reduce our footprint while capitalizing on sustainability opportunities within the aluminum industry. Our efforts are centered on minimizing the potential impacts of climate change, extreme weather events, depleting natural resources, and biodiversity loss across every aspect of our operations and value chain. We ensure all processes adhere to international standards while implementing innovative practices to meet these objectives.

## Environmental Management

As a player in the aluminum industry, known for its high environmental impact due to intensive energy use and greenhouse gas emissions, we fully recognize the critical need to reduce the environmental footprint of our operations. Therefore, we go beyond legal compliance, pursuing an environmental management strategy that adheres to international standards. We prioritize areas where our environmental impact is most significant, performing thorough risk assessments and implementing proactive measures to mitigate potential risks. We comply with the ISO 14001 Environmental Management Standard, ensuring continued adherence through annual external audits.

Within the scope of our Environmental Management System, we conduct Environmental Aspect Analyses across ASAŞ manufacturing plants to identify the environmental impacts throughout our operations, evaluate the relevant environmental aspects from a lifecycle perspective, and mitigate the effects. Each department is evaluated individually, focusing on waste generation and potential impact.

Both current production processes and new investments are reviewed for environmental impacts. We update our environmental assessments annually, striving for zero pollution in air, water, and soil. In addition, there have been no spills, leaks, or environmental accidents at our business centers over the past three years.







### **Environmental Impact Reduction Strategy**

At ASAŞ, we adopt a comprehensive approach to environmental management, addressing climate change, emissions, energy use, natural resource conservation, aluminum circularity, and value chain transformation. We lead the sustainable transformation of our industry, structuring our strategy around six key pillars:

#### **Energy Efficiency and Renewable Energy Use**

We are committed to reducing energy consumption, optimizing processes, and promoting the efficient use of energy resources through advanced technologies and innovative methods. By expanding the share of renewable energy, such as solar power, in our energy consumption, we will further reduce our carbon footprint.

#### **Recycling Facility**

We aim to maximize the use of aluminum scrap and enhance circularity by establishing a recycling facility. We will also ensure that scrap generated from our operations is recovered without creating waste, thereby contributing to the circular economy.

#### **Use of Recycled Materials**

By increasing the use of recycled materials in the raw materials we source, we aim to reduce the high energy consumption associated with primary aluminum, thereby significantly lowering the carbon emissions generated from the value chain.

#### **Supply Chain Management**

We collaborate with suppliers to integrate sustainability principles throughout the supply chain, prioritizing materials from sustainable sources.

#### **R&D and Innovation**

We leverage innovative technologies and processes to develop low-carbon alloys and products, aiming to reduce emissions, improve energy efficiency, and reduce our environmental impact.

#### **Natural Resource Conservation**

We focus on protecting diminishing natural resources by improving the efficiency of the raw materials we use and enhancing our waste and water management processes. We also prioritize biodiversity conservation and ecosystem restoration in our operational areas.

In 2022, we conducted Life Cycle Assessments (LCA) for 12 product groups. We subsequently obtained Environmental Product Declarations (EPD) for all assessed products, valid for five years, and registered with the EPD Türkiye. In 2023, we produced aluminum billets with a low carbon footprint according to Türkiye's reference values.

We also continue efforts to reduce and prevent environmental noise beyond regulatory requirements. For instance, in 2023, we installed insulation cabins for the fans in the casting operations of our Flat-Rolled Products manufacturing plant to ensure environmental noise levels align with international standards.



**ASAŞ received the Environmental Award in the large-scale enterprise category for the Metal–Machinery Industry at the 29th Şahabettin Bilgisu Environmental Awards Ceremony, organized by the Kocaeli Chamber of Industry.**

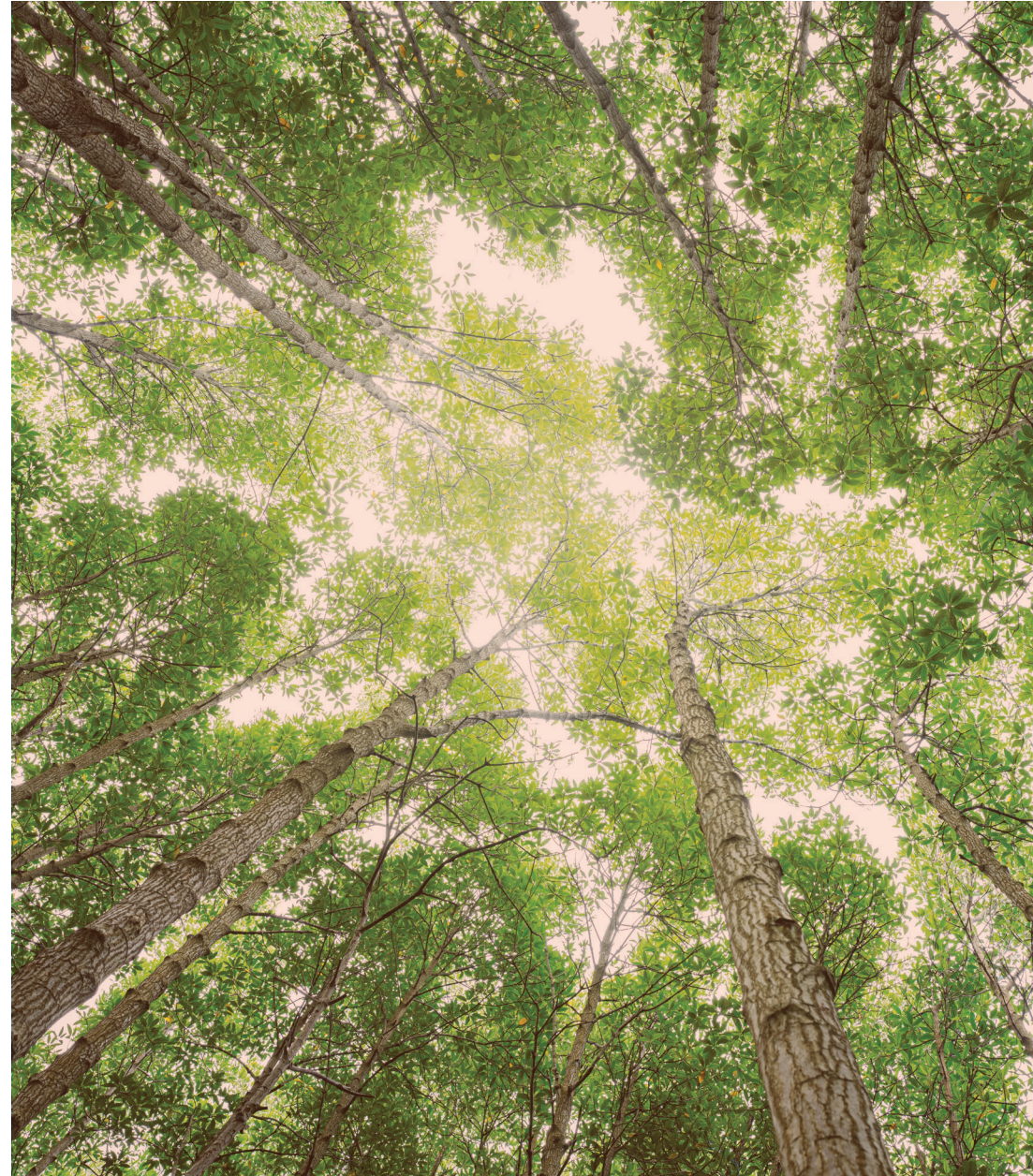
We prioritize raising environmental awareness among our employees. We regularly organize training programs covering topics such as reducing environmental impacts, conserving energy and water, and contributing to waste management. In 2023, we provided an average of 3.77 hours of environmental training per employee, totaling 11,200 employee-hours. We also encourage employee engagement through environmental-themed idea and knowledge competitions.



# Emissions Management and Climate Crisis

The European Union's (EU) Net Zero vision for 2050, as outlined in the European Green Deal, and Türkiye's target of reaching net zero emissions by 2053 are accelerating climate transformation across many sectors. These targets demonstrate that transitioning to a low-carbon economy is essential, not optional. We operate in a key industry directly impacted by the EU's Carbon Border Adjustment Mechanism (CBAM), which introduces both reporting requirements and financial liabilities. Aware of our role in the aluminum sector's climate transformation, we have adopted a low-carbon production model and a circular economy approach, focusing on reducing greenhouse gas emissions throughout our value chain.

We monitor our greenhouse gas emissions annually and are actively working on our company's net-zero transformation roadmap. All direct and indirect emissions are measured, reported, and verified according to the ISO 14064-1 Greenhouse Gas Emissions Reporting and Verification Standard.





## Decarbonization Roadmap

The Paris Climate Agreement's commitment to limit global warming to 1.5 °C, coupled with evolving national and international regulations, has necessitated decisive action from businesses. Operating in the aluminum industry with significant export volumes to the EU, we aim to minimize the impact of the Carbon Border Adjustment Mechanism introduced under the European Green Deal and to fully align with Türkiye's 2053 net zero emissions target. To do so, ASAŞ has accelerated decarbonization efforts. In 2023, we advanced the development of our decarbonization roadmap by adopting industry best practices and made significant progress toward setting science-based climate targets aligned with the 1.5 °C scenario.

We are working with external consultants and a green finance institution to establish this roadmap. Although the primary focus of our efforts is climate change and decarbonization, we are also incorporating resource efficiency, energy efficiency, and water analysis into the project. This comprehensive approach enables us to address both environmental and social impacts. Through these analyses, we are outlining the necessary steps for ASAŞ to achieve net zero emissions by 2050 without compromising operational efficiency or competitiveness.

The key steps we have taken, and plan to take, as part of our net zero roadmap include:

- Carbon footprint assessment, setting reduction targets, and identifying decarbonization options,
- Material efficiency analysis,
- Energy efficiency analysis,
- Water cycle analysis,
- Identifying water efficiency, reuse, and recycling options,
- Preliminary assessment of the environmental and social impacts of each decarbonization option,
- Consolidation, draft investment plan, and roadmap in line with the Science-Based Targets initiative (SBTi).





The scope of this work is based on the EU’s Industrial Emissions Directive (IED), which establishes rules for regulating industrial emissions in various industries, aiming to minimize pollution and improve air, water, and soil quality. It also includes regulations setting emission limits and requiring industrial facilities to use the Best Available Techniques (BAT) to reduce their environmental impact. The IED and BAT encourage industries to adopt cleaner technologies and practices beyond what current regulations demand.

Based on the findings of our analysis, we aim to assess the potential for green financing opportunities related to the identified decarbonization options and establish science-based climate targets under the SBTi framework.

For Scope 1 and Scope 2 emissions, we focus on optimizing energy use, investing in renewable energy, and improving energy efficiency. For Scope 3 emissions, we work with stakeholders across our value chain to decarbonize, promote sustainable materials, and develop carbon-neutral transportation and logistics solutions, and adopt innovative technologies. We also explore industry-specific options such as increasing recycling and developing comprehensive waste management strategies to further reduce Scope 3 emissions.



# Energy Management

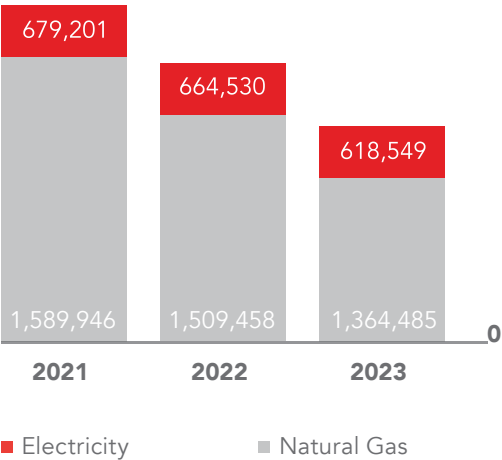
At ASAŞ, to tackle the climate crisis, we develop comprehensive strategies for efficient energy management, leveraging digital solutions and innovative technologies. Our approach prioritizes clean, renewable energy sources, and we are accelerating investments in renewable energy projects within our facilities. By integrating digital technologies such as advanced data analytics, smart sensors, and automation systems into our processes, we aim to enhance energy efficiency, reduce our carbon footprint, and improve our sustainability performance.

ASAŞ complies with the ISO 50001 Energy Management System Standard. Our energy management strategy focuses on energy efficiency and renewable energy. We leverage innovative technologies and consistently improve our production processes to optimize energy consumption. We optimize energy consumption through energy-efficient equipment, process improvements, and comprehensive measurement and analysis systems.

We conduct two audits annually: one by accredited independent auditors and another through internal processes aligned with the ISO 50001 Energy Management System standards.

**In 2023, our total energy consumption decreased by 9 percent from the previous year, totaling 1,983,03 GJ, with 69 percent from natural gas and 31 percent from electricity.** This reduction was due to lower production volumes compared to a year earlier and energy efficiency initiatives.

Energy Consumption by Source and Year (GJ)



We annually implement projects focused on energy-efficient design, energy savings, and optimizing energy use through the Energy and Sustainability Directorate.

These initiatives fall into three categories: projects funded internally, projects conducted in partnership with the Ministry of Energy under the Energy Efficiency Projects (VAP), and projects supported by EU-backed funds. ASAŞ saved 6,384.44 GJ of energy through its energy efficiency projects in 2023.

ASAŞ saved 6,384.44 GJ of energy through its energy efficiency projects in 2023.





Through VAP initiatives supported by the Ministry of Energy's General Directorate of Energy Affairs, we carry out projects such as installing more efficient equipment, energy recovery systems, and commissioning new systems. We also receive grants that offset a portion of our investment costs.

Our trigeneration facility meets part of our electricity needs while maximizing the use of steam and hot water as secondary energy sources. **In 2023, we produced over 10,000 metric tons of steam and hot water. We were awarded the I-REC Certificate, which verifies that 100 percent of the electricity we consumed in 2023 originated from renewable energy sources.** Looking ahead, we aim to certify our energy consumption with I-REC Certificates to ensure that all the electricity we use is derived from renewable resources. Furthermore, in the medium and long term, we aim to generate our own energy at our solar power plants (SPP). We believe that ASAŞ Energy, established to manage our renewable energy investments, will help accelerate these efforts in the future.

To further enhance energy efficiency at our facilities, we invest in more efficient equipment. By replacing the fan blades of our cooling towers with energy-efficient alternatives, we expect to reduce our energy consumption by 30 percent. We are also upgrading our billet heating furnace to a more efficient model, which will significantly reduce energy consumption. Our calculations concluded that an upgrade will yield higher savings as the current version suffers from high thermal losses and high electricity consumption. We expect significant energy savings per unit of production in terms of both electricity and natural gas consumption. **By replacing the billet furnaces, we expect to save 5 m<sup>3</sup> of natural gas and 2.5 kWh of electricity per hour.**

We are also conducting energy efficiency and improvement efforts in our casting facility. In this context, to prevent billet cracks caused by the high casting water temperature in summer, we are enhancing the cooling capacity of the casting water system by upgrading the pumps and piping of the cooling towers.

### **Compressed Air Systems Efficiency Project**

The compressed air used in our production processes is supplied to three sections via two compressor stations. During our system-wide inspections, we identified inefficiencies and developed an Energy Efficiency Project (VAP) to address these issues. As part of this initiative, we launched energy efficiency projects to improve the efficiency of compressed air dryers and purge systems in the PVC section. This allows us to increase the use of energy-efficient equipment. To track the savings achieved, we plan on installing compressed air monitoring systems in the PVC and Flat-Rolled Products sections. We have completed the project preparations and submitted them to the Ministry of Energy and Natural Resources.

### **Energy Efficiency Through Transformer Insulation**

The project aims to prevent dust intrusion into transformer centers that are not fully independent of the external environment and are integrated into the transformer rooms. We implemented the required insulation measures to fully seal the panel rooms from external environments. Consequently, we minimized thermal losses caused by dust intrusion, achieved more efficient cooling, and reduced energy consumption.



# Waste Management and Circularity

The increasing pressure on limited natural resources necessitates their optimal use and the design of processes according to the principles of the circular economy. Aluminum’s unique ability to be recycled endlessly without losing quality or value presents a prime opportunity for circularity in our industry. **ASAŞ continues its focus on maximizing the efficient use of resources, minimizing waste generation at its source, and ensuring that a large proportion of waste is recycled into secondary aluminum production under the circular economy model.**

For waste that cannot be recycled internally, we partner with licensed firms for external recycling services. Adopting a circular economy approach not only improves waste management practices but also significantly enhances regulatory compliance and drives operational efficiency.

Throughout our production areas, we sort and collect waste like paper/cardboard, plastic, metal, glass, organic waste, and hazardous materials at the source. Materials such as treatment sludge and foundry sand are repurposed as alternative raw materials, while aluminum scrap, sourced both internally and externally, is melted down in our furnaces and reused.

All ASAŞ facilities are Zero Waste-certified.



In our operational areas, departments label their waste using the In-Department Waste Declaration Label and regularly transport them to designated waste areas. From there, the Administrative Affairs Unit coordinates waste collection and transport to our temporary storage facility, The waste is then sorted into separate compartments and sent to licensed firms either daily or weekly. All records are managed digitally via the SAP system. During our monthly HSE (Health, Safety, and Environment) audits, any issues related to waste management are identified, and corrective actions are assigned to relevant departments for follow-up.

In 2023, ASAŞ generated approximately 23,000 metric tons of waste, recovering over 22,000 metric tons, while around 840 metric tons of hazardous waste were properly disposed of.

In 2023, ASAŞ recovered 96 percent of its total waste.



## Chemical Management

At ASAŞ, we are committed to ensuring the safe and responsible use of chemicals within our operations, adhering to legal standards and minimizing environmental impact. We assess the risks associated with the chemicals used in our processes, adhering to safe storage and usage protocols. We also invest in research and innovation to evaluate alternative chemicals and reduce environmental impacts. Based on our assessments, we replace more hazardous chemicals with safer alternatives in our processes. For every new chemical we source, we request a Material Safety Data Sheet (MSDS/SDS).

In managing chemical spills, we employ best practices, including collection pits, spill treatment lines, emergency kits, and overflow containers.

Our emergency response procedures in case of chemical spills are outlined in our Emergency Instructions. During our monthly HSE (Health, Safety, and Environment) audits, any issues related to chemical spills are identified, and corrective actions are assigned to relevant departments for follow-up. In 2023, we conducted a chemical spill drill near the diesel tank at the PVC manufacturing plant, and no chemical spill incidents occurred throughout the year.

In specific operations like painting and rolling, we recover thinner and rolling oil, while in anodizing, we reclaim acids to reuse them before they turn into waste. **Due to process improvements in 2023, acid usage in our wastewater treatment facilities decreased by 38 percent compared to the previous year.** We manage chemical waste management through licensed contractors, focusing on industrial symbiosis and recovery wherever possible, consistent with circular economy principles.

In addition to these efforts, we also emphasize chemical safety in employee training programs, encouraging proper use of personal protective equipment (PPE) to ensure occupational health and safety.

## Waste Management Awareness Initiatives

At ASAŞ, we organize a variety of initiatives to raise awareness and enhance employees' understanding of waste management throughout the year. We conduct regular training sessions for personnel responsible for waste collection and segregation, and orientation sessions for new hires focus on waste reduction, safe chemical handling, and response to spills. For current employees, digital platforms offer e-learning on Zero Waste and waste management hierarchy as reminders. Additionally, we provide waste collection points in cafeterias for household vegetable waste oils and electronic waste.

As a key stakeholder in the aluminum industry, ASAŞ participates in industry-wide initiatives aimed at reducing environmental impacts and supporting the climate transition. Accordingly, we actively contribute to the Recycling Inventory Study, part of the Sustainability and Certification Center Project conducted by the Turkish Aluminium Industrialists Association (TALSAD) to align the Turkish aluminum industry with the EU's Green Deal policies.



# Water Management

At ASAŞ, we focus on reducing water usage per unit of production, supporting efficient water management through innovative projects. Reducing our water footprint and operating within a water risk management plan are among our top priorities. To strengthen these efforts, we are integrating water-specific risk assessments into our broader risk evaluation processes. We utilize groundwater across all production facilities, calculating our water footprint according to the ISO 14046 Water Footprint Standard, and preparing a detailed inventory report. In 2023, we achieved a 6 percent year-on-year decrease in total water withdrawal, lowering it to 789,000 m<sup>3</sup>. However, due to decreased production volumes, water consumption per product actually rose to 5.33 metric tons/m<sup>3</sup>.<sup>11</sup>

Currently, we are upgrading the water infrastructure in our facility by leveraging the best available techniques to analyze both domestic and industrial water systems. To further improve efficiency, we are developing a digital water management system aimed at tracking consumption, quality, and recovery, which we plan to launch in 2025 and submit for TÜBİTAK support. While we work to reduce water consumption, we also ensure effective wastewater management. We operate two separate treatment facilities where used water is treated before being discharged into the receiving environment. In line with the regulations, we conduct regular monitoring to ensure that our discharge remains within permissible limits. These treatment facilities operate on three shifts, and wastewater is continuously monitored as it is discharged into the receiving environment.

While we conduct daily analyses in our laboratories, we commission third-party organizations to carry out monthly wastewater analyses to ensure compliance with discharge standards. Our efforts also include minimizing chemical usage during treatment to improve water quality. We are also working on water recovery projects. In our most water-intensive facilities, such as in painting operations, we reuse the final rinse water in pre-washing processes through internal systems. These initiatives have already led to a 2.8 percent reduction in total water consumption, with plans to further increase this percentage as recovery efforts continue. In office environments, we are transitioning to sensor-activated faucets to promote water conservation. We also raise employee awareness of efficient water usage through engaging training sessions and strategically placed informational posters throughout the workplace. During orientation sessions, we incorporate educational content to promote mindful water usage and follow up with periodic brief training sessions that reinforce these practices.



11-For production volumes, we used the combined shipment data of the aluminium extrusion manufacturing plant and flat-rolled product manufacturing plant.





## Biodiversity and Land Use

Global environmental crises not only intensify climate change risks but also result in widespread and irreversible damage to ecosystems, leading to a range of nature-based challenges and ecological disruptions. The protection, restoration, and renewal of biodiversity and ecosystems are essential not only for environmental sustainability but also for the health and well-being of societies and economies.

Addressing global crises today increasingly involves adopting a holistic approach that prioritizes nature-based solutions. To this end, the United Nations declared the period starting in 2020 as the Decade on Ecosystem Restoration, during which large-scale restoration projects have been initiated worldwide to create both environmental and economic benefits.

At ASAŞ, we align our efforts with the Health, Safety, and Environment (HSE) Policy to actively identify and mitigate biodiversity risks. Our initiatives are focused on preserving and enhancing biodiversity in all regions where we operate.

Accordingly, in 2022, we developed our first biodiversity action report, led by expert academics in flora and fauna. Through this comprehensive assessment, we identified ecologically sensitive areas, evaluated ecological risks, and uncovered biodiversity potentials using field observations and literature reviews. Subsequently, we digitized and mapped this data. We also developed and implemented an invasive species removal plan.

In accordance with our Biodiversity Action Plan, we have implemented a comprehensive work program and continue to execute initiatives. To assess our impact and mitigate potential harm, we are actively monitoring habitats and species as part of this action plan, with efforts extending through 2023 and 2024.

**We remain conscious of our responsibility to nature in the areas where we operate. Before any new investments, we ensure that comprehensive biodiversity and soil analyses are performed. These assessments, conducted with the help of hydrologists, biologists, and soil experts, guide our decisions and ensure we meet all necessary environmental obligations.** In existing operational areas, monthly biodiversity monitoring is carried out by biologists, and the results are compiled into monthly reports. In areas where new investments are planned, we collaborate with soil experts to collect soil samples, which we then donate to those in need through local institutions and communities.

Before any work begins in new investment areas, we consult with hydrologists, biologists, and soil experts. These experts provide briefings to working teams and conduct training sessions for management teams. Furthermore, we install biodiversity warning signs in working areas to raise awareness and promote biodiversity conservation.





# Appendices





## National and International Certificates

Our portfolio of national and international certifications, integral to our corporate governance framework and values, demonstrates our unwavering commitment to regulatory compliance and adherence to industry standards across all operational domains. A substantial portion of our management objectives and activities across all manufacturing plants are executed through the management systems outlined below.

STANDARDS / CERTIFICATES	Aluminum Extrusion	Flat-Rolled Products and Composite Panel	PVC, Shutter, Roller Shutter
ASI Performance Standard	•	•	•
ISO 9001 Quality Management System	•	•	•
ISO 14001 Environmental Management System	•	•	•
ISO 50001 Energy Management System	•	•	•
ISO IEC 27001 Information Security Management System	•	•	•
ISO 45001 Occupational Health and Safety Standard	•	•	•
EN 15085 – 2 Welding of Railway Vehicles and Components	•		
IATF 16949 - Automotive Quality Management System	•	•	
ISO TS 22163 (IRIS) Railway Industry Quality Management System	•		
KOSHER Certificate		•	
EN 40-6 / EN 15085-2 / TS EN 755-1 / EN 1090-1 / EN 1090-3 / EN 15088 CE Standards	•		
QUALANOD Specifications	•		
QUALICOAT Specifications	•		
NSF Certification		•	
RAL Certification			•
TS EN 12068 – 1 Cathodic Protection Certificate			•
TS EN 12020-1 Standard	•		
TS EN 755-1 Standard	•		
Halal Certificate		•	
TS EN ISO 3834-2 Standard	•		
TS 4922 Standard	•		
EN 15088 Certificate of Factory Production Control	•	•	

## Achievements and Awards



### Environmental Award for Large-Scale Enterprises, Metal–Machinery Industry

At the 29th Şahabettin Bilgisu Environmental Awards Ceremony organized by the Kocaeli Chamber of Industry, ASAŞ won 1st place in the Environmental Award for the Metal–Machinery Industry, Large-Scale Enterprises Category, among 23 participating companies.



### Sustainable Business Awards

We made it to the finals at the Sustainable Business Awards with our project on Integrations to the Aluminum Smelting Process to Increase the Use of Painted Scrap Aluminum to Contribute to Green Transformation.



### Innovation Results Project (Türkiye Exporters Assembly - TIM)

In the Innovation Results Project (TIM), we made it to the finals with our InovaLig initiative.



### We received a certificate from TALSAD-QSI and Fatih Sultan Mehmet University.

We also received recognition from TALSAD-QSI and Fatih Sultan Mehmet University for our participation in a carbon calculation project, which involved selected firms from the aluminum industry and was supported by the Istanbul Development Agency (ISTKA).



### Türkiye Productivity Project Awards Competition (VPO)

Additionally, we were honored with an Honorable Mention at the Türkiye Productivity Project Awards (VPO) for our work on developing an Automated Multi-Mold System for Mechanical Process Presses.



### We received a plaque of appreciation from the Sakarya Provincial Health Directorate.

We also received a plaque of appreciation from the Sakarya Provincial Ambulance Services Chief Physician for our contributions.



## Achievements and Awards



### We participated in the Türkiye Productivity Project Awards Competition (VPO) with two projects.

- Strengthening the Melting Furnace for Automotive Alloys and Incorporating Painted Scrap Aluminum into Recycling
- Digital OS/IQ Project



### We participated in KALDER's ANKARA 2023 event.

- At KALDER's ANKARA 2023 event, we showcased kaizen improvements within our manufacturing plants.



### We entered the Sustainable Business Awards with four projects.

- Automation Transformation in Existing Lighting
- The Code Project for Creating an Ergonomic Workspace by Stacking Heavy Loads without Human Effort
- The Code Project to Remove Employees from Risky Operation Points Using Robotic Systems
- The Code Project for Safe Work at Heights – Eyes on the Sky



### Ministry of Youth and Sports Awards

Under events organized by the Ministry of Youth and Sports, we earned multiple awards:

- 1st place in the Basketball Türkiye Championship Junior Boys 3\*3 Basketball Tournament held in Sivas.
- 2nd place in the SAKARYA U18 Girls League Interprovincial Basketball Tournament.
- 1st place in the YEKTA ÖNER SEASON U16 Girls League Basketball Tournament held in Kocaeli.
- 1st place in the SAKARYA U16 Boys League Interprovincial Basketball Tournament.
- 1st place in the SAKARYA U16 Girls League Interprovincial Basketball Tournament.

# Collaborations and Memberships

ASAŞ Aluminum builds strong partnerships through various channels with institutions and organizations that contribute to our corporate strategy and sustainability performance. We aim to foster mutually beneficial relationships through collaborations. Through corporate memberships in sectoral associations, professional organizations, and chambers of commerce, we stay updated on the latest developments and best practices in the industry, and engage with industry stakeholders by leveraging our corporate knowledge and experience.

## Collaborations

- Universität Bremen (University of Bremen)
- European Aluminium
- Graz University of Technology
- Max-Planck-Gesellschaft (Max-Planck-Gesellschaft)
- University of Leicester
- IVL Swedish Environmental Research Institute
- KIOS Research and Innovation Center of Excellence
- Instytut Energetyki
- Università degli Studi di Napoli Federico II (University of Naples Federico II)
- Institut Supérieur de Mécanique de Paris
- CIRCE-Innovation Technology Centre
- Fundación Cidaut
- Scientific and Technological Research Council of Türkiye (TÜBİTAK)
- Fraunhofer-Gesellschaft (Fraunhofer Society)
- SINTEF Research Institutes
- International Systems Institute
- Łukasiewicz Research Network
- Technische Hochschule Ingolstadt, THI
- Centre Tecnològic de Catalunya, Eurecat (Telecommunications Technology Center of Catalonia)
- Boğaziçi University
- Turkish-German University
- Sakarya University of Applied Sciences
- Istanbul University
- Sakarya University
- Sabancı University
- Atılım University
- Işık University
- Istanbul Technical University
- Gebze Technical University
- Yıldız Technical University
- Karadeniz Technical University
- Bursa Uludağ University
- Kocaeli University
- Pamukkale University
- Northumbria University
- Brunel University
- Samsun Ondokuz Mayıs University
- Mersin University
- TOBB University of Economics and Technology
- Eskişehir Technical University
- Eskişehir Osmangazi University
- Marmara University
- Istanbul University - Cerrahpaşa
- IREC – Energy Research Foundation
- University of Liège (ULiège)
- Università degli Studi di Padova, UNIPD
- University of Cyprus
- University of Applied Sciences Upper Austria

## Memberships

- Business Council for Sustainable Development Türkiye (BCSD Türkiye)
- Turkish Aluminium Industrialists Association (TALSAD)
- Association for Surface Treatment on Aluminium (AYID)
- Automotive Suppliers Association of Türkiye (TAYSAD)
- Foreign Economic Relations Board (DEİK) – Türkiye-U.S. Business Council (TAK)
- German-Turkish Chamber of Industry and Commerce
- Istanbul Chamber of Industry (ISO)
- Istanbul Chamber of Commerce (ITO)
- Istanbul Mineral and Metals Exporters' Association (IM-MIB)
- Turkish Quality Association (KalDer)
- Window Manufacturers' Quality Association (PÜKAB)
- Anatolian Rail Transportation Systems Cluster (ARUS)
- Facade Industrialists and Business People Association (CEPHEDER)
- Women Entrepreneurs Association of Türkiye (KAGIDER)
- Türkiye Exporters Assembly (TIM)
- Istanbul Ferrous and Non-Ferrous Metals Exporters' Association (IDDMIB)
- Akyazı Chamber of Commerce
- Sakarya Chamber of Commerce and Industry
- ASAŞ Sports Association
- Aluminium Stewardship Initiative (ASI)
- European Aluminum



# Sustainability Performance Indicators

## Environmental Performance Indicators / Energy Consumption

Total Energy Consumption	2021	2022	2023
Electricity Consumption (GJ)	679,201	664,530	618,549
Natural Gas Consumption (GJ)	1,589,946	1,509,458	1,364,485

Aluminum Flat-Rolled Product Manufacturing Plant	2021	2022	2023
Electricity Consumption (GJ)	368,717	365,036	307,257
Natural Gas Consumption (GJ)	714,314	745,888	620,278

Aluminum Extrusion Manufacturing Plant	2021	2022	2023
Electricity Consumption (GJ)	233,568	228,114	232,140
Natural Gas Consumption (GJ)	863,930	750,672	732,413

Composite Panel Manufacturing Plant	2021	2022	2023
Electricity Consumption (GJ)	31,056	26,406	29,798
Natural Gas Consumption (GJ)	293,56	318,23	341,02

PVC Profile and Shutter Manufacturing Plant	2021	2022	2023
Electricity Consumption (GJ)	45,858	44,975	49,353
Natural Gas Consumption (GJ)	11,408	12,579	11,453

# Sustainability Performance Indicators

## Energy Intensity

Aluminum Flat-Rolled Product Manufacturing Plant	2021	2022	2023
Electric Energy Intensity (GJ/metric ton)	3.03	3.29	3.45
Natural Gas Energy Intensity (GJ/metric ton)	5.88	6.71	6.97

Composite Panel Manufacturing Plant	2021	2022	2023
Electric Energy Intensity (GJ/metric ton)	1.04	1.18	0.93
Natural Gas Energy Intensity (GJ/metric ton)	0.01	0.01	0.01

Aluminum Extrusion Manufacturing Plant	2021	2022	2023
Electric Energy Intensity (GJ/metric ton)	3.73	3.48	3.96
Natural Gas Energy Intensity (GJ/metric ton)	13.79	11.46	12.50

Energy Savings (GJ)	2021	2022	2023
Annual Energy savings achieved <sup>12</sup>	4,924	0	6,384

PVC Profile and Shutter Manufacturing Plant	2021	2022	2023
Electric Energy Intensity (GJ/metric ton)	2.43	2.57	2.51
Natural Gas Energy Intensity (GJ/metric ton)	0.60	0.72	0.58

Waste Heat Generation (kg)	2021	2022	2023
Hot Water	769,814	537,778	547,536
Steam	15,313,575	9,679,844	9,601,092

<sup>12</sup>- No projects were completed in 2022, as the ongoing initiatives are set to be finalized over a three-year term.



# Sustainability Performance Indicators

## Emissions

Green House Gas Emissions (metric ton CO <sub>2</sub> e) (GHG)	2021 *	2022 *	2023 **
Scope 1	87,382	104,519	79,843
Scope 2 (Market Based)	0	0	0
Scope 3	2,728,980	1,867,461	1,699,411
<b>Total</b>	<b>2,816,362</b>	<b>1,971,979</b>	<b>1,779,253</b>

Greenhouse Gas Intensity (metric ton CO <sub>2</sub> e/metric ton product) (MRV)	2021	2022	2023
Flat-rolled Products Manufacturing Plant	0.31	0.28	0.36
Aluminum Extrusion Manufacturing Plant	0.5	0.44	0.47

## Water Management

Water Withdrawal	2021	2022	2023
Groundwater (m <sup>3</sup> )	849,810	840,226	789,629
Water consumed per unit of product (m <sup>3</sup> /metric ton) <sup>13</sup>	4.56	4.75	5.33

Water Discharge (m <sup>3</sup> )	2021	2022	2023
Surface water	373,398	301,291	293,092

Water Consumption (m <sup>3</sup> )	2021	2022	2023
Water consumption volume	476,412	538,935	496,537

\*: Verified by a third party.

\*\* : Verification is ongoing by a third party.

<sup>13</sup>For production volumes, we used the combined shipment data of the aluminum extrusion manufacturing plant and flat-rolled product manufacturing plant.

# Sustainability Performance Indicators

## Waste Management

Non-Hazardous Waste Disposed (metric ton)	2021	2022	2023
Non-hazardous waste sent to landfill/storage	347	-	-
<b>Disposed Hazardous Waste (metric ton)</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
Hazardous waste sent to landfill/storage	0.19	46.18	25.21
Hazardous waste incinerated for energy recovery (metric tons)	747	722	815
<b>Total Hazardous Waste Disposed</b>	<b>747</b>	<b>768</b>	<b>840</b>

Recovered Waste (metric ton)	2021	2022	2023
Recovered/reused non-hazardous waste	16,576	15,604	15,826
Recovered/reused hazardous waste	6,900	8,235	6,392
<b>Total recovered waste</b>	<b>23,476</b>	<b>23,839</b>	<b>22,218</b>

Waste per Unit of Production <sup>14</sup>	2021	2022	2023
Waste generated per unit of product (metric ton/metric ton)	0.13	0.13	0.15

14- For production volumes, we used the combined shipment data of the aluminum extrusion manufacturing plant and flat-rolled product manufacturing plant.



# Sustainability Performance Indicators

## Social Performance Indicators / Employee Demographics

Employees	2021		2022		2023	
	Female	Male	Female	Male	Female	Male
Number of employees	242	2,611	241	2,771	255	2,717
Total number of employees	2,853		3,012		2,972	
Number of white-collar employees	197	391	196	430	205	426
Total number of white-collar employees	588		626		631	
Number of blue-collar employees	45	2,220	45	2,341	50	2,291
Total number of blue-collar	2,265		2,386		2,341	

Employee Distribution by Employment Type	2021		2022		2023	
	Female	Male	Female	Male	Female	Male
Total full-time employee count	242	2,611	241	2,771	255	2,717
Total part-time employee count	0	0	0	0	0	0
Total	2,853		3,012		2,972	

Employee Distribution by Educational Attainment	2021	2022	2023
Primary School	779	795	728
High-School	1,222	1,312	1,319
University degree and higher	852	905	925

Age Distribution of Employees	2021		2022		2023	
	Female	Male	Female	Male	Female	Male
30 and younger	63	826	68	909	78	906
Between 30-50	168	1,634	159	1,691	163	1,634
50 and older	11	151	14	171	14	177

Employees by Years of Service	2021		2022		2023	
	Female	Male	Female	Male	Female	Male
0-5 years	122	1,258	114	1,271	129	1,238
5-10 years	86	769	91	800	83	680
10 years and longer	34	584	36	700	43	799

# Sustainability Performance Indicators

## Employee Demographics

Other Equal Opportunity Indicators	2021		2022		2023	
	Female	Male	Female	Male	Female	Male
Employees in STEM roles	26	51	27	53	28	46

Employees with Disabilities	2021		2022		2023	
	Female	Male	Female	Male	Female	Male
Number of employees with disabilities	6	72	6	84	5	88

Executives by Age	2021		2022		2023	
	Female	Male	Female	Male	Female	Male
30 and younger	1	0	0	0	1	0
Between 30-50	20	89	25	88	24	83
50 and older	4	5	4	9	3	11

Executives by Organizational Level	2021		2022		2023	
	Female	Male	Female	Male	Female	Male
Board of Directors	0	3	0	3	0	3
Director	1	10	1	12	1	14
Manager	8	34	12	32	11	35

Employees by Contract Type	2021		2022		2023	
	Female	Male	Female	Male	Female	Male
Permanent employment contract	242	2,611	241	2,771	255	2,717
Fixed-term employment contract	0	0	0	0	0	0
Employees covered by collective bargaining agreement	0	0	0	0	0	0



# Sustainability Performance Indicators

## Performance and Talent Management

Employee Turnover	2021	2022	2023
Number of employees leaving	123	470	587
Number of employees voluntarily leaving	96	271	283
Employee turnover rate (%)	20.62	16	19.79

Performance Management	2021	2022	2023
Number of white-collar employees under regular performance review	613	619	520
Number of blue-collar employees under regular performance review	2,235	2,386	2,341

Engagement Survey Results	2022	2023
Employee engagement/satisfaction survey results	75%	74%

## Training and Development

Total Training	2021	2022	2023
Total training hours (person-hours)	18.52	27.35	24.14

Leadership Training	2023	
	Female	Male
Number of employees who received leadership training by gender	14	20

Total leadership training hours (person-hours)	1,231
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# Sustainability Performance Indicators

## OHS

OHS Performance	2021	2022	2023
Number of ISO 45001-certified facilities	5	5	5
What is the standard number of hours you define for a full workday?	7.5	7.5	7.5
How many workdays do you consider in your fiscal year?	365	365	365
Total working hours (hours)	5,695,283	6,509,984	6,576,039
OHS Training	2021	2022	2023
OHS training hours per employee (person-hours)	17.2	18.8	14.53
OHS training hours per contractor (person-hours)	-	-	1.50
OHS Metrics	2021	2022	2023
Number of workdays lost due to accidents	10,305	2,939	3,170
Number of accidents	84	139	139
Number of Fatal Accidents	2021	2022	2023
Direct employee	1	0	0
Subcontractor employee	0	0	0

Occupational Diseases	2021	2022	2023
Direct employee	0	0	7
Subcontractor employee	0	0	0
Number of Employee	2021	2022	2023
Direct employee*	107,577	57,098	64,025
Subcontractor employee	0	0	0
OHS Performance	2021	2022	2023
Incident Rate (IR) (%) **	2.71	4.27	4.23
Fatality Rate (%) ***	0,035117	0	0
Occupational Disease Rate (ODR ) (%) ****	0	0	0.212894
Lost Day Rate (LDR) (%) *****	361.8784	90.29208	96.41062

\*Based on workforce loss due to illness.

\*\* Total number of accidents \* 200,000 / Total working hours (hours)

\*\*\* Total number of fatal accidents \* 200,000 / Total working hours (hours)

\*\*\*\* Total number of occupational diseases \* 200,000 / Total working hours (hours)

\*\*\*\*\* Number of lost days due to injuries \* 200,000 / Total working hours (hours)



# Sustainability Performance Indicators

## R&D and Innovation

R&D and Innovation Indicators	2021	2022	2023
R&D and innovation expenditure (TRY)	22,406,830.7	46,362,262.1	57,820,381.5
R&D expenditure aimed at improving environmental performance (TRY)	4,759,776.10	18,449,958.77	21,107,148.86
Number of R&D and Innovation employees	88	85	67
Completed projects	19	18	10
R&D-focused projects per person	1.56	0.93	1.45
Number of patent applications	4	1	0
Number of registered patents	4	2	3
Number of registered utility models	0	0	1
Number of registered designs/trademarks	9	7	9
Number of fair, conference, etc. participation	4	8	15

# GRI Content Index





## GRI Content Index

<b>Statement of use</b>	ASAŞ Alüminyum has reported the information cited in this GRI content index for the period 01.01.2023-31.12.2023 with reference to the GRI Standards.
<b>GRI 1 used</b>	GRI 1: Foundation 2021

GRI STANDARD	DISCLOSURE	LOCATION/ PAGE NO, SOURCE AND/OR DIRECT ANSWERS
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### General Disclosures

GRI 2: General Disclosures 2021	2-1 Organizational details	9-12
	2-2 Entities included in the organization's sustainability reporting	4
	2-3 Reporting period, frequency and contact point	4
	2-4 Restatements of information	No re-statements were made in this scope during the reporting period.
	2-5 External assurance	No external assurance was undertaken.
	2-6 Activities, value chain and other business relationships	9-12, 21-22
	2-7 Employees	61, 94
	2-9 Governance structure and composition	14-16
	2-10 Nomination and selection of the highest governance body	14
	2-11 Chair of the highest governance body	14
	2-12 Role of the highest governance body in overseeing the management of impacts	14-15
	2-13 Delegation of responsibility for managing impacts	14-16
	2-14 Role of the highest governance body in sustainability reporting	16
	2-15 Conflicts of interest	19

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<b>GRI STANDARD</b>	<b>DISCLOSURE</b>	<b>LOCATION/ PAGE NO, SOURCE AND/OR DIRECT ANSWERS</b>
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### General Disclosures

GRI 2: General Disclosures 2021	2-16 Communication of critical concerns	19, 31-33
	2-17 Collective knowledge of the highest governance body	14-15
	2-18 Evaluation of the performance of the highest governance body	14-15
	2-19 Remuneration policies	56, 61
	2-20 Process to determine remuneration	56, 61
	2-22 Statement on sustainable development strategy	28-29, 36-38, 77
	2-23 Policy commitments	14, 29
	2-24 Embedding policy commitments	14, 29
	2-25 Processes to remediate negative impacts	17-18, 31
	2-26 Mechanisms for seeking advice and raising concerns	19, 31
	2-27 Compliance with laws and regulations	17-19
	2-28 Membership associations	89
	2-29 Approach to stakeholder engagement	31-33
	2-30 Collective bargaining agreements	95



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<b>GRI 1 used</b>	GRI 1: Foundation 2021

<b>GRI STANDARD</b>	<b>DISCLOSURE</b>	<b>LOCATION/ PAGE NO, SOURCE AND/OR DIRECT ANSWERS</b>
<b>Material Topics</b>		
GRI 3: Material Topics 2021	3-1 Process to determine material topics	34
	3-2 List of material topics	35
	3-3 Management of material topics	34-38
<b>Economic Performance</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	13
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	13
	201-2 Financial implications and other risks and opportunities due to climate change	18
<b>Anti-corruption</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	19
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	19
	205-3 Confirmed incidents of corruption and actions taken	19

## GRI Content Index

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<b>GRI 1 used</b>	GRI 1: Foundation 2021

<b>GRI STANDARD</b>	<b>DISCLOSURE</b>	<b>LOCATION/ PAGE NO, SOURCE AND/OR DIRECT ANSWERS</b>
<b>Energy</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	79
GRI 302: Energy 2016	302-1 Energy consumption within the organization	79
	302-3 Energy intensity	91
	302-4 Reduction of energy consumption	79-80
<b>Water and Effluents</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	83
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	83
	303-2 Management of water discharge-related impacts	83
	303-3 Water withdrawal	92
	303-4 Water discharge	92
	303-5 Water consumption	92
<b>Biodiversity</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	84
GRI 304: Biodiversity 2016	304-2 Significant impacts of activities, products and services on biodiversity	84



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<b>GRI 1 used</b>	GRI 1: Foundation 2021

GRI STANDARD	DISCLOSURE	LOCATION/ PAGE NO, SOURCE AND/OR DIRECT ANSWERS
<b>Emissions</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	76-78
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	92
	305-2 Energy indirect (Scope 2) GHG emissions	92
	305-3 Other indirect (Scope 3) GHG emissions	92
	305-4 GHG emissions intensity	92
	305-5 Reduction of GHG emissions	76-78
<b>Waste</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	81
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	81
	306-2 Management of significant wasterelated impacts	81
	306-3 Waste generated	81
	306-5 Waste directed to disposal	81-93

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<b>GRI 1 used</b>	GRI 1: Foundation 2021

GRI STANDARD	DISCLOSURE	LOCATION/ PAGE NO, SOURCE AND/OR DIRECT ANSWERS
<b>Employment</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	58
GRI 401: Employment 2016	401-1 New employee hires and employee turnover	96
<b>Occupational Health and Safety</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	64-68
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	64-68
	403-2 Hazard identification, risk assessment, and incident investigation	97
	403-3 Occupational health services	64-68
	403-4 Worker participation, consultation, and communication on occupational health and safety	64-68
	403-5 Worker training on occupational health and safety	64-68,97
	403-6 Promotion of worker health	64-68
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	64-68
	403-8 Workers covered by an occupational health and safety management	64-68,97
	403-9 Work-related injuries	97
	403-10 Work-related ill health	97



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<b>GRI 1 used</b>	GRI 1: Foundation 2021

<b>GRI STANDARD</b>	<b>DISCLOSURE</b>	<b>LOCATION/ PAGE NO, SOURCE AND/OR DIRECT ANSWERS</b>
<b>Training and Education</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	58
GRI 404: Training and Education	404-1 Average hours of training per year	59
	404-2 Programs for upgrading employee	58-60
	404-3 Percentage of employees receiving regular performance and career development reviews	96
<b>Diversity and Equal Opportunity</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	61-62
GRI 405: Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	61-62
<b>Supplier Social Assessment</b>		
GRI 3: Material Topics 2021	3-3 Management of material topics	43
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social	43

# GRI Content Index

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GRI 1 used	GRI 1: Foundation 2021

GRI STANDARD	DISCLOSURE	LOCATION/ PAGE NO, SOURCE AND/OR DIRECT ANSWERS
R&D and Innovation		
GRI 3: Material Topics 2021	3-3 Management of material topics	47-52
Community Impact		
GRI 3: Material Topics 2021	3-3 Management of material topics	69-71
Customer Satisfaction		
GRI 3: Material Topics 2021	3-3 Management of material topics	40-42

# ASI Performance Index

CATEGORY	ASI STANDARD CLAUSE	ASI STANDARD CLAUSE	DISCLOSURE LOCATION / DIRECT RESPONSE
A. Governance	1. Business Integrity	1.1. Legal Compliance	17-19
A. Governance	1. Business Integrity	1.2. Anti-Corruption	19
A. Governance	1. Business Integrity	1.3. Code of Conduct	15-16,19, 31
A. Governance	2. Policy and Management	2.1.a. Environmental, Social and Governance Policy (Implement and Maintain)	16, 43, 46, 63, 64
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