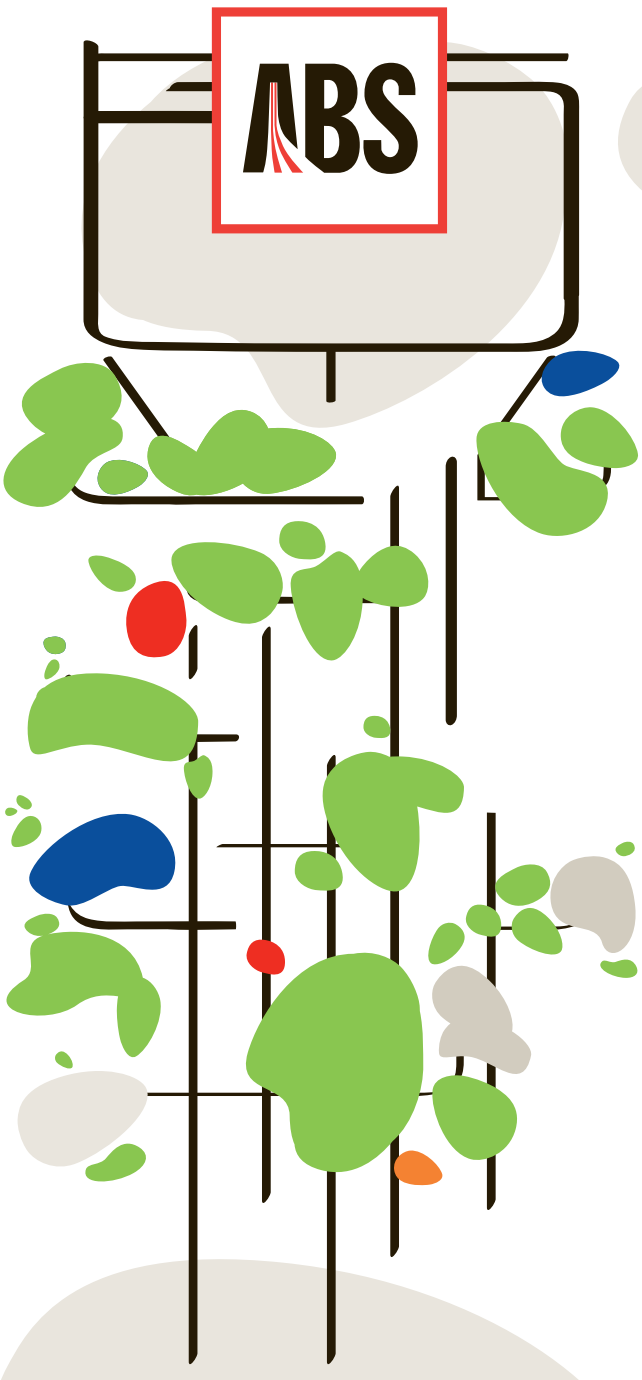
# SUSTAINABILITY REPORT

2023



SECURITYSELECTIONSENIORSENSESERVICESFERE**SHARE**SHIFTSHIPPINGSH
TERVIEWSHOWSITUATIONSKILLSSKYLINESMARTSMILESOCIALSOLUTIONSS
SOULSOURCINGSPIRITSPORTSTAFFSTAGESTANDARDSTARTSTORAGESTORYT
GSTRUCTURESTUDYSTYLESUCCESSFULSUGGESTIONSUMMARYSUMMITSUPP
TYSYMPOSIUMSYNERGYSURVEYSAFETYSALESSALUTESAMPLE**SCRAP**SATISFA
SELECTIONSAFETYSEMESTERSENIORSERVICESHIFTSHIPPINGSHOOTSKILLS
CIALSOLUTIONSOLVING-PROBLEMSOONSOULSOURCHINGSPIRITSTAFFSTAG
LINGSTRATEGYSTUDY**SUMMARY**SUPPORTSYMPOSIUMSYNERGYSAMPLESCHE
SAFETYSALESSALUTESAMPLESATISFACTIONSAVINGSAYSCHEDULESCHOOLS
CURITYSELECTIONSENIORSENSESERVICESFERESHARESHIFTSHIPPINGSHO
VIEWSHOWSITUATIONSKILLS**SOUL**SKYLINESMARTSMILESOCIALSOLUTIONS
SOULSOURCINGSPIRITSPORTSTAFFSTAGESTANDARDSTARTSTORAGESTORYT
STRUCTURESTUDYSTYLESUCCESSFULSUGGESTIONSUMMARYSUMMITSUPPO
POSIUMSYNERGYSURVEYSAFETYSALESSALUTESAMPLESATISFACTIONSEARC
FETYSEMESTERSENIORSERVICE**SECURITY**SHIFTSHIPPINGSHOOTSKILLSSKY
SOLUTIONSOLVING-PROBLEMSOONSOULSOURCHINGSPIRITSTAFFSTAGESTE
GSTRATEGYSTUDYSUMMARYSUPPORTSYMPOSIUM**SOCIAL**SYNERGYSAMPLES
SAFETYSALESSALUTESAMPLESATISFACTIONSAVINGSAYSCHEDULESCHOOLS
SECURITYSELECTIONSENIORSENSESERVICESFERESHARESHIFTSHIPPINGSH
TERVIEWSHOWSITUATIONSKILLSSKYLINESMARTSMILESOCIALSOLUTIONSS
SOULSOURCINGSPIRITSPORTSTAFFSTAGESTANDARDSTARTSTORAGESTORYT
STRUCTURE**SEMESTER**STUDYSTYLESUCCESSFULSUGGESTIONSUMMARYSUM
NABILITYSYMPOSIUMSYNERGYSURVEYSAFETYSALESSALUTESAMPLESATISFA
SELECTIONSAFETYSEMESTERSENIORSERVICESHIFTSHIPPINGSHOOT**SKILLS**
CIALSOLUTIONSOLVING-PROBLEMSOONSOULSOURCHINGSPIRITSTAFFSTAG
LINGSTRATEGYSTUDYSUMMARY**SUPPORT**SYMPOSIUMSYNERGYSAMPLESCHE
SAFETYSALESSALUTESAMPLESATISFACTIONSAVINGSAYSCHEDULESCHOOLS
SECURITYSELECTIONSENIORSENSESERVICESFERESHARESHIFTSHIPPINGSH
TERVIEWSHOWSITUATIONSKILLSSKYLINESMARTSMILESOCIALSOLUTIONSS
SOULSOURCINGSPIRITSPORTSTAFFSTAGESTANDARDSTARTSTORAGE**STORYT**
GSTRUCTURESTUDY**STYLE**SUCCESSFULSUGGESTIONSUMMARYSUMMITSUPP
TYSYMPOSIUMSYNERGYSURVEYSAFETYSALESSALUTESAMPLESATISFACTION
SAFETYSEMESTERSENIORSERVICESHIFTSHIPPINGSHOOTSKILLSSKYLINESM
TIONSOLVING-PROBLEMSOONSOUL**SUCCESS**SOURCHINGSPIRITSTAFFSTAG
LINGSTRATEGYSTUDYSUMMARYSUPPORTSYMPOSIUMSYNERGYSAMPLESCHE
SAFETYSALESSALUTESAMPLESATISFACTIONSAVINGSAYSCHEDULESCHOOLS
SELECTIONSENIORSENSESERVICESFERESHARESHIFTSHIPPINGSHOOTOFTH
TIONSKILLSSKYLINESMARTSMILESOCIALSOLUTIONSSOLVING-PROBLEMSOO
FSTAGESTANDARDSTARTSTORAGESTORITELLINGSTRATEGYSTRONGSTRUCTU
GESTIONSUMMARYSUMMITSUPPORTSISAKSUSTAINABILITYSYMPOSIUMSYN

ABS sustainability

# SUSTAINABILITY REPORT

## 2023

2022-2023 Voluntary Non-Financial Statement
pursuant to Italian Legislative Decree 254/2016

# TABLE OF CONTENTS

# LETTERS TO THE STAKEHOLDERS

In this third edition of the Sustainability Report, ABS takes a decisive step towards consolidating the decarbonisation of its products and processes, providing a transparent and complete picture of the key directions that have guided and will guide its investment decisions.

The new Strategic Plan outlined a long-term project that will lead us to a net reduction in our overall emissions by 2030, with specific plans to achieve Net Zero by 2050.

The means to achieve the ambitious results we set ourselves is through the competence and development of our people in a dynamic and engaging working environment that combines vision and innovation, where merit prevails.

Our collaborators are ready for an evolution full of projects: we want to be the protagonists of change, leading it with initiative, materialising it with care and implementing it together.

Our commitment is concrete, backed up by plans that are already being developed and implemented, with the aim of contributing to the growth not only of our company, but also of the area and community in which we operate.

Indeed, our vision of development is well represented on the cover of our report: we are aware that the economic, social and environmental components and actions we apply in ABS will have an external impact, and we want to increasingly integrate external requirements into our actions, interpreting them on a daily basis and paying close attention to scenarios, so that together we can create shared value in harmony with all our stakeholders.

**Camilla Benedetti**
CHAIRWOMAN

The journey towards a concrete sustainability path guides our strategic and operational decisions and sets us on a path of researching new solutions, innovating products and processes, and optimising resources.

In a volatile environment, it is essential to be vigilant and forward-looking, planning for growth that rethinks production models with measurable results.

Our vision is developed along three lines: sustainability, service and consolidation of supply, with the aim of improving all aspects of the value chain.

Digimelter's innovative and green technology, already implemented in Sisak, will also be developed in the Cargnacco (UD) site, allowing us to take a decisive step towards the goal of "zero emissions". Our approach to efficiency, quality and customer service covers all processes and is embodied in numerous development projects, supported by a multi-year investment plan of more than 750 million euro.

By the beginning of 2024, our products will be monitored and described through the specific life cycle of each product; this scientific analysis will be instrumental in obtaining the Environmental Product Declaration (EPD) and Carbon Neutral Digital certification, two important steps in communicating the value of our commitment to our customers.

Creating value upstream and downstream of our supply chain is one of our priorities: the aim is to develop a fully circular production cycle, selecting raw materials and integrating the scrap collection process. At the same time, the ABS Service project aims to create a distribution network capable of making our products widely available.

Our commitment to the next level and to continuous improvement, which we summarise as **LevelUP**, will be the main tool for achieving all our goals.

**Stefano Scolari**

CHIEF EXECUTIVE OFFICER


ABS
QWR

# HIGHLIGHTS

**RAW MATERIALS OF RECYCLED ORIGIN**
95 % (expressed by **weight**)

**SLAG RECOVERY**
150,046 t
(Ecogravel Black + White)

**WATER INTENSITY**
1.42 m³/t

**GHG EMISSIONS SCOPE 1 2023**
-3%
(compared to previous year)

**ECONOMICS**

**TURNOVER**
1,442 m EUR
1,442,688.505 €

**EBITDA**
170 m EUR
170,902,430

**INVESTMENTS IN INNOVATION**
28.8 m EUR

**INVESTMENTS IN R&D**
8.4 m EUR
(last 3 financial years)

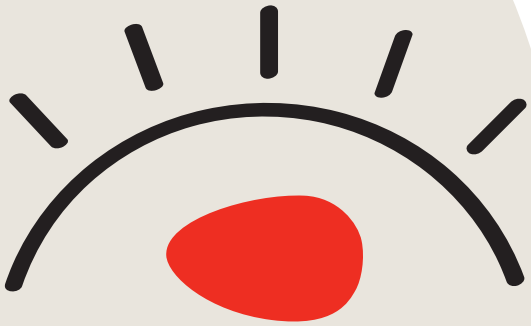
**PEOPLE**

**NEW HIRES**
198

**TRAINING**
20 average hours per employee


**100% OF OPERATING SITES**
covered by certifications:
ISO 14001 - ISO 50001
ISO 45001

# CORPORATE IDENTITY



## VISION

Our vision enables us
to work every day
to be the partner of choice
in securing valuable solutions
using state-of-the-art processes and technologies
for a sustainable progress.

## MISSION

Through the passion and excellence of our people,
we work together with our customers to fullfill our mission of
providing products and services of the highest quality.

We invest in technology and organization for the
prosperity of all our stakeholders.

## With the preparation of this year's sustainability report, ABS continues to consolidate its commitment to pursuing and measuring sustainability results and goals in an objective manner,

through the reporting scope that includes the parent company ABS S.p.A. and its subsidiaries, which together form the Steelmaking Division of the Danieli Group. Our 200-year history in steel production is a valuable heritage of steelmaking expertise from which we draw inspiration and innovation every day.

We are part of the Danieli Group, which designs, produces and installs innovative machines and plant worldwide for the iron and steel industry and the non-ferrous metals sector.

These two elements are inextricably linked to the uniqueness of ABS as a world leader in the production of special steels with high technological performance that are used in many sectors: automotive, earthmoving, industrial vehicles, precision mechanics, wind, oil & gas, power generation, nuclear, railway, naval and military.

In addition to producing and marketing steel, ABS aims to improve, day after day, the sustainability of its business by respecting the environment and all the communities in which it operates.

*One site for over 1,000 types of products.*

***1.5** Mt/year*
*production capacity*

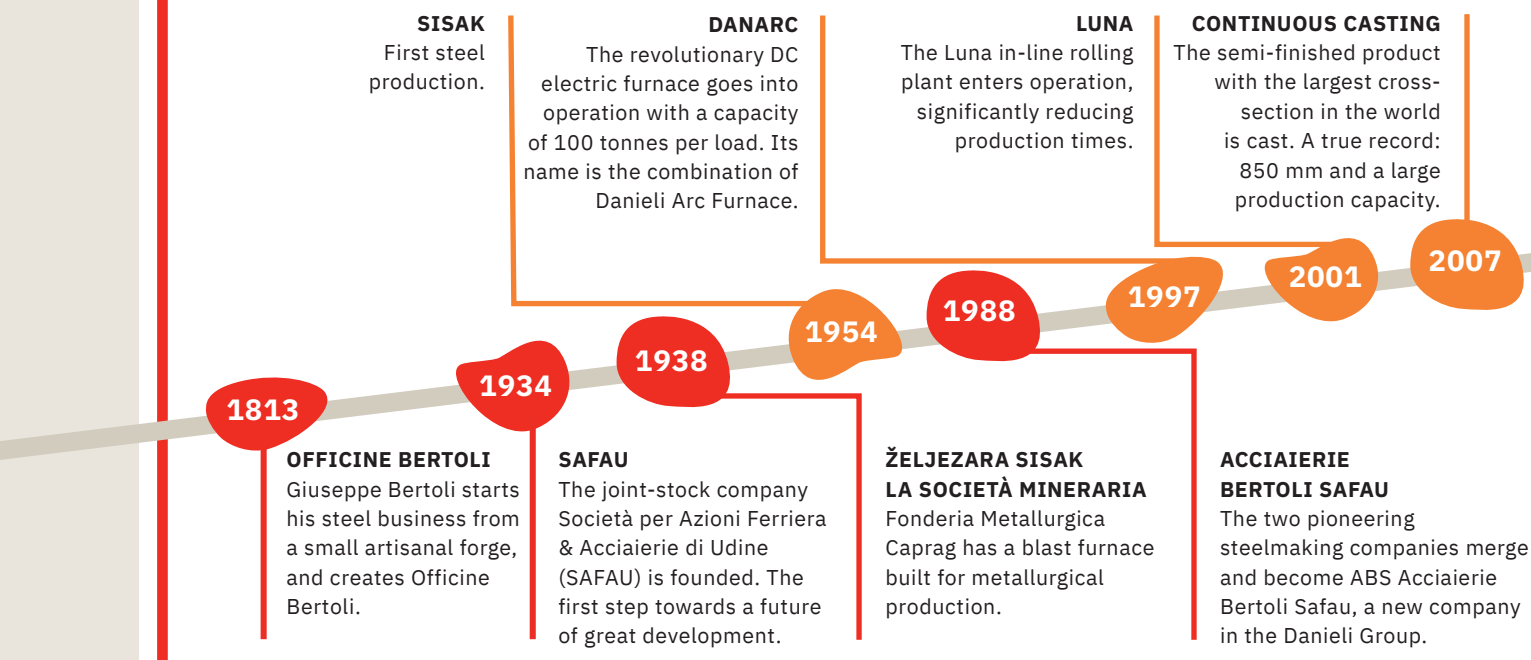
***1,000***
*different steel grades*

# THE ABS GROUP

The Steelmaking Division, (hereinafter ABS), consists of:

**ABS - Acciaierie Bertoli Safau SpA**
Acciaierie Bertoli Safau S.p.A., (hereinafter ABS S.p.A.), was created at its Cargnacco (UD) site in 1988 by the merger of two steel mills of long experience and high specialisation: "Officine Bertoli" founded in 1813 and "Safau", whose origins date back to 1934. ABS S.p.A. produces and markets special long steel, grinding balls for the mining industry and for the total recovery of smelting process waste, as well as industrial aggregates for the construction industry. The company operates in a position of leadership in Europe in the special steels sector, with production to order of high quality products for highly specialised technical and mechanical uses.

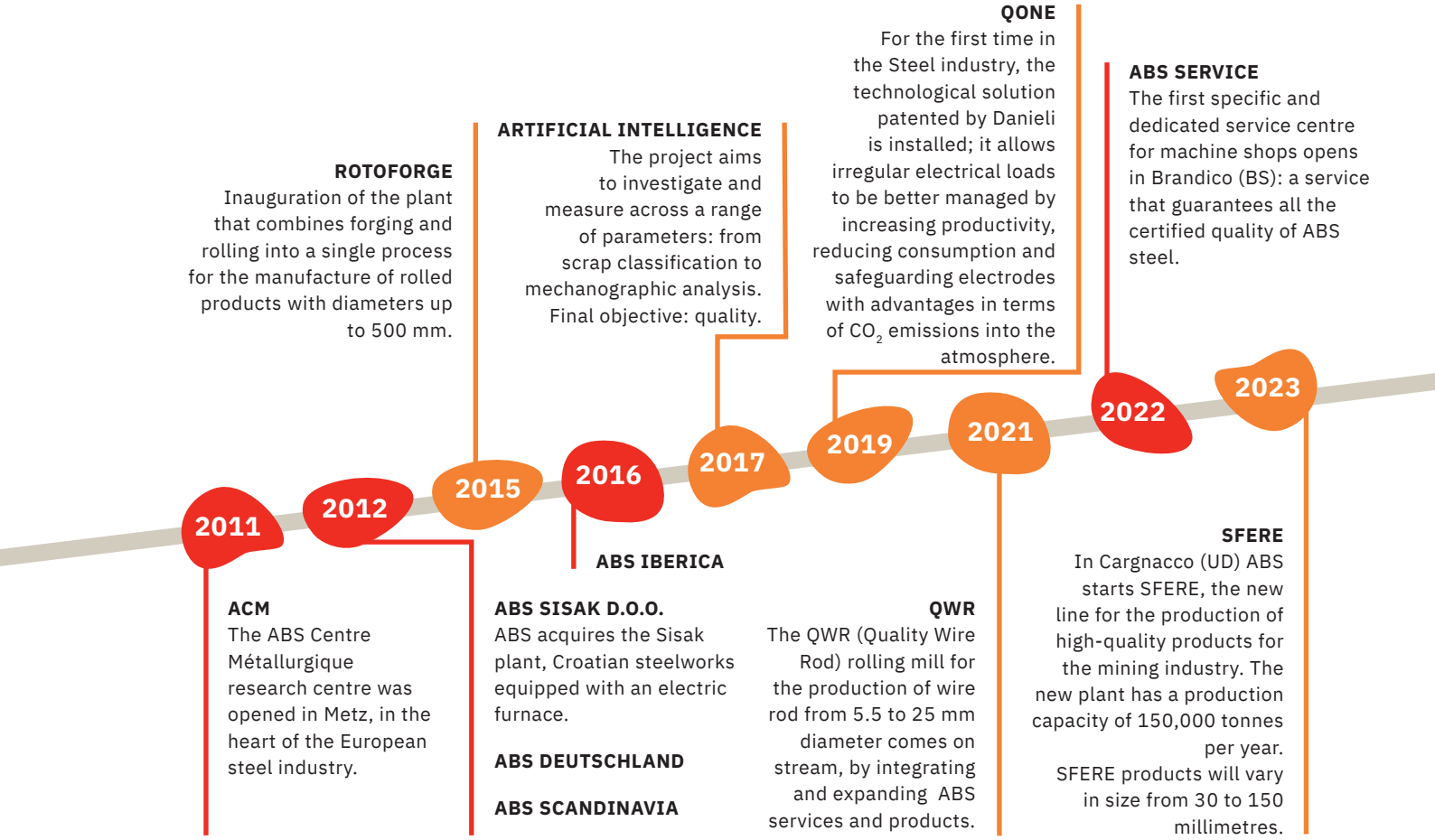
ABS S.p.A. has been increasing its production capacity year after year, and today, thanks to the work of more than 1,500 employees and collaborators, it produces about 1,500,000 tonnes of steel and more than 1,000 different grades in different formats (ingots, blooms, bars, wire rods, billets). The company covers a total area of 1,215,000 square metres on three sites, an increase of approximately 100,000 square metres on the previous year due to the purchase of new land. The Cargnacco (UD) site, home to the headquarters and main production plant, covers an area between three municipalities: Pavia di Udine, Udine and Pozzuolo del Friuli. The sales offices are located in Brescia, the crossroads of northern Italy's steel industry. ABS Service is based in the municipality of Brandico.



**ABS SISAK d.o.o**

Željezara Sisak has a long tradition and experience in metallurgical production, which began back in 1938 with the construction of a blast furnace, owned by Società Mineraria - Fonderia Metallurgica Caprag. Steel production began in 1954. On May 31, 2012, Acciaierie Bertoli Safau bought the plants from the American company CMC, and became ABS SISAK d.o.o. The Croatian production plant in Sisak is the first plant worldwide to be equipped with an innovative Q-ONE digital melting furnace, developed and engineered by Danieli Automation.

At present, Sisak is aiming for an annual production of 450,000 tonnes of special steels, thanks to an increase in the workforce and the consolidation of processes.




**ACM - ABS Centre Métallurgique S.A.S.**
The ABS research and development centre called ACM, or ABS Centre Métallurgique, was established in 2011. Located in Metz, France, in the heart of European steelmaking, in an area that includes a centre of academic excellence in materials research. ACM is the business area dedicated to research and innovation in steelmaking. The entire supply chain, from raw material (scrap) to finished product, is the focus of the analyses.

The main objectives of ACM are the development of new ranges of innovative high-performance steels with reduced $CO_2$ footprint, as well as the creation of digital twins[1] to support all the main production areas for the understanding of both metallurgical mechanisms and waste reduction, the motto being "Doing the right job the very first time".

Through accreditation according to the international standard ISO 17025 (General requirements for the competence of testing and calibration laboratories), ACM also carries out different types of tests such as: tensile tests, impact bending tests, hardness tests and chemical analysis.

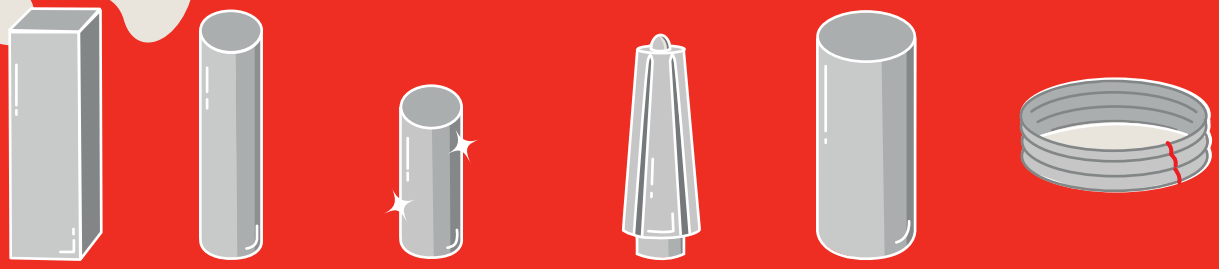
**ABS Deutschland GmbH (Germania)**
**ABS Scandinavia AB (Svezia)**
**ABS Iberica SL (Spain)**
The three companies operate in their respective markets for the development of commercial activities and sales of special long steels. A presence that is consolidated over time, increasingly developing an on-demand service with local warehouses that allow a reduction in delivery times, greater flexibility in supply and greater customer satisfaction.

**production site**

**commercial office**


[1] Digital twins of plants that, through the development of advanced digital models, simulate their behaviour.


ABS



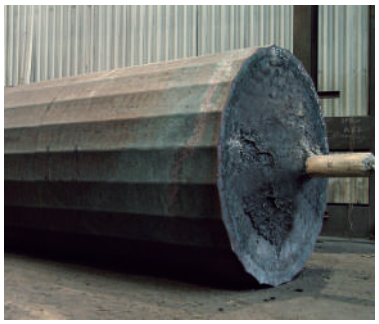
BILLET | BAR | COLD TRANSFORMED | INGOT | BLOOM | WIRE ROD

# PRODUCTS

The different **types (classes) of ABS products** are developed to meet the quality requirements of our customers, responding to the constant search for innovative solutions as required by an ever-evolving market.

The **forged products** manufactured by ABS are part of a wide family of products extending over a wide range of sizes, types of steel (case-hardened, quenched and tempered steels), finishes and heat treatment. This type of product is produced by the Danieli Breda automatic forging plant.

SQUARE INGOTS

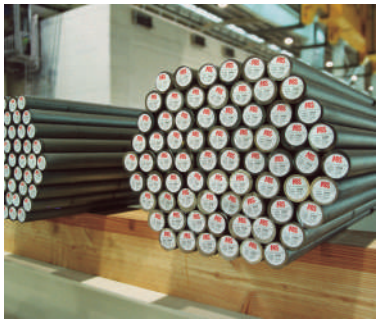


POLYGONAL INGOTS

CONTINUOUS CASTING BLOOMS

FORGED BARS

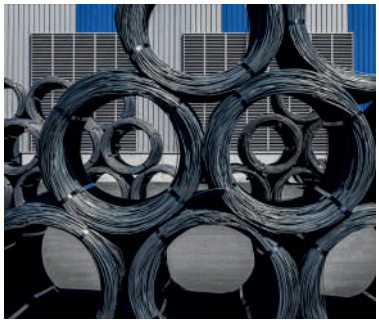
SQUARE ROLLED BARS



ROUND ROLLED BARS

COLD FINISHED BARS

GRINDING BALLS



WIRE ROD

Rotoforged products were the innovative products created to combine the strengths of rolled and forged products into a single large-size product. The ABS S.p.A. team and the Danieli Group have designed the largest plant in the world for the rolling of long products: the RF 1800 Stand. With high value-added features, the large rotoforged products combine the structural integrity of forged products with the surface quality typical of rolled products.

In the two Luna and Marte rolling lines, ABS produces **rolled products** of different types. The rolling stands are fed from continuous casting products or with ingots, using the hot charge process for the latter in order to reduce energy consumption whenever possible.

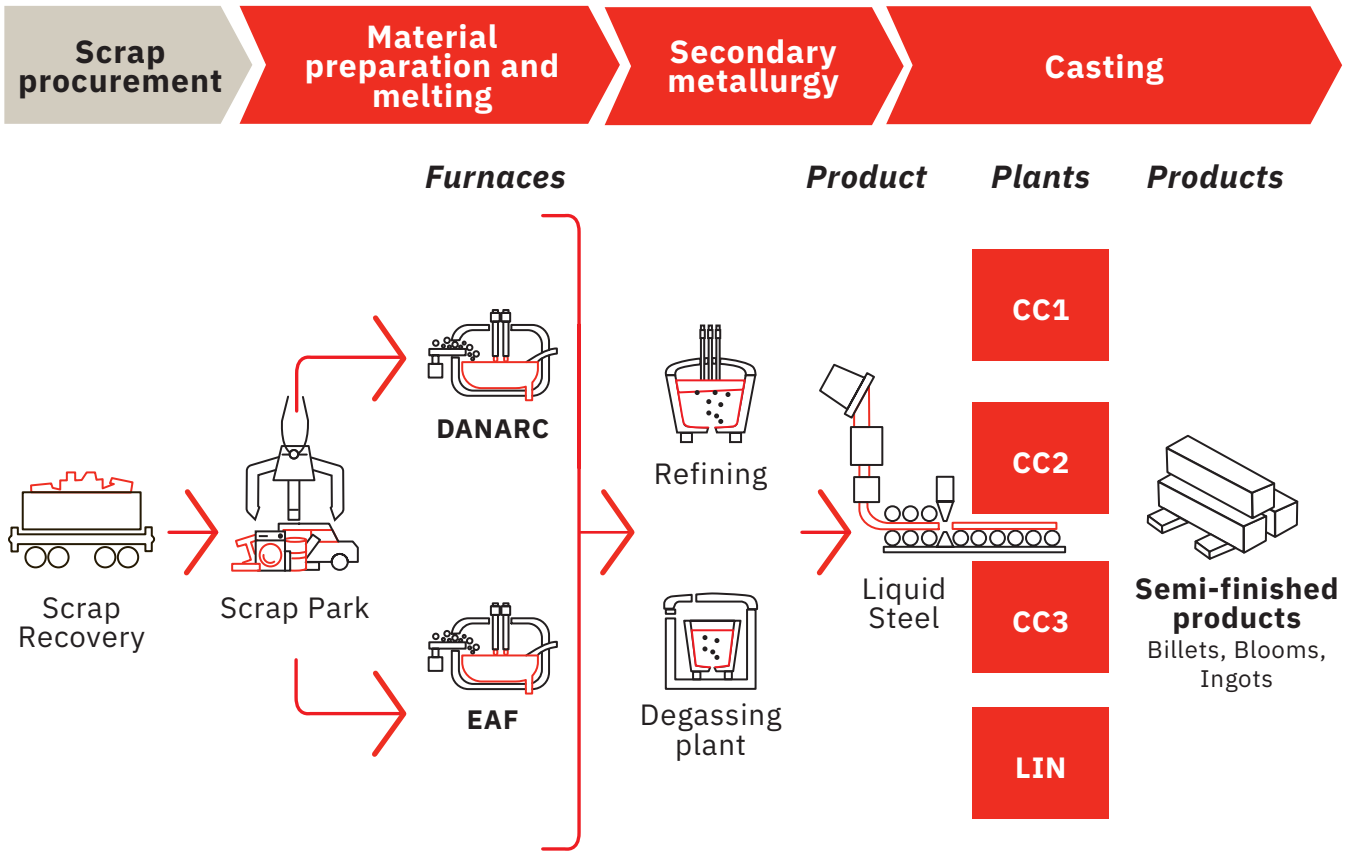
To guarantee the maximum quality of the products, we select the most suitable rolling methods and constantly monitor the reheating parameters. The rolled products are then cooled using multiple cooling cycles on air cooling beds, insulated cooling beds for controlled cooling at critical stages, or in slow cooling pits. Finally, the product is thoroughly checked and conditioned for the repair of any defect that might have been detected. Rolled products can then be delivered to the customers directly or submitted to subsequent finishing and/or heat treatment processes, where necessary.

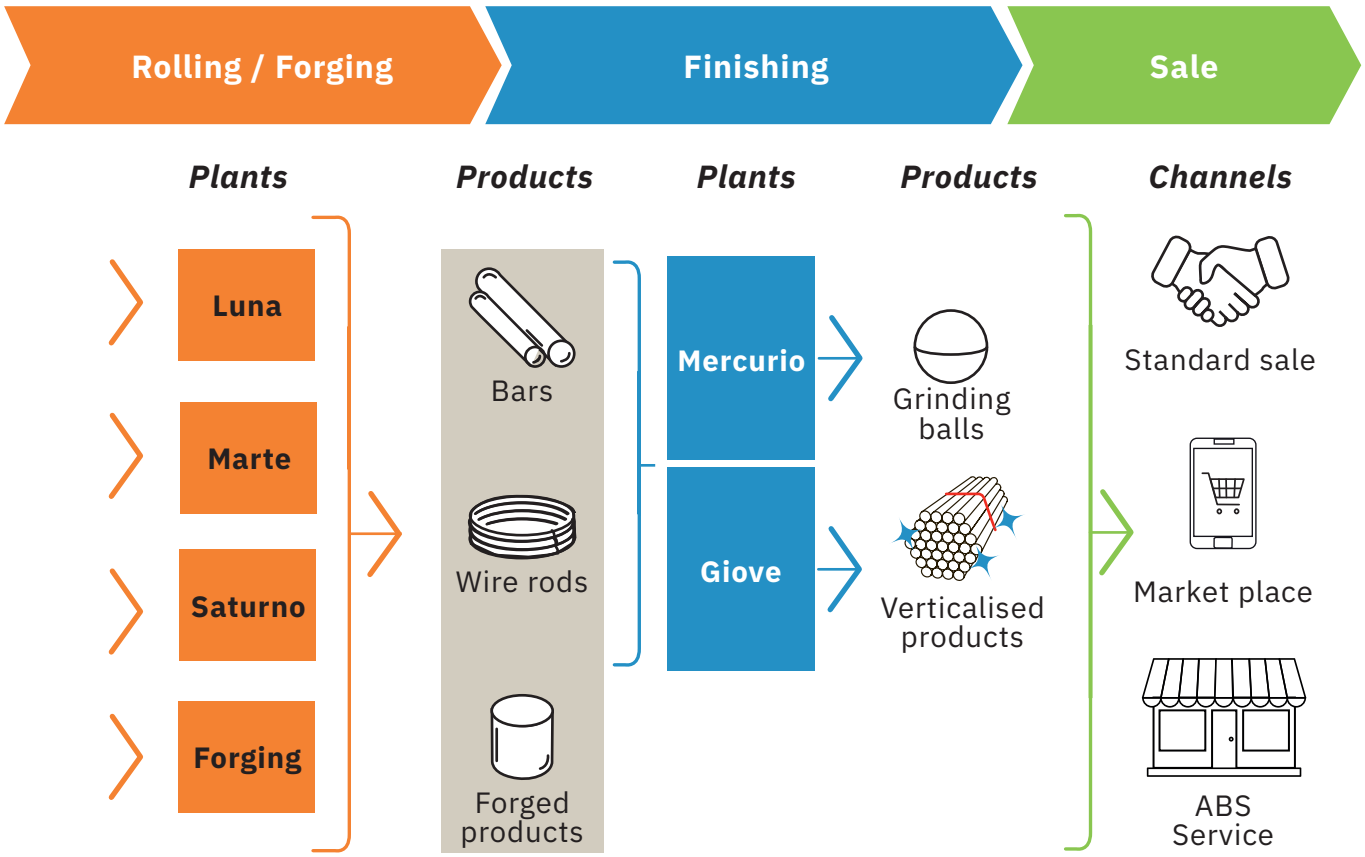
One of the salient features of our **range** of **ingots** is its flexibility to be tailored as needed to meet customer requirements.

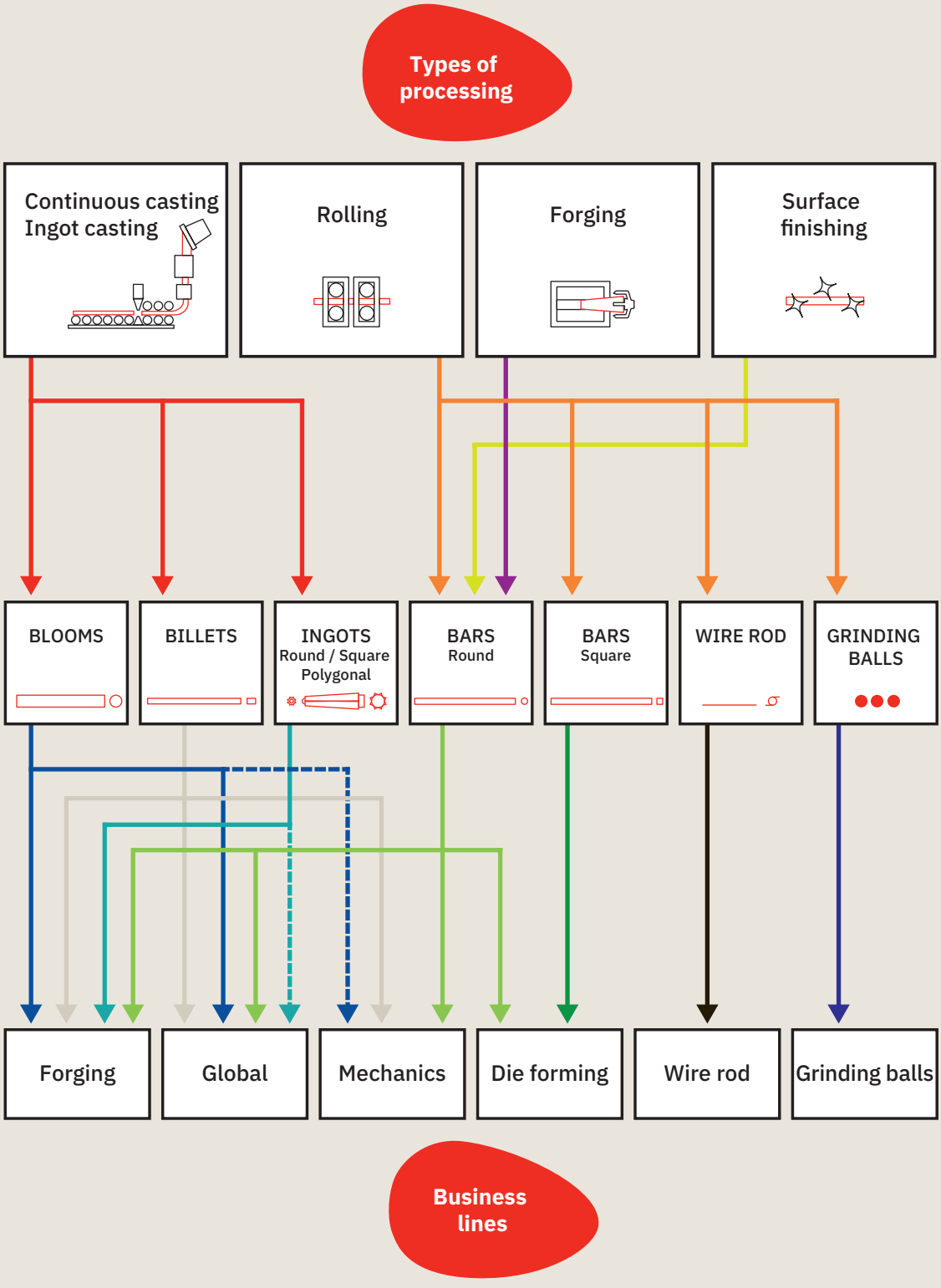
Different round, square, rectangular or polygonal sections can be produced using a mould car or a fixed mould station as required. After casting, the ingots are either delivered to sales in their raw state or continue towards the rolling line. The wide range of raw blooms from continuous casting, where a record-breaking 850 mm diameter is possible, is intended not only for sales but also for feeding our own internal rolled and forged product production flows.

Moreover, ABS is directly active in the circular economy also through the production, at the Global Blue plant, of industrial aggregates from the treatment and processing of smelting slag. These aggregates, referred to as **Ecogravel Black** and **Ecogravel White** (depending on the nature of the slag from which they are derived), are produced with CE marking and are used in the construction and road building markets.

# PRODUCTION PROCESS IN ABS





Rolling / Forging
Finishing
Sale
Plants
Products
Plants
Products
Channels
Luna
Marte
Saturno
Forging
Bars
Wire rods
Forged products
Mercurio
Giove
Grinding balls
Verticalised products
Standard sale
Market place
ABS Service


Types of processing
Continuous casting
Ingot casting
Rolling
Forging
Surface finishing
BLOOMS
BILLETS
INGOTS
Round / Square
Polygonal
BARS
Round
BARS
Square
WIRE ROD
GRINDING BALLS
Forging
Global
Mechanics
Die forming
Wire rod
Grinding balls
Business lines

# GEOGRAPHICAL DISTRIBUTION OF TURNOVER

As reported by Eurofer[2], crude steel production in Europe reached 136,2 million tonnes in 2022, a decrease of 11% compared to 2021, the year of post-pandemic recovery.

This result was affected, especially in the first half, by the war in Ukraine and the resulting disruption of supply chains, as well as by the significant increase in energy commodity prices, which led to a sharp fall in demand for steel in all the main sectors in which it is used.

Imports followed a similar trend, falling by 7% if crude and semi-finished goods are included and by 5% if only finished goods are considered. For the latter in particular, the decline only affected flat products, while imports of long products increased by +11%, exceeding the volumes imported in 2021.

Turkey is one of the main importers of long products into Europe, followed by China, Switzerland and India.

Exports of finished products also fell, by 14%, for both flat products (-10%) and long products (-22%). More than half of the material went to the USA, Turkey, Switzerland and Egypt. This was followed by China, affected by a sharp drop in demand, Brazil and India.

**The price increase in the energy sector**, and consequently in steel products, which started in the second half of 2021, had a negative impact on ABS sales in the first two months of 2022. The market then began a slow recovery, unaffected by the conflict in Ukraine, which on the contrary led to a reduction in the supply of steel products from the affected areas and a widespread concern of material shortages, with a consequent positive impact on the order book.

The situation was reversed in the summer due to the dramatic increase in electricity and gas prices, with a recovery that started towards the end of the year and continued in the following months, bringing the order book back to the level of early 2022.

[2] EUROFER - Economic and steelmarket outlook 2023-2024
EUROFER - Third Quarter Report - July 2023

**Great uncertainty remains for 2023.** Rising interest rates and inflation in Europe, the global overproduction that survived the pandemic and the conflict in Ukraine, together with trade distortions, threaten to make Europe's steel supply and demand balance even more fragile. **Increasing competition in the global steel industry** is focusing attention on the level of safeguards and protectionism required for the sustainability of the European steel sector.

In order to cope with the constant fluctuations in demand, ABS reaffirms its commitment to customer satisfaction by developing solutions with a high quality content, seamlessly combining the technology of its plants with its deep know-how of the steel production and transformation processes.

Market orientation drives and strengthens the commitment of ABS to sustainability. From the automotive sector to the renewable energy sector, the first to move towards a low-carbon economy, to the railway and mining sectors, the focus on a sustainable supply chain is at the heart of our customers' development.

Moreover, reducing $CO_2$ levels and the transition towards Net Zero for an energy-intensive sector such as ours is crucial to achieving the EU's climate targets. This is a path of transition that ABS has been following for years and it is a fundamental value for its path.

The development of ABS products is consistent with the evolution of the markets. The company includes **four business lines** specialised in die forming, forging, mechanical, and wire rod products, and global exports, the fifth line which has, instead, a geographical focus.

The **die forming** line is mainly aimed at customers in the automotive (passenger cars, commercial vehicles), truck and earthmoving sectors, as well as a constant number of customers in the oil & gas sector. The parts made with our steels include crankshafts, drive shafts, gear forks, gears, flanges and valve bodies.

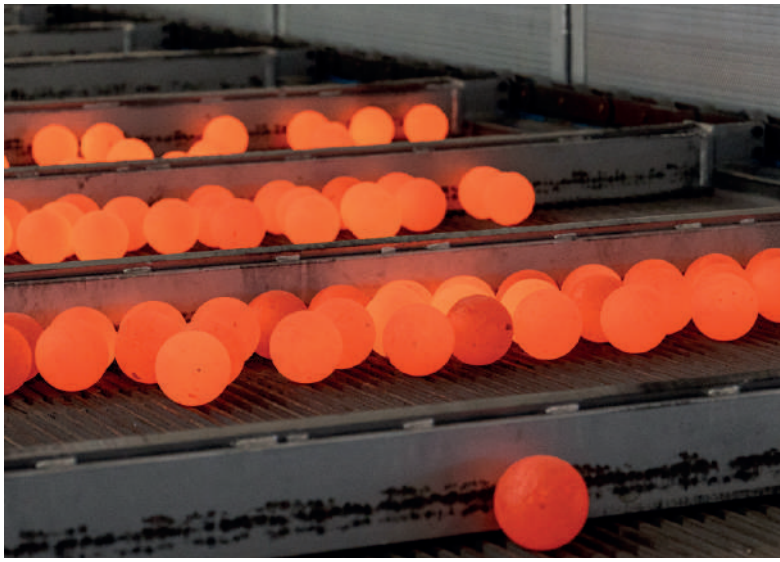
The **forging line** focuses on the sale of forged products, continuous casting blooms and ingots, which represent about 90% of its order volumes. These products are intended for the manufacture of rings, gearboxes, bearings, flanges and components for the wind and oil & gas markets, railway wheels and axles, cylinders for the industrial, medical and automotive sectors.

The **mechanical line** is focused towards mechanical workshops and distribution. Sales volumes are concentrated on treated rolled products and cold-processed products of the Qualisteel line, intended for the production of linkage for the wind and construction industry, gears, gearboxes, transmission shafts for the industrial, automotive, truck and earthmoving plant engineering sectors.

At the end of 2020, the QWR plant (Quality Wire Rod 4.0 - Saturn line) launched the production of **wire rod** to target the automotive market, for applications such as car springs and suspensions, bearings, engine fixing bolts, connecting rods, as well

as the cold drawing, welding, prestressed reinforced concrete, and low and medium-high carbon sectors.

The **grinding ball line** was launched in the 2022/2023 financial year with the aim of entering the grinding media sector. Customised grinding balls in sizes ranging from 30 to 150 mm will have bespoke mechanical characteristics and will be guaranteed by high quality standards throughout the production process. The steel grinding balls will mainly be used in the mills of the mining industries in South America, South Africa and Eastern Europe as well as in the cement industry.



While the previous business lines are focused on the domestic and European markets, the global export line, on the other hand, is dedicated to the development of the entire ABS product range on a global level, with the aim of covering the automotive, truck (USA, Mexico, Brazil, UK), oil & gas (USA, Middle and Far East) and wind power (India, Brazil, South Africa) markets.

ABS S.p.A., with the aim of guaranteeing its Customers an excellent and widespread service, created the service and distribution centre called ABS Service in 2022, where it offers the quality of its products, even in small batches, to machine shops and SMEs. The customer can order the material in bundles, as a single bar and/or cut to the required length.

## ABS MARKET SHARES

**34%** Europe

**58%** Italy

**08%** Rest of the world

# CORPORATE GOVERNANCE

Governance is defined by the Board of Directors, which verifies the adequacy of the organisational, administrative and accounting structure, with special reference to the internal control and risk management system, and defines the set of planning, management and control rules and methods necessary for the operation of ABS.

The ordinary and extraordinary management of the company is the exclusive responsibility of the **Board of Directors** [3], the main body of the governance system, which is made up of 7 members, from which the Chairman, the Chief Executive Officers with operational powers and the Managing Directors are elected.

The Board of Directors meets at least twice a year, or when required by events of an exceptional nature or by the nature of the decisions to be taken.

The members of the Board of Directors are chosen by the Shareholders' Meeting and it is the Board of Directors that develops the economic, social and environmental strategies of the company, supported by external opinions and specialist advice as required.

The current Board of Directors will remain in office until the approval of the Financial Statements as at June 30, 2024.

The Board of Directors, in charge of supervising and approving the Sustainability Report of Acciaierie Bertoli Safau S.p.A., met on October 25, 2022, and elected Camilla Benedetti as the new Chairwoman of ABS and Carla de Colle as Honorary Chairwoman of ABS. The Board also decided to appoint the current CEO, Stefano Scolari, as Deputy Chairman.

| **Board of Directors** [4] | |
|---|---|
| Camilla Benedetti | *Chairwoman* |
| Anna Mareschi Danieli | *Deputy Chairwoman* |
| Stefano Scolari | *Chief Executive Officer*<br>*Deputy Chairman* |
| Giuseppe Flaborea | *Director* |
| Giacomo Mareschi Danieli | *Director* |
| Gianpietro Benedetti | *Director* |
| Rolando Paolone | *Director* |

[3] Executive members: Camilla Benedetti (Chairwoman), Stefano Scolari (CEO and Deputy Chairman), Giuseppe Flaborea (Director). Non-executive members: Anna Mareschi Danieli (Deputy Chairwoman), Giacomo Mareschi Danieli (Director), Gianpietro Benedetti (Director), Rolando Paolone (Director).

[4] **Number of other important offices held, commitments undertaken by each member and nature of commitments:** **Camilla Benedetti:** Member of the supervisory body of ABS SISAK d.o.o; Sind International srl: Director; Danieli Metallurgical Industry (China): Director; Morgardshammar AB: Director, Thuya srl: Sole Director; MIP Politecnico Milano: Director. **Stefano Scolari:** Member of the supervisory body of ABS SISAK d.o.o.; Member of the BoD of ABS Centre Métallurgique; Chairman of the BoD of Absolute scrl. **Anna Mareschi Danieli** Elected Deputy Chairwoman of Confindustria Udine; Sind International srl: Chief Executive Officer; Member of the BoD of: (i) I.TER società consortile, (ii) Università degli studi di Trieste; (iii) Member of the chamber council and director of the chamber council of the CCIAA (chamber of commerce for industry agriculture and handicrafts) of Pordenone-Udine; TVR s.r.l.: Director.
**Giuseppe Flaborea:** Member of ABS SISAK d.o.o management board; Member of ABS Centre Métallurgique Board of Directors; Chairman of Rott-Ferr srl. **Gianpietro Benedetti:** Chairman of Confindustria Udine; Gestion JP srl: Sole Director; Sind International srl: Chaiman of the Board of Directors. **Giacomo Mareschi Danieli** Fata SpA: Director; Sind International srl: Director; Danieli Co Ltd: Chaiman of the Board of Directors; Danieli Metallurgical Industry (China): Chaiman of the Board of Directors; Innoval Technology Limited: Director. **Rolando Paolone** Danieli Centro Combustion SpA: Chaiman of the Board of Directors; Danieli UK Holding: Director; Sund Birsta AB: Director; Morgardshammar AB: Director; More srl: Director; DSR Sider Engineering Group SpA: Director.

The 7 members of the Board of Directors are distributed as follows: 2 belonging to the female gender and age group of 30 to 50 years and 5 to the male gender, 2 in the age group of 30 to 50 years and 3 over 50 years. 57% of the members, 4, are between 30 and 50 years of age, while 43%, 3, are over 50.

The Board of Directors has the mandate to approve both the Economic and Financial Statements and the NFS.

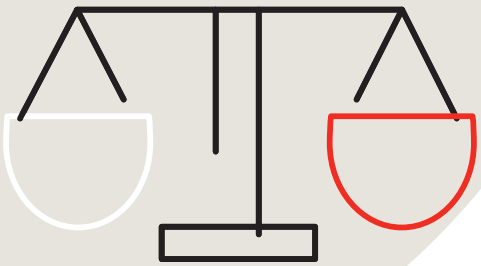
**The Company has established an internal audit function, which is responsible for checking the adequacy of the internal control and risk management system, conducting periodic audits in cooperation with the management of the various corporate functions and providing regular feedback on the results of its activities to the Board of Directors, the Board of Statutory Auditors and the Supervisory Body.**

The **Board of Statutory Auditors** monitors compliance with the law and the Articles of Association, as well as compliance with the principles of proper administration in the performance of the Company's activities. In 2022/2023, the Board of Statutory Auditors includes 5 members, of which 4 are men (80%) and one is a woman (20%), all of whom are in the 50+ age bracket (100%).

The Board of Statutory Auditors monitors the financial reporting process, as well as the adequacy of the Company's organisational structure, internal control system and administrative-accounting system, and the reliability of the latter in providing a fair representation of the operations. Finally, the Board of Statutory Auditors supervises the legal audit of the annual and consolidated accounts, as well as the independence of the legal auditing body.

| Board of Statutory Auditors | |
|---|---|
| Giuseppe Alessio Vernì | *Chairwoman* |
| Giuseppe Bertoli | *Standing Auditor* |
| Laura Piussi | *Standing Auditor* |
| Edgardo Fattor | *Alternate Auditor* |
| Alessandro Gambi | *Alternate Auditor* |

*In the picture, the Executive Board of ABS S.p.A.*



# ETHICS

ABS holds ethics in high regard as the guiding principle of its actions.

In the course of time, these principles have been collected into a document that serves as a compass to support discretionary decisions and ethical dilemmas, and to guide ABS's actions as a responsible member of the community.

The ABS Code of Ethics is a freely downloadable and searchable public document, applied to all aspects of business conduct: from strategy planning by the Board of Directors to the way employees and suppliers are treated, from sales techniques to accounting practices.
All new employees are provided with a copy of the Code of Ethics and all are trained in its contents.

The ABS Code of Ethics is also a business management tool. It sets standards of behaviour for all who work for the company and promotes fundamental human rights, labour rights, relations with the local area.

The ABS Code of Ethics is an essential part of our corporate culture and represents our will to move towards the creation of the shared good. To all intents and purposes, this document is also a wide-ranging personnel management tool used not only to evaluate workers in the event of disciplinary disputes, but also as a rewarding tool when evaluating performance.

## The principles of the code of ethics are summarized in:

## RESPECT FOR HUMAN RIGHTS

Human rights are inalienable rights held by all persons. Respect for these rights is a fundamental element of the proper and responsible management of ABS activities. ABS endeavours to avoid discriminatory behaviour, and therefore does not discriminate in any way, be it on the basis of gender, sexual orientation, ethnicity, language, religion, political opinions, personal conditions, and/or social conditions. Any form of forced, compulsory, or child labour practices is also prohibited.

In full compliance with the Universal Declaration of Human Rights and Italian law, all ABS employees are guaranteed the right to freedom of association and collective bargaining. In ABS 88% of the workforce was covered by collective bargaining agreements.

## FIGHTING CORRUPTION: SUPERVISORY BODY

ABS considers that ensuring fairness and transparency in the conduct of its business and corporate activities is a priority and is necessary to protect the company and its shareholders.

As from 2011, to protect the company against active and passive corruption, the Board of Directors of ABS has equipped its Italian premises with an **organisational model in line with the obligations set out by Legislative Decree 231/2001, which provide for a Supervisory Body (SB)** to receive reports of any violations.

The Supervisory Body meets on a periodical basis and its activities are brought to the attention of the Board of Directors for its assessment and approval, as well as of the Board of Statutory Auditors.

The knowledge of the actions regulated by the organisational model and of the behaviours it requires are the subject of specific information and training activities for employees and suppliers.

The Code of Ethics establishes precise rules for managing contacts with the Public Administration. It defines rules of conduct and for the management of contributions, subsidies or funding obtained from the State or other public body or from the European Communities. It prohibits the direct or indirect offer of gifts and benefits (money, objects, services, favours or other benefits), as well as inducing Public Officials/Public Servants to use their influence on other Public Servants.

Over the next three to five years, the company intends to issue a code of conduct and an anti-corruption policy to strengthen the management and awareness of these topics within the company.

No violations were identified in ABS in the current year for what regards active and passive corruption, anti-competitive behaviour, discrimination and non-compliance with laws and regulations of a socio-economic nature. Therefore, no actions taken by the company in order to manage any violation are to be reported.

The company, like its parent company Danieli, intends to comply with the new whistle-blowing regulations envisaged by Italian Legislative Decree 24.2023, with a dedicated platform and the possibility to report any violations to an internal group.

# VALUES

The ABS development model is based on a system of 7 values that represent the drivers on which the Steelmaking Development Plan is developed at the Group level.

These values are the compass that guides all of the company's activities and serve as the basis for formulating medium- and long-term performance indicators.

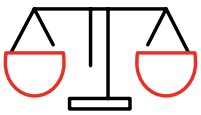
These qualitative and quantitative indicators are applied and adapted to the different business divisions to assess and measure the progress of individual, functional and corporate projects and plans.

ABS is committed to ensuring that these values are not just declarations, but become a behaviour that is embedded in the normal operations of the company.

**CUSTOMER IS CENTRAL**
We monitor the present to identify real needs. By constantly striving to improve, we aim to meet the needs of our customers and accompany them step by step as the market evolves.

**PEOPLE**
The starting point for achieving real and lasting results is a culture that promotes meritocracy, personal and professional development, and the enhancement of people.

**TEAM SPIRIT**
As a true team, we focus on the common good and put personal interests aside.



**ETHICS**
Transparency, honesty, fairness, respect and responsibility: a common thread that unites and guides the behaviour of people and the whole organisation.

**INNOVATION**
To innovate is to spread the culture of improvement by example, and it means constantly looking for new ideas to improve one's own work and contribute to the company's progress.

**EXCELLENCE**
Excellence is giving the best of ourselves at all times, in every activity, from the smallest to the most complex, in the pursuit of absolute quality, without compromise.

**SUSTAINABILITY**
We recognise the importance of natural capital through the responsible use of resources.

*RECENT CERTIFICATIONS*

***ISO 27001***
*Information Security Management System*

***ISO 50001***
*Energy Certifications IQNET / IGQ*

# OUR APPROACH TO RISK

In response to an increasingly dynamic, competitive and uncertain international environment, ABS has structured itself with an **Enterprise Risk Management** system that has led the company to evolve from a defensive logic, mainly aimed at reducing losses, to an increasingly integrated and proactive management of the various types of risk, aimed at improving the company's performance and emphasising the transversal nature of the objectives and the overall corporate vision.

The ERM system naturally permeates all company functions. Each function is involved in specific development plans which include a range of actions for the mitigation of the risks identified. The Board of Directors is the body with the greatest responsibility for risk management within ABS. Management and members of the Managing Board, composed of ABS Executives, are responsible for defining and implementing risk management procedures, and ensuring that risks are appropriately addressed and considered.

During strategic and business planning, the process of identifying and managing risks is essential to ensure a model of business continuity that takes into account people and the environment. Rather than being seen as a threat, risk is integrated into the definition of the strategic business plan with the aim of exploiting the opportunities it presents to create value.

By constructing a risk matrix, we identified the main risks and the relevant corrective actions. Using this tool we classified all possible events that could occur according to a frequency and severity index and, for each one, we identified the appropriate preventive and corrective actions.
This approach was applied to the various corporate areas: environment, safety, human resources, quality, energy and cyber.

The Internal Audit function fits into this context by carrying out periodic risk assessments. Once mapped, the risks are classified in probability-impact matrices; this enables prioritisation, which has led to the definition of a three-year audit plan, which has already been implemented at ABS (year 2021) and is regularly followed up.

The Internal Audit function also verifies that the internal control and risk management system is functional and effective, taking into account the development of the activities of the company and the context of reference, on an ongoing basis, ad hoc when specifically required, and in compliance with international standards.

In order to facilitate the achievement of the key objectives of ABS, the function:

- Carries out specific interventions aimed at verifying the compliance of processes with internal and external regulations, making sure that the rules and procedures of the control processes are complied with and that all the parties involved operate in accordance with the set objectives;

- Provides regular feedback on these topics to the other control bodies, such as the SB and the Board of Statutory Auditors;
- Works together with the players in the internal control and risk management system, ensures that the Company is managed in a manner that is sound, fair and consistent with its objectives.

## ABS CERTIFICATIONS

The assessment and management of risks from a sustainability point of view is carried out not only through the different management systems adopted and required by the certification schemes the company is part of (ISO 14001 for environmental risks, ISO 45001 for health and safety risks, ISO 50001 for energy carrier management), but also by the assessment of more traditional risks such as safety, plant engineering, functional risks to ensure business continuity, and economic/financial risks.

Plus, ABS Cargnacco (UD) has been ISO 27001 certified since 2023, as cybersecurity is a key issue for the company.

| SYSTEM CERTIFICATIONS | ABS Cargnacco (UD) | ABS Sisak | ACM |
|---|---|---|---|
| ISO 9001 | ✓ | ✓ | ✓ |
| ISO 14001 | ✓ | ✓ | ✓ |
| ISO 45001 | ✓ | ✓ | ✓ |
| ISO 50001 | ✓ | ✓ | |
| ISO 17025 | | | ✓ |
| IATF 16949 | ✓ | | |
| ISO 27001 | ✓ | | |


In coordination with the parent company Danieli, risks are managed at the Steelmaking segment level by aligning ABS operating procedures with those of all the other companies in the ABS Group. The business risk management system takes into account the exogenous and endogenous risks, including:

**Economic and financial risks:**
- Credit risk;
- Country risk;
- Exchange rate risk;
- Liquidity risk;
- Risks related to the financial market trends;
- Risk of natural disasters;
- Risk of partner default.

**Strategic risks:**
- Risk of competition;
- Positioning risk;
- Risk of market/product failure;
- Risks related to the management of energy values;
- Risks related to values and ethics;
- Risks related to the supply chain;
- Risks related to sustainability.

**Operational risks:**
- Risks of business continuity;
- Risks related to skills;
- Risks related to maintaining adequate customer service;
- Cyber risks;
- Product security risks;
- Risks related to product quality;
- Environmental risks;
- Health and safety risks.

**Compliance risks:**
- Risks related to product conformity;
- Risks related to competition;
- Risks related to the proper management of the business as defined by Italian Legislative Decree 231/2001;
- Risks related to occupational health and safety as defined by Italian Legislative Decree 81/2008.

# ISO 27001 CERTIFICATION INFORMATION SECURITY MANAGEMENT SYSTEMS.

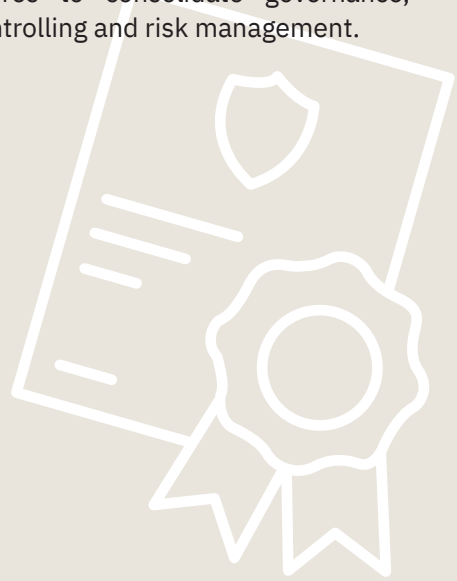
ABS is one of the first steel and manufacturing companies in Italy to be awarded this certificate by the accredited body **Bureau Veritas Italia**, which certifies the implementation of an Information Security Management System (SGSI or ISMS) and, at the same time, the activation of processes for continuous improvement in the centralised management and administration of IT systems in support of operational activities.

**The ISO 27001 certification was achieved by ABS through a fast-track process that began in November 2022 and ended in February 2023**, covering operational processes, IT vendor service management and project management security.

ABS can rely on a system that provides solid protection against cyber-attacks and data breaches, **ensuring the security and integrity of the production system from a 4.0 perspective.**

In a global scenario increasingly focused on information security, cyber security and privacy topics, ABS Acciaierie also promotes and spreads security awareness among its employees in order to prevent attempts to undermine data and applications.

The certification, which is widely used in the financial and insurance sectors to protect data and systems, is the result of an investment by ABS of around 1 million euro in infrastructure, training and personnel, plus 200 thousand euro per year for upgrades and maintenance. A journey that began about four years ago and has created a model and changed the corporate culture, implementing procedures to consolidate governance, cost controlling and risk management.



## CYBERSECURITY

Information and its proper management is a key issue today.
Companies are increasingly connected to their value chain through IT networks. This leads to a change in business relationships, interdependencies between organisations and activities. In this context, the cybersecurity approach plays an increasingly important role in protecting information and systems from evolving and increasingly sophisticated threats.

Maintaining the security of IT systems is essential to protect company data, customer and supplier data, but ultimately also to protect the company's reputation. Cybersecurity requires a holistic approach that includes the use of advanced technologies, constant monitoring of systems and a training process for personnel.

ABS's IT structure began a process of consolidating management skills, technical governance by introducing increasingly standardised and efficient processes to support ABS's innovation and evolution, which enabled it to achieve **ISO 27001 - Information Security Management Systems certification** in February 2023.

Since July 2022, a third-party managed **Security and Network Operation Centre** service has been in place to oversee all IT systems and services, introducing predictive and preventive solutions and methods into the data and systems protection model to complement traditional reactive protection techniques.

For ABS, protecting production lines and the people who work on them is just as important as protecting information and systems.

With this in mind, ABS launched a multi-year **cyber security programme for OT Networks** during the year, aimed at limiting the attack surface and minimising the impact of a potential violation of production systems. These initiatives took the form of several pilot projects, some of them very innovative and experimental in nature, which will enable ABS to excel in the protection of Production systems in the coming months.

**People are at the heart of the measures implemented**, and with this in mind, the Cyber Security Awareness campaign will continue in 2022-23 through a smart and innovative service that builds a customised process based on IT and cyber security skills that are periodically reassessed through short tests. The programme for 2023 **involved about 500 people** of the Cargnacco (UD) site who were provided with six training courses aimed at increasing awareness of the risks posed by email attachments and links, phishing, smishing and vishing.

A sound cyber security strategy and appropriate preventive measures enable ABS to meet the challenges of an ever-changing digital environment and protect sensitive information and data from increasingly sophisticated threats.

## BUSINESS CONTINUITY

The need to identify the potential threats to which our organisation can be exposed to define the processes necessary to ensure the resilience of the structure following the occurrence of adverse conditions, to guarantee the security of operations, production capacity, interests and the image of the company, has led us to initiate a project aimed at obtaining certification in accordance with the ISO 22301 standard, which establishes the necessary requirements for an efficient business continuity management system for a Company.

At present, risk management takes into account the main ordinary operational risks, or scenarios related to extraordinary natural events, as well as structural damage to plants and buildings, but, although it is absolutely extensive, it is split between the various management systems (Safety, Environment, Energy, Quality).

In general, the implementation of a **Business Continuity Management System (BCSM)** in accordance with ISO 22301, developed using the PDCA (Plan-Do-Check-Act) methodology, allows an integrated approach between operational and staff functions and represents a formidable methodological and organisational drive towards a more sustainable company.


**The expected benefits of the project can be summarised as follows:**

- Protection of company assets;
- Increased organisational reputation and resilience;
- Proactivity in risk prevention/ management;
- Reactivity in applying countermeasures during interruptions;
- Reducing the impact of adverse events and their associated costs;
- Guarantee of the lowest (zero at most) impact on the service.

Certification is expected, initially for ABS S.p.A., by 2024.

# INNOVATION

Competence consolidated over two centuries of activity and a predisposition for innovation driven by “Innovaction”, the ability to incubate and encourage innovative ideas, give ABS the requisites to be a leading player at the global level in its path towards reaching a top position in the special steels segment.

For ABS, innovation is synonymous with development and growth. Innovating means being at the forefront, regenerating as the main protagonists in known market contexts.

We rely on the strength of ideas and projects to grow our work. ABS focuses its innovation towards three main areas: products, plants and digital transformation.

Constant commitment to research and development led to excellence in both products and production processes.

**The challenge of innovation drives ABS to foster creativity, ingenuity, passion, with the support of the organizational and managerial capacity of the company and its technology, developed together with its subsidiary companies.**

Over the last few years, ABS has applied the principles of Innovation and Digital Transformation for continuous improvement and process efficiency, focusing on the Energy, Maintenance, Quality & Testing, Logistics & Warehouse, Scrap Park, and more generally on the very heart of ABS: Production.

Two key components drive ABS innovation projects:

- **the creation of enabling factors** to foster internal research, the growth of incremental innovation, but also the interception of potentially disruptive elements;

- **the research and development of a network of qualified partners** with whom to implement long-term projects, in an Open Innovation model.

To give a single body to these two components, ABS has adopted a general Portfolio Management process to analyse and manage innovation projects in their complexity: from the development of the project idea, to the search for financial sources, to the tracking of results, to project accounting. The function responsible for managing innovative projects has been included within the sustainability area.

Like the entire sustainability area it is considered highly strategic, and this specific placement will facilitate and optimize the processes of evaluation, cross-contamination and connection of corporate projects, in order to improve our sustainability performance. We have also recently set up a specific function dedicated to the systematic search for sources of subsidized finance that privilege paths of innovation and partnership at an international level.

## INNOVATION PROJECTS

Innovation is a key element for ABS, which constantly strives for excellence in both products and production processes. ABS is working to position itself as an industry leader, stimulating all levels of business to provide innovative ideas that can be applied to specific projects, and optimising the obtaining of non-repayable loans and tax credits for their implementation. Among other things, this makes it possible to enhance people's creativity and involve them in a process of sustainable and motivating growth.

**Among the projects launched during the 2022-2023 financial year, it is worth mentioning those that have gained access to national and European credit lines due to their innovative content:**

ENGINE
ZERO-DEFECT MANUFACTURING FOR GREEN TRANSITION IN EUROPE

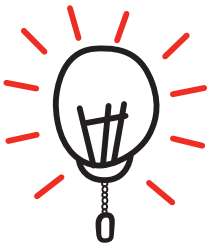
- **Engine Project, Horizon 2020 Programme:** The main objective of the project is to develop a "first-time-right" and zero-defect metal product design and manufacturing system and apply it in the marine engine supply chain. Our aim is to improve the competitiveness of industry and SMEs, reduce defects and production waste, create new business opportunities and improve employee wellbeing;

cogniman
COGNITIVE INDUSTRIES FOR SMART MANUFACTURING

- **Cogniman Project, Horizon Europe Programme:** The project is dedicated to the development and validation of a new digital cognitive smart manufacturing concept that will shift the future design of production processes towards autonomous and predictive manufacturing with greater flexibility, safety and efficiency. This initiative will provide the means to facilitate flexible, resilient, reconfigurable, safe, sustainable and efficient smart manufacturing by integrating key technologies that can be applied to hitherto difficult-to-automate production processes;

- **North Adriatic Hydrogen Valley Project, Horizon Europe Programme:** The aim of the project is to create an economic, social and industrial ecosystem based on hydrogen. The project will stimulate economic growth by creating new job opportunities as part of the green and digital transition, and will contribute to the creation of a European hydrogen economy by creating the conditions for wider replication across the EU. Together with Danieli Centro Combustion, the company is participating in a pilot project to convert one of its heat treatment furnaces for steel ingots to hydrogen power. ABS will be part of the hydrogen supply chain developed by this project;

- **Custard Project, Innovation Fund Programme:** Through this project, ABS aims to develop a Carbon Capture and Usage technology, developed by Danieli, to be able to decarbonise up to 50% of the flue gas of one of its reheating furnaces by capturing $CO_2$ to produce sodium bicarbonate. The $CO_2$ capture and reuse solution developed with the project may be replicated by ABS in its plants and by Danieli worldwide, paving the way for the decarbonisation of other industries such as chemical and power plants;



**28.8 m EUR**
*investments in innovation*

**2**
*international European cooperation projects*

- **Production and use of hydrogen in the Hard-to-abate sectors Project, NRRP 3.2 line:** The project envisages the conversion of a heat treatment plant for special steels currently fuelled by natural gas to a green hydrogen regime. To this end, measures are envisaged to ensure the use of low-carbon hydrogen to fuel the treatment process combined with a measure to start the in-house production of renewable hydrogen from photovoltaic energy.

Moreover, sustainability requirements also drive **product innovation projects** that enable ABS customers to produce mechanical components, particularly for the automotive market, with improved strength performance for the same weight, and thus enable vehicles to be lighter.

The strategy of weight reduction is becoming an established trend, creating a huge demand for both modern, lightweight materials and new design concepts.

This strategy becomes part of the circular economy and is the solution required for both modern mobility, transport and energy production.

In today's weight-saving strategies, in addition to design, materials are the main component. However, the lightweighting process needs a global redesign, for example by seizing the opportunities in electric cars to reduce secondary masses (powertrain, transmission).

The research into materials and innovation of steel products becomes essential to meet these new challenges and requirements.

**ABS's commitment in this respect is oriented in several directions:**

- ABS developed **bainitic steels (ABSBAIN20 and 40)** to provide alternative solutions to enable the lightening of components.

- To solve the limitations of steel structure caused by natural cooling, ABS is working with its customers to achieve advanced structures through **new cooling strategies.**

- ABS is currently working on **low-bonded, high-strength materials** for powertrains and BEVs of electric vehicles or for the gears of wind turbines.

- In view of the increasing use of hydrogen, ABS is working on the development of **steels that are less sensitive to embrittlement** generated by the use of this energy carrier.

From the point of view of production processes, starting from the Cargnacco (UD) site, ABS is equipping itself with intelligent Industry 4.0 systems, capable of bringing together the different stages of the production process with the aim of minimising waste, optimising timing and reducing energy consumption.

# HYBRID DIGITAL GREEN PLANT

As part of our VISION, the project to install the new **HYBRID DIGITAL GREEN PLANT** line north of the Italian ABS site is of particular interest. The plant will be mainly dedicated to the production of special steel billets to feed the innovative ABS wire rod mill (Saturno line), but will also supply semi-finished products to the Luna rod rolling mill as well as direct sales to Customers.
**HYBRID DIGITAL GREEN PLANT** is a project that summarises the values and pillars of ABS, as it will enable the production of around 800,000 tonnes/year of semi-finished products (billets, blooms, rounds) by adopting technological solutions where innovation and sustainability are the driving forces for increasing resilience and competitiveness. In particular, the very name of the plant suggests the solutions adopted:

## DIGITAL

**The power required to melt the scrap in the electric furnace is supplied by Danieli's innovative "Q-One" system** and the process and product quality control tools are managed by digital platforms.

## GREEN

**The plant strives to be the most advanced steelmaking complex in the world with "net zero-emissions", "zero-water-discharge"** with total recovery of cooling water, and "net zero-waste", i.e. complete reuse of processing waste either directly or indirectly.

## HYBRID

Electricity that can be self-generated from renewable sources can be fed directly into the Q-One, the heart of the plant.

The new **HYBRID DIGITAL GREEN PLANT** will use the most advanced technologies designed by the Danieli Group and is structured in the following areas:

- Scrap receipt park, with 94% of the charge represented by recycled raw material;
- DIGIMELTER® primary metallurgy station fed through Q-ONE®, with ECS® continuous charging that allows recovery of flue gas heat for scrap preheating;
- Two **DIGITAL REFINING STATION®** secondary metallurgy stations for steel refining;
- Fume suction system (**FTP**) by monitoring all sources of emission (channelled and diffused);
- 5-strand continuous casting machine;
- Auxiliary systems: water treatment (**WTP**), compressed air production plant (CAP), pneumatic mail, laboratories and workshops.

To support the activities of the new **DIGITAL GREEN PLANT**, a number of innovative technology packages will be implemented to support the activities of operators and improve the safety of the working environment and performance:

- **Q-Robot Melt: fully automatic sampling robot;**
- **Q-Stap and Q-Sand:** manipulator for EBT cleaning and automatic sand refilling;
- **Thor 3K:** slag door with automatic cleaning system.

A number of innovative technology packages will also be available to improve fuel consumption and performance:

- **Q-Panel:** energy-saving panels that allow the Digimelter to be cooled in a closed circuit with zero water discharge and waste heat recovery for other uses (district heating or power generation);
- **Q-Melt:** advanced system for managing primary metallurgical processes and optimising electricity and coal consumption;
- **Q-Smartec:** automatic self-adaptive electrode cooling.

**HYBRID DIGITAL GREEN PLANT** aims to achieve the following sustainability goals:

- Dust emissions lower than those required by the most stringent European regulations;
- Minimisation of noise impact by separating all production areas;
- Limitation of energy consumption thanks to state-of-the-art plant technology;
- Rational use of water resources with full recovery of water used;
- Provision of energy from renewable sources alongside electricity from the grid.

The plant will employ approximately 200 people who will increase the workforce of ABS, thus also positively impacting employment levels in the area.

## A PROJECT SHARED WITH STAKEHOLDERS

The authorisation process for the installation of the plant began in the last financial year with the formal request for environmental authorisation to Regione Friuli Venezia Giulia, which, in this regard, initiated a procedure to determine whether an environmental impact assessment was required.
During this process, numerous meetings were held with stakeholders, first and foremost with the Municipalities on whose territory ABS's industrial activities are located (Pozzuolo del Friuli, Pavia di Udine and Udine), but also with the regional environmental agencies (ARPA FVG) and, more generally, with all local and regional public institutions. Each stakeholder asked for insights, which were promptly and comprehensively provided by ABS and Danieli.
ABS carried out an assessment of the potential aggravation of health risk (HRA) to the population affected by the effects of the work, which also received a favourable opinion.
The project was checked in every detail by the relevant Authorities and, in June 2023, Regione Friuli Venezia Giulia approved the next steps leading to construction and start-up.

More specifically, the documentation submitted includes:

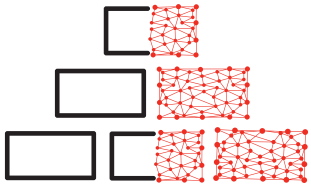
- proposed plant layout;
- description of processes, materials used and expected consumption;
- impact studies of pollutant emissions (GHG and non-GHG);
- energy modelling of noise propagation to receptors;
- mitigation and adaptation measures.

## ACM CONTRIBUTION TO INNOVATION IN ABS

ACM is committed to perfecting the quality of the products that make up the ABS offer, focusing its activities on process modelling from the solidification phase to the finished product.

This activity results in the creation of complex digital twins detailing the products resulting from the various ABS processes. The main objective is to optimise production efficiency, ensure the production of high quality products from the initial testing phase and minimise waste and ABS's environmental footprint through a more responsible use of resources.

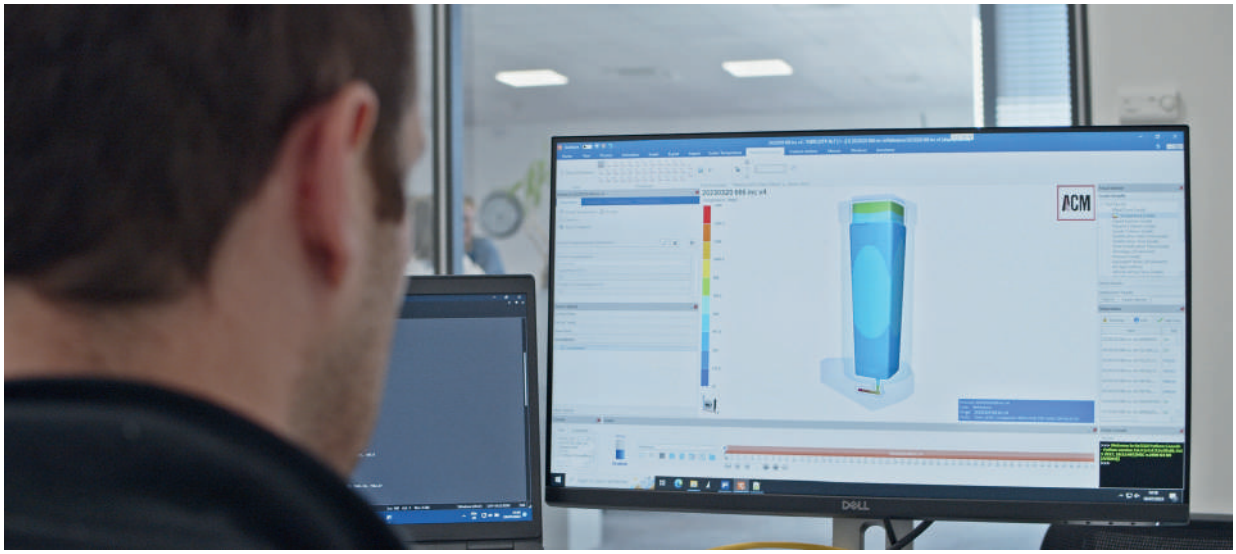
Through the use of **advanced digital models**, ACM aims to improve the production process, enabling greater optimisation and control at every stage of the production cycle. This approach reduces the possibility of errors and waste, increases the sustainability of the process and reduces the overall environmental impact to ensure the delivery of the highest quality products and a significant reduction in environmental impact.



During 2022-23, with the support of ABS process engineers, ACM continued to improve existing models and worked on new digital twins of the product, deepening the existing mechanisms and understanding of the phenomena that occur at different stages of production.

ACM was also involved in the European Horizon 2020 ENGINE project, which developed twins or product models from liquid steel tundish to rolled billet to casting processes and mechanisms.

At the same time, ACM worked on the models of the grinding ball milling line in order to produce at the right time and check the set-up parameters required to produce this new ABS product. ACM also continues to work on models for the continuous casting plant of ABS Sisak, especially for high-carbon grades.



# TOWARDS GREEN STEEL: TYPES AND ENERGY

The European Circular Economy Action Plan identifies steel as one of the products/materials with the greatest potential for circularity. Strong and durable by nature, steel is a crucial element in achieving a carbon-neutral world. Its adaptability to recycling, reuse and regeneration makes it a key pillar of the transition.
Steel has an extremely long life cycle and can be 100% recycled countless times without losing its properties. Its density and magnetic properties make it easy to separate at the end of the cycle, making it one of the most recycled materials in the world. Efforts to achieve more sustainable and lower-emission production follow different paths and use different production solutions, often referred to as "green" or "sustainable"; a summary is therefore needed, as not all solutions contribute equally to reducing emissions.

Full-cycle **production techniques (Blast Furnace with Oxygen Converters: BF+BOF)** have the highest impact, producing on average **2.2 tonnes of $CO_2$**[5] per tonne of steel produced.

DRI-EAF technology, which combines Direct Reduced Iron (DRI) with Electric Arc Furnace (EAF), is a solution that will be increasingly developed in the future and represents a significant step forward in terms of sustainability compared to the blast furnace cycle. The main difference with the blast furnace process is the reducing agent used to remove oxygen from the iron ore: the blast furnace (BF) uses carbon in the form of metallurgical coal (coke), whereas DRI plants can use natural gas (CH4) or hydrogen (H2) or a mixture of the two for reduction.

Currently, plants for the production of DRI mostly use natural gas, but the technology is now mature enough to also allow the use of hydrogen, both as an energy source and as a reducing agent. Naturally, the production of DRI using H2 green as a reducing agent has lower emissions than the production of DRI using CH4.

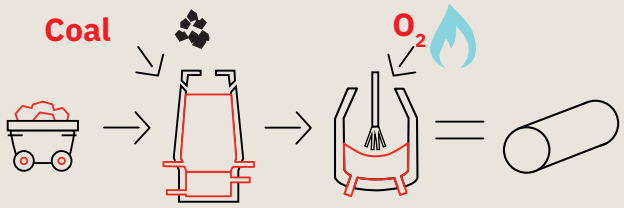
**DRI-EAF production techniques (where DRI is produced using CH4)** improve emissions compared to the full cycle by an average of **1.4 tonnes of $CO_2$** per tonne of steel produced.

Steel made from the **scrap melting process with electric arc furnace (EAF Scarp based)** is the most environmentally friendly option. This production method emits on average about **0.3 tonnes of $CO_2$** per tonne of steel produced, a reduction of **-86% compared to the blast furnace cycle**.

Italy, with about 80% of its production coming from electric furnaces, is an excellent example of low-emission steel production compared to the rest of Europe and the world, which mainly use the most polluting cycles.

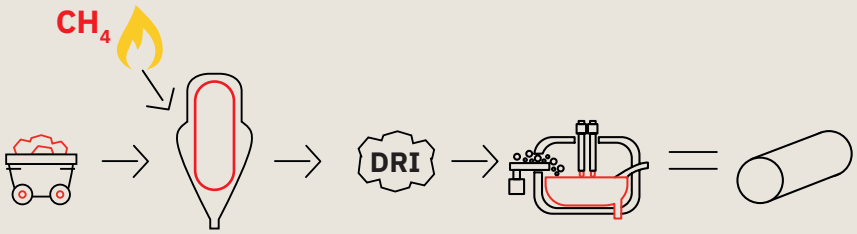
Therefore, the latest-generation ecological transition of steel production is moving towards the use of electric arc, scrap or DRI-based smelting processes, powered by green energy that does not come from fossil fuels, using alternative energy sources such as green hydrogen, i.e. produced by electrolysis of water, with the energy required for the process coming from renewable sources without carbon dioxide emissions.

## STEEL PRODUCTION TECHNOLOGIES



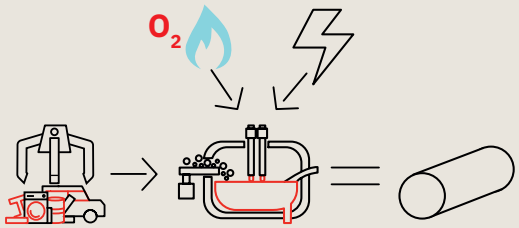

2.2 $CO_2$ per TONNE

**FULL CYCLE WITH BLAST FURNACE**



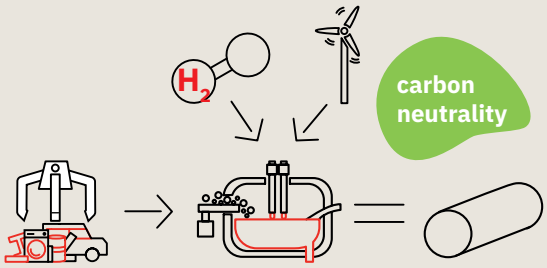

1.4 $CO_2$ per TONNE

**ELECTRIC CYCLE WITH DRI**




0.3 $CO_2$ per TONNE

**ELECTRIC CYCLE FROM SCRAP**




NET ZERO

**GREEN STEEL:**
**HYDROGEN + 100% RENEWABLE ENERGY**

[5] Source IRENA based on: IEA. Iron and Steel Technology Roadmap [Internet].
Paris: International Energy Agency; 2020 Oct [cited 2022 Sep 30]. (Energy Technology Perspectives).
Available from: *www.iea.org/reports/iron-and-steel-technology-roadmap*

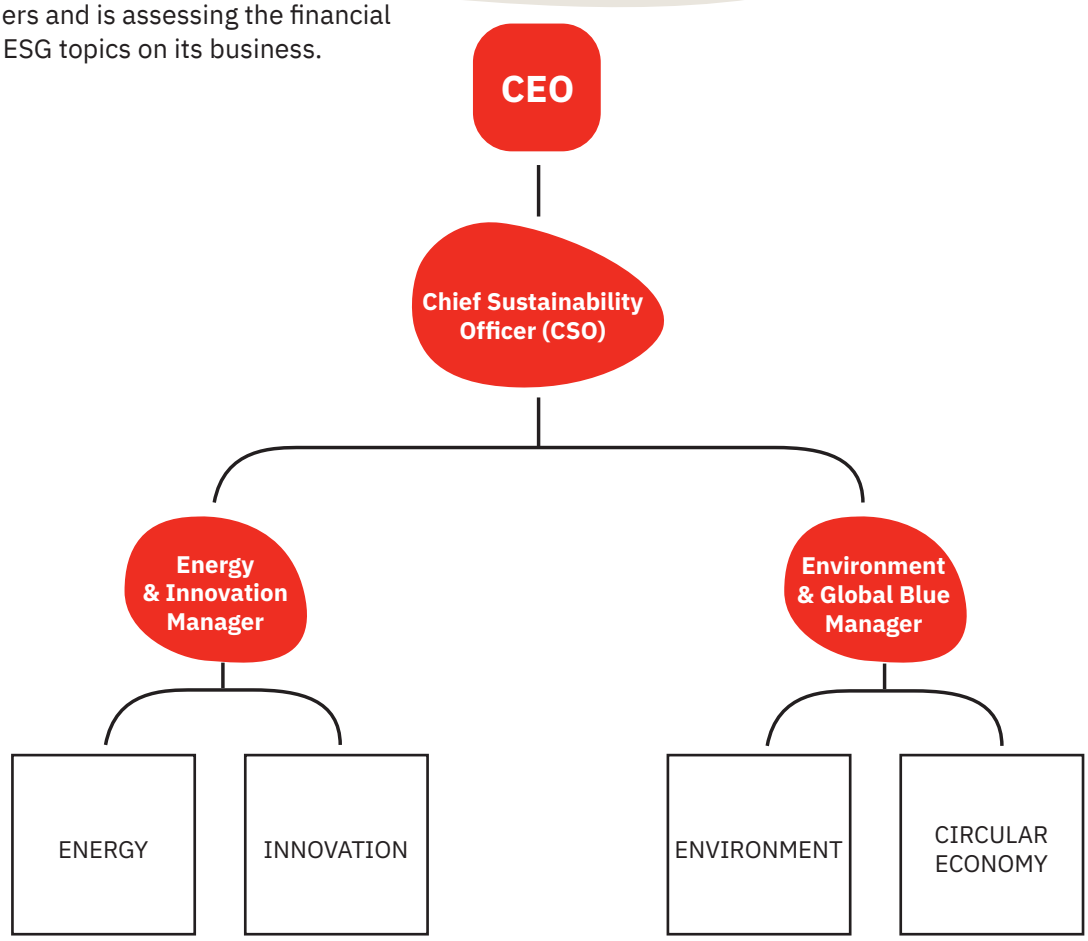
# OUR APPROACH TO SUSTAINABILITY

ABS firmly believes that **to be truly "sustainable", a Company must be able to guarantee its operations over the long term**, and today, this condition cannot be ignored when considering the ecosystem in which one operates and the integration of ESG (Environmental - Social - Governance) topics into the core business strategy.

Moreover, recognising the importance of constantly challenging and adapting to the needs of the future in an ever-changing economic and social context, ABS has reviewed its materiality matrix with its stakeholders and is assessing the financial impact of ESG topics on its business.

This will enable the adoption of a dual materiality vision that can calibrate the relevance of each topic and prioritise corporate initiatives to maximise the positive impact on both the external and internal context.

ABS's sustainability strategy forms an integral part of its overall corporate strategy. It is the principle of sustainable action, the guide of all our short, medium and long-term projects and actions.



# SUSTAINABILITY AND INNOVATION MANAGEMENT

ABS has a **Chief Sustainability Officer (CSO)** appointed by the BoD, who has the task of managing and planning the activities of the Environment, Energy, Innovation functions and the Global Blue plant, i.e., the plant in charge of transforming steel mill slag into industrial aggregates called Ecogravel™.

Moreover, the CSO is responsible for evaluating and interpreting changes in the external environment on sustainability issues to search for policies and initiatives in order to develop new lines of strategy for ABS. The CSO is responsible for coordinating the other functions on sustainability topics.

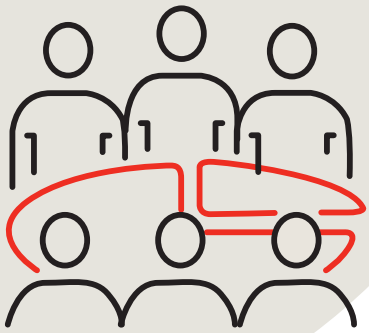
The **Sustainability & Innovation Manager** supports the CSO and is responsible for identifying and managing incentives to support these initiatives, monitoring sustainability performance targets and transversal projects that will contribute to meeting ESG commitments.

As from 2021, there is a newly formed sustainability **Steering Committee** in ABS, consisting of our CEO and frontline managers, which is tasked with supporting ABS in its sustainability process and bringing different perspectives to the strategy definition.

This committee joins our operational committees, internal bodies made up of members of personnel and/or company executives for monitoring decisions and identifying actions for the support of short-term results by the functions involved in the production process.

The importance of operational committees is that they provide a forum for discussing important issues that require the cooperation of several departments and/or corporate functions.

These committees help to ensure that decisions are made collaboratively and that the various departments are adequately represented and involved in the decision-making process.



# STAKEHOLDER, MATERIAL TOPICS AND SDGs

In ABS, the process of bringing to light material issues according to the ABS – Stakeholder dual vision is an activity that has been carried out since 2016 and has been developed by a progressive inclusion of different types of stakeholders.

The classification of ABS stakeholders is the result of an in-depth analysis that led to the final identification of the following categories: **employees, customers, shareholders, suppliers, regulatory and government bodies, research institutes, environmental protection and communities.**

Each category was further analysed and detailed in order to identify all stakeholders with a connection to the ABS business.

During the years, customers, suppliers, employees, regulatory and government bodies, research institutes and new generations have been involved in defining material topics, mainly through surveys. This process was carried out by ABS S.p.A. and the analysis is to be considered valid for the entire Steelmaking division.

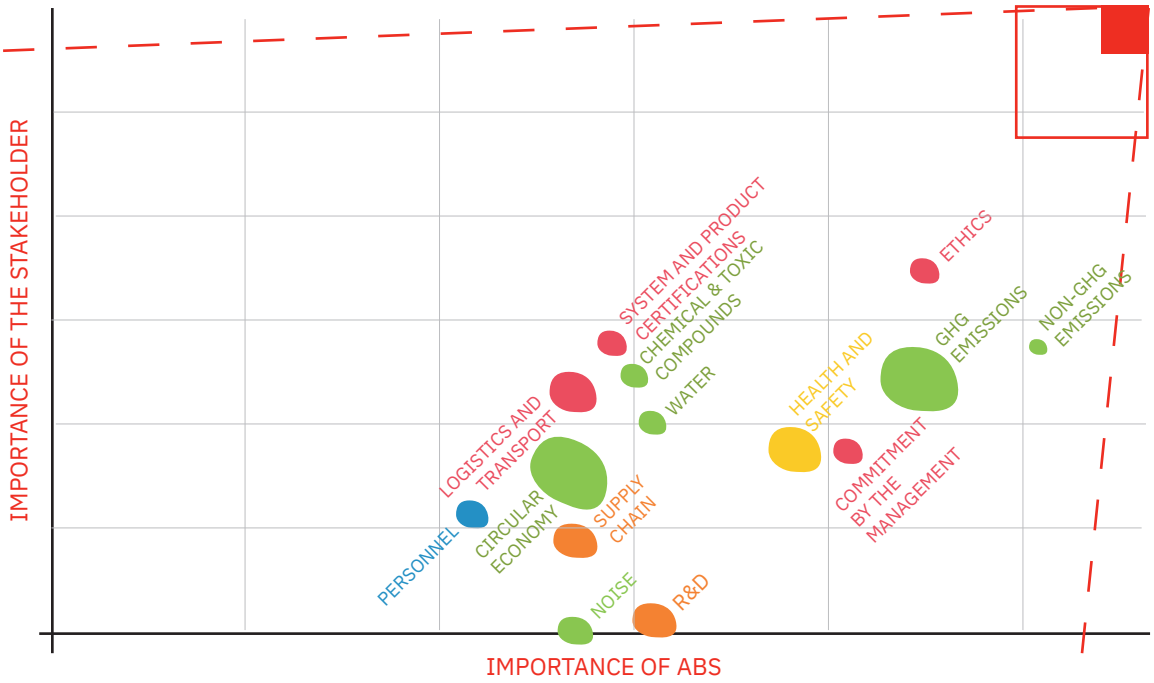
**Materiality analysis is an evolving process and in ABS it has been approached in a dynamic and consistent manner, taking into account the growing awareness of sustainability topics, their impact on business strategy and the related risks and opportunities.**

**Materiality assessed according to the impact generated is of great importance and involves identifying and prioritising the most significant impacts a company has on the economy, the environment and people.**

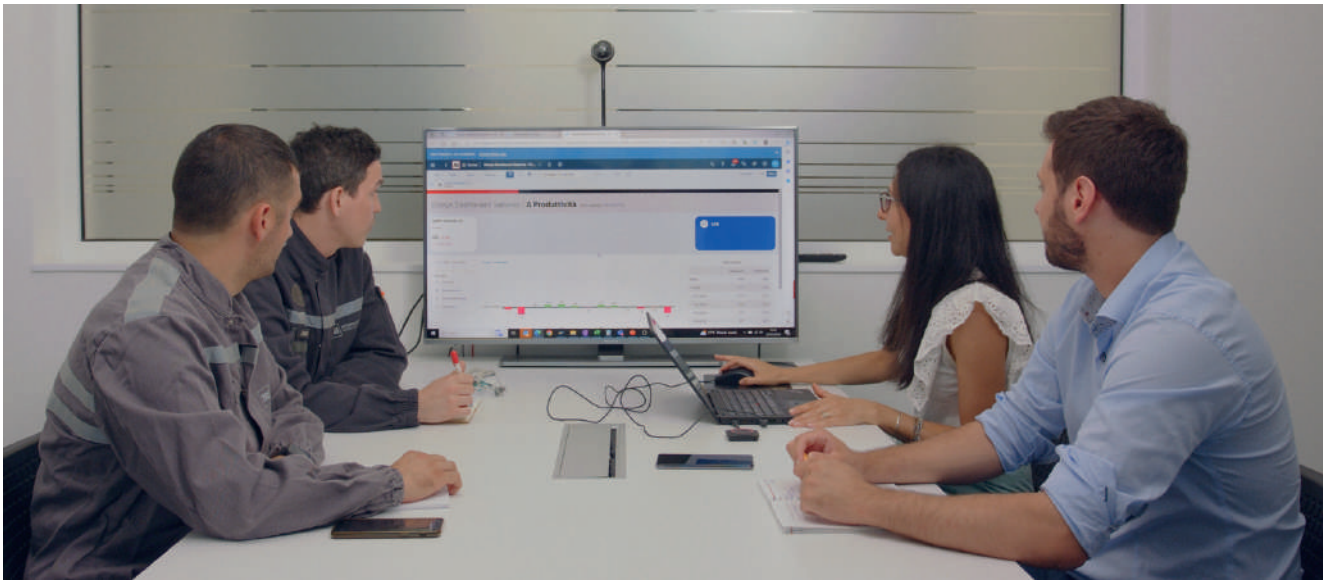
Over the past year, the activity has included not only the engagement of specific categories of stakeholders, customers and new generations, but also the adoption of a **new approach to assessing the impact of material topics.** Moreover, a functional process was carried out with the heads of the various organisational functions of ABS to re-read the topics that emerged as material in terms of the potential impact generated.

Specifically, the following were assessed: the **nature of the impact** (positive or negative), the main **sphere of influence** (economic, environmental, social and/or human rights), the **causes** (whether direct or indirect), the **extent** of possible benefits or damages, the **nature of the spill-over** (potential or actual), the **geographical scope of the spill-over**, the **effort required**, where possible, to repair the damage caused by a negative impact, the **frequency of occurrence** and whether or not the topic is subject to **regulatory requirements**.

The results of this activity are presented below in a graphical visualisation where the size of the symbol is closely related to the intensity of the impact generated.




Impact intensity from 1 to 5:



## MATERIALITY MATRIX YEAR 2023:
## Relevant topics and intensity of impact generated

| | Impact | | Sphere of influence | | | |
|---|---|---|---|---|---|---|
| **Material topic** | **positive** | **negative** | **Economic** | **Environmental** | **Social** | **Human rights** |
| PERSONNEL: fair remuneration | ●● | ●● | ✓ | ✓ | ✓ | ✓ |
| PERSONNEL: skills development projects | ●● | ●● | ✓ | ✓ | ✓ | ✓ |
| PERSONNEL: respect for human rights | ● | ●● | | | | ✓ |
| OCCUPATIONAL HEALTH AND SAFETY | ●● | ●●● | ✓ | | ✓ | ✓ |
| GHG EMISSIONS | ●●● | ●●●● | ✓ | ✓ | ✓ | ✓ |
| NON-GHG EMISSIONS | ● | ● | ✓ | ✓ | ✓ | |
| CIRCULAR ECONOMY: procurement of raw materials | ●●● | ●●●● | ✓ | ✓ | ✓ | ✓ |
| CIRCULAR ECONOMY: waste management that favours reuse and recycling over disposal | ● | ●● | ✓ | ✓ | ✓ | |
| CIRCULAR ECONOMY: management of by-products (ABS Ecogravel) | ● | ●● | ✓ | ✓ | ✓ | |
| NOISE: measures to reduce noise and vibration emissions | ●● | ● | ✓ | ✓ | ✓ | |
| WATER: proper water resource management | ● | ●● | ✓ | ✓ | ✓ | ✓ |
| CHEMICAL & TOXIC COMPOUNDS: reducing consumption | ● | ●● | ✓ | ✓ | ✓ | ✓ |
| SUSTAINABLE SUPPLY CHAIN | ● | ●●● | ✓ | ✓ | ✓ | ✓ |
| ETHICS: ethical management of the business | ● | ●● | ✓ | ✓ | ✓ | ✓ |
| COMMITMENT BY THE MANAGEMENT: to sustainability actions | ●● | ●● | ✓ | ✓ | ✓ | ✓ |
| LOGISTICS AND TRANSPORT: development of actions to reduce associated environmental impact | ●● | ●●● | ✓ | ✓ | ✓ | |
| RESEARCH AND DEVELOPMENT | ●●● | ●● | ✓ | ✓ | ✓ | |
| CERTIFICATIONS | ●● | ● | ✓ | ✓ | ✓ | ✓ |

**Intensity of generated impact:** ● slight ●● low ●●● moderate ●●●● significant

Impacts reported as positive mainly refer to an assessment of activities aimed at mitigating actual negative impacts. Activities undertaken by ABS that generate real positive impacts, such as training, avoid potential negative impacts. All relevant activities and projects that generate positive impacts or are intended to mitigate negative impacts and are related to these assessments are described in this report.

ABS's view of the most important topics in terms of impact and relevance was revised during the current year and the revised version of the materiality matrix was approved by the Board of Directors on July 20, 2023.

The topics found to be material, i.e. deserving, as a matter of priority, of special attention and strategic planning, are those pertaining to the following areas:

| MATERIAL TOPIC | SDGs SUB-TARGETS | GRI AND CUSTOM KPI |
|---|---|---|
| Energy and GHG (greenhouse gas) emissions |  **7.2:** Increase substantially the share of renewable energy in the global energy mix by 2030. **7.3:** Double the global rate of improvement in energy efficiency by 2030. | **302** **305** |
| Other emissions into the atmosphere Chemical & toxic compounds Logistics and transport Noise & vibration |  **12.4:** by 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimise their adverse impacts on human health and the environment. | **305** Environmental investments; % Transport by train |
| Ethical management of the business Commitment of the management towards the adoption of sustainability policies |  **10.2:**By 2030, empower and promote the social, economic and political inclusion of all irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status. | **2-23 c.** |
| Development of practices to ensure full compliance with health and safety at work |  **8.8:** protect labour rights and promote safe and secure working environments of all workers, including migrant workers, particularly women migrants, and those in precarious employment | **403** |
| Management of water resources: withdrawals and discharges |  **15.1:** By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements. | **303** |
| Circular economy actions and policies aimed at reducing the impact of the acquisition of raw materials and develop a virtuous waste management model, adopting, where possible, recovery and recycling policies instead of disposal |  **12.5:** By 2030, substantially reduce waste generation through prevention, reduction, recycling, and reuse. | **301** |
| Sustainability-oriented supply chain management |  **12.6:** encourage companies, especially large and trans- national companies, to adopt sustainable practices and to integrate sustainability information into their reporting cycle. | **2-7** |
| Actions towards staff regarding remuneration policies, development of growth paths for skills and respect for human rights |   **4.4:**By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship. **5.1:** End all forms of discrimination against women and girls everywhere. | **404** |
| Development of Innovation and Research & Development activities |  **9.5** Improve scientific research, increase the technological capacity of industrial sectors in all countries, especially in developing countries, by 2030, by promoting innovation and significantly increasing the number of people employed in research and development. | System, process and product innovation activities developed |
| System and product certifications | | System and product certifications obtained |

# VALUE GENERATED AND DISTRIBUTED TO STAKEHOLDERS

| Economic value directly generated and distributed | 30/06/2023 |
|---|---|
| A. Directly generated economic value | 1,507.75 |
| B. Distributed economic value | 1,340.67 |
| **(A-B) Characteristic retained economic value** | **167.08** |

(million euro).

| Analysis of distributed economic value | 30/06/2023 |
|---|---|
| Operating costs | 1,238.29 |
| Remuneration of Personnel | 88.66 |
| Remuneration of the Public Administration | 5.24 |
| Remuneration of Risk Capital | - |
| Remuneration to Lenders | 7.78 |
| Donations and sponsorships | 0.70 |
| **Total** | **1,340.67** |

(million euro).

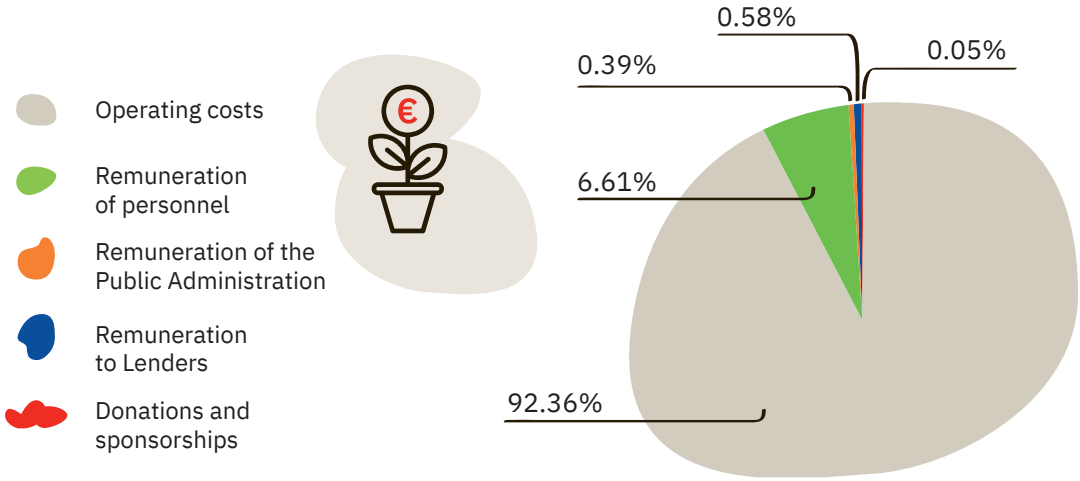
ABS contributes to the economic growth of the social and environmental context in which it operates by generating shared value. In the 2022/2023 financial year, the Directly Generated Economic Value amounted to 1,507.75 million euro.

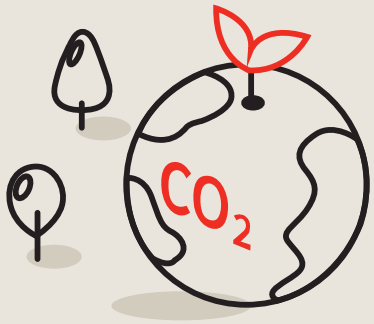
Almost 90% of the company's wealth generated in the 2022/2023 financial year, amounting to approx. 1,340.67 million euro, was distributed to its stakeholders. Suppliers and employees are among the stakeholders who benefit most from the value produced by ABS.

With regard to the main stakeholders, the economic value distributed was as follows:

- **Personnel** (including term contractors and Board Directors) **6.61%**, through direct remuneration consisting of salaries and severance payments and indirect remuneration consisting of social security contributions and costs for personnel-related services.
- **Suppliers 92.36%** - are identified in the operating costs that mainly represent payments to suppliers of goods and services.
- **Public Administration 0.39%** - through the payment of direct and indirect taxes.
- **Lenders 0.58%** - through the payment of financial charges.
- **Donations and sponsorships 0.05%** - through donations.

## VALUE GENERATED AND DISTRIBUTED




# OUR SUSTAINABILITY STRATEGY

Our sustainable development strategy, defined taking into account enabling factors, megatrends and the 2030 Agenda, is leading ABS towards a low-carbon, high-innovation development model in which people are fundamental and customers central. With this in mind, ABS follows a path of continuous improvement, because where impacts cannot be removed, they must be reduced to preserve the environment and create value for the community, anticipating future regulations related to carbon emissions or environmental, social and governance (ESG) aspects in order to gain a competitive advantage.

The main objectives that can be linked to sustainability and digitalisation are to:

- increase the range of products offered;
- increase the volume of shipments and turnover;
- optimise operating and logistics costs;
- optimise the use of plants;
- reduce environmental impact.

Some of the strategic lines on which ABS is working are:

- **The evaluation and adoption of advanced and lower impact technologies.** Considerable investments in innovative technologies are offset by short, medium and long-term benefits thanks to a better ESG performance and a better risk-cost of capital and quality ratio.
- **The increase in sustainable steel production.** The market is encouraging our customers, particularly in the automotive sector, to reduce climate-changing gas emissions in the supply chain, leading to an in increase in demand for low-carbon steel supplies.
- **Improving the efficiency of our processes.** Managing resources more efficiently and reducing operational risk provides greater resilience to future change.
- **Digitalisation that generates value.** ABS adopts technologies to improve defect recognition, process safety and quality. ABS chose to quantify, monitor, record and evaluate sustainability performance and reporting through an IT platform. Our digital solutions also help improve productivity by optimising energy consumption, minimising waste and controlling emissions.
- **Collaboration with stakeholders.** To accelerate the green transition, an alignment with our stakeholders is crucial to enable the collaboration needed to co-develop feasible solutions to complex challenges.

ABS focuses on maximising the use of recycled raw materials, develops sustainable business practices, spreads a shared culture of health and safety among employees and collaborators, by adopting practices that protect the environment, reduce global warming and improve the quality of life in the local community. All these actions are a clear signal of a commitment that ultimately would lead ABS customers to be more sustainable themselves.

The strategic plan, called **VISION DIGITAL GREEN**, being defined and approved by the Board of Directors, envisages the implementation in ABS of an investment plan with actions of almost Euro 1,000 million over the period from 2023 to 2028, in which business development is based on **five strategic "pillars"** that address the main sustainability trends emerging in the market:

- **Resilient supply chain;**
- **Decarbonisation and circular economy;**
- **Rationalisation and efficiency of production;**
- **Innovation, expansion and specialisation of the offer;**
- **Attention to human capital.**

The above context includes:

- the purchase of a company in Friuli that collects scrap (Rott - Ferr), which will allow the integration of this process into ABS, improving the value chain and, together with the development of the area to the south of the Cargnacco (UD) site, the **circularity performance** (deed dated July 11, 2023);
- the installation of a first tranche of 5.3MW, out of a total of approximately 16MW, of photovoltaic panels for the production of renewable energy (ongoing);
- the renovation and streamlining of the combustion systems of the reheating and heat treatment furnaces, whose projects resulted in a reduction in methane consumption of approximately 3.3 Msmc in 2022/23, which corresponds to a 5% reduction in methane consumption at the Cargnacco (UD) plant;
- the construction of new stretch of the internal railway connections to the Italian plant, which, following a path also shared with Regione Friuli Venezia Giulia, COSEF and RFI, will lead to an absolute predominance of transport by rail (>70%) over road transport, with undoubted benefits in terms of reducing Scope 3 GHG emissions (thanks to the completion of the stretch of track serving the QWR).

**In June 2023, COSEF completed the first lot of the railway yard serving the Udine Industrial Zone (Ziu), which will also enable the activation of the new Signal Box (SB) for the new ABS Saturno Line.**

The second lot, which includes the construction of the access road, is currently being contracted by COSEF, while the final lot, which includes the construction of three additional tracks of approximately 470 metres in length, in addition to the first two already built, is at the design stage.

# MEGATREND

Internationally, there is a growing recognition that people, society and policymakers need to act strongly and quickly to reduce risks. The risks related to environmental as well as social and industrial change cascade into further risks that, if not mitigated in advance, could lead to major economic, social and environmental upheavals in the not too distant future.
With an annual production of around 1.9 billion tonnes [6], steel is the third largest man-made bulk material in the world after cement and wood. Although other materials offer alternatives to steel in various applications, its high strength, recyclability, durability, ease of manufacture and relatively low cost make it highly unlikely to be replaced in the near future.

The steel sector [7] is defined as ***hard to abate*** and ***energy intensive***, as it ranks first among heavy industries in terms of $CO_2$ emissions and second in terms of energy consumption. The Italian steel industry ranks eleventh in the world and second in Europe after Germany, employing nearly 31,000 people in 2022 [8] and generating revenues of nearly 66 billion euro [9]; it is also considered to be at the forefront of plant engineering and digitalisation, in which it has been investing for years and intends to continue to do so without losing market share.

The European Union has also set long-term $CO_2$ emission reduction targets for the European steel sector, aiming to develop technologies that will reduce $CO_2$ emissions by 55% by 2030 and achieve climate neutrality by 2050. These are ambitious targets that will require a combination of different strategies and levers to achieve, as well as a fierce competitive challenge from non-European countries where emissions regulations may be less stringent than in the EU.

In countries such as China, India and Turkey, the approach to carbon neutrality is much more subtle. This reduced environmental sensitivity allows steel to enter the European market with significantly lower production costs, combined with a lower level of investment in plant and technology to reduce climate-changing gas emissions.

**COP 26** emphasised the urgency of decarbonising the steel sector. An industry that still faces challenges in turning ambition into action. Despite increasing commitments to net zero, reducing emissions from steel production remains a challenge. The steel sector is the largest industrial sector in terms of emissions, accounting for 30% [10] of industrial carbon emissions.

[6] *https://www.statista.com/statistics/267264/world-crude-steel-production/*
[7] Somers, J., Technologies to decarbonise the EU steel industry, EUR 30982 EN, Publications Office of the European Union, Luxembourg, 2022, ISBN 978-92-76-47147-9, doi:10.2760/069150, JRC127468 p. 40
Vogl, V., Sanchez, F., Gerres, T., Lettow, F., Bhaskar, A., Swalec, C., Mete, G., Åhman, M., Lehne, J., Schenk, S., Witecka, W., Olsson, O., & Rootzén, J. (2021). Green Steel Tracker. *www.industrytransition.org/greensteel-tracker*
[8] EUROFER "European Steel in Figures 2023"
[9] Federacciai "Relazione annuale 2022" (2022 Annual Report)
[10] IEA (2021), Industry direct CO2 emissions in the Net Zero and Announced Pledges scenarios, 2000-2030, *https://www.iea.org/data-and-statistics/charts/industry-direct-co2-emissions-inthe-net-zero-and-announced-pledges-scenarios-2000-2030*

In 2022, global steel production reached 1.89 billion tonnes [11], with an average carbon intensity of 1.4 $tCO_2$/t of steel [12]. With such a high carbon footprint, decarbonising the steel sector is key to meeting climate change targets.

Most of the production of steel is now located in countries with Net Zero targets, but there are discrepancies between the commitments made by companies and those set at national level. Europe represents the continent with the highest number of companies with ***Net Zero*** targets. In this context, the pipeline of innovative technologies is promising but needs to be significantly strengthened, and the size of the company and its investment capacity are key characteristics driving decarbonisation. The scrap-based EAF production system is the most significant contributor to achieving the ***Net Zero*** target. The risk of stranded assets for the sector is real and, in addition to increasing the cost of the low-carbon transition, has potentially high social impacts on workers and communities.


One of the objectives of the **European Green Deal** is to create a level playing field across the EU, including the revision of the **ETS** (Emission Trading System), which regulates the trading of greenhouse gas (GHG) emission shares, and the introduction of the **CBAM** (Carbon Border Adjustment Mechanism), which is effectively a tax designed to penalise products entering Europe with $CO_2$ emissions above the limits set by the EU. The Carbon Boundary Adjustment Mechanism (CBAM) is designed to protect industry in the decarbonisation phase from external competitors not subject to European climate targets.

The mechanism will equalise the price of $CO_2$ between domestic products and imports and ensure that climate targets are not undermined by the relocation of production to countries with less stringent policies.

[11] Federacciai "Relazione annuale 2022" (2022 Annual Report)
[12] Worldsteel (2021), 2021 World Steel in figures, *https://www.worldsteel.org/en/dam/jcr:976723ed-74b3-47b4-92f6-81b6a452b86e/World%2520Steel%2520in%2520Figures%25202021.pdf*
IEA, Direct CO2 intensity of the iron and steel sector in the Net Zero Scenario, 2010-2030, IEA, Paris *https://www.iea.org/data-and-statistics/charts/direct-co2-intensity-of-the-iron-and-steel-sector-in-the-net-zero scenario-2010-2030, IEA. Licence: CC BY 4.0*

Carbon pricing mechanisms cover less than 20% of global steel production capacity and do not meet the requirements of the Net Zero trajectory. 120 USD per tonne of $CO_2$ is the estimated threshold that would be required in 2030 to be consistent with a net zero pathway by 2050. While we have identified a lower threshold of $60 per tonne of $CO_2$ that would be consistent with a pathway to net zero emissions by 2060, so far less than 10 per cent of global steel capacity is subject to this price level [13].

**In terms of plant technology, 57% of continental steel production is in the full cycle, using blast furnaces and iron ore, and the remaining 43% is in the electric arc furnace (EAF), using scrap as the main raw material.**

Considering that it is "easier" for electric cycle producers to meet the European parameters than their full cycle competitors, there will be a strong push in the near future to convert plants by eliminating blast furnaces and coke ovens to install DRI (Direct Reduced Iron)/HBI (Hot Briquetted Iron) plants in series with electric furnaces or perhaps smelters for the production of cast iron in order to keep oxygen converters and part of the production process unchanged. This means that one of the next problems we will face will be a shortage of scrap, or at least a deterioration in the quality of the scrap available.

As a direct consequence, the circularity of scrap will be increasingly promoted through the development of technologies to manage this change, using steel differently so that it can be reused in a subsequent life without the energy burden of a new smelting process.
In the European market, scrap prices increased mainly due to higher demand from steel producers. In particular, scrap prices in Italy reached 400-440 €/tonne in March 2023. A similar trend can be seen in France, Spain and throughout Eastern Europe. Scrap is essential for steel production, but it is also essential for decarbonisation.

Accelerating the digital transformation is the necessary boost to competitiveness that the industry needs to defend its global market share, and a necessary step to achieve efficiency, both in terms of production and energy. There is currently a shortage of specialised digital skills in our sector. In addition to the training gap, there is also the IT systems and cyber security gap, which raises the additional issue of securing know-how and business continuity.

Artificial intelligence and big data applied to quality control processes help both to ensure greater efficiency in the production chain, to the benefit of the customer, and to reduce complaints.

[13] OECD - Assessing steel decarbonisation progress ready for the decade of delivery - November 2022 - Page 10.

Automation and robotization technologies will be increasingly used in the steel sector in the future, with the main objective of maintaining the safety of workers by avoiding exposing them to high-risk activities and/or movements that could damage their health.

Artificial intelligence, remote vision and neural networks will be increasingly present in production plants in order to learn and memorise normal working practices and be able to make autonomous decisions, giving instructions to machines and the operator, when there is an anomaly in the process.

Artificial intelligence is playing a leading role in predictive maintenance, with an increasing number of sensor-enabled products designed to detect abnormal machine behaviour and prevent downtime by intervening before unexpected plant damage spreads to the rest of the process.

The trend analysis necessarily takes into account the short and medium-term risks for the steel industry associated with the Russian-Ukrainian conflict. Contrary to expectations, the market benefited from the conflict in Ukraine, which reduced the supply of steel products from the affected areas, but also caused widespread concern about material shortages.

The price fluctuation in the energy sector, and consequently in steel products, which began in the second half of 2021, remains a key issue in determining the trends in the sector, not only from a purely economic point of view, but also in terms of the speed at which increasingly efficient and sustainable solutions are developed.

**Raw materials**, scrap in particular, are also important when considering sustainability. The European Union is already preparing a set of rules that will make the export of recyclable waste (in particular ferrous and non-ferrous scrap) to countries outside the Organisation for Economic Co-operation and Development (OECD) conditional on those countries demonstrating capacity for environmentally sound waste management.

Alongside product development, **servitisation becomes a priority development axis for ABS**; customised alignment between the timing of demand and internal supply ensures material certainty and minimises stock-outs, with a positive impact on fixed material costs.

# ENVIRONMENTAL ASPECTS

"Value retention through waste prevention".

ABS production activities have an impact on various environmental matrices, which are systematically analysed.

In order to minimise its impact on all aspects of the environment, the **Company adopts BAT** (Best Available Techniques), the best technical solutions for installations, management and control, able to guarantee a high level of environmental protection, also thanks to the collaboration with specialised companies.

ABS has voluntarily decided to obtain the **UNI EN ISO 14001 Environmental Management System certification for all production plants** in Cargnacco, Sisak and the Metz Research Centre: it is an important tool that enables the entire ABS organisation to monitor and continuously improve its activities to ensure compliance with regulatory requirements.

The Cargnacco production site has been granted an **Integrated Environmental Authorization**, **issued in 2020**, which replaces all the other operational environmental authorizations. Since ABS is ISO 14001 certified, our IEA has a duration of 12 years, two years more than its normal ten-year duration.

The Giove - Qualisteel line, where cold processing takes place, has a Single Environmental Authorisation, which was transferred in 2020 following the acquisition of the department within ABS.

ABS SISAK also has an environmental authorisation issued by the competent authority in 2020; the authorisation defines the monitoring of emissions to air and water in terms of methodology, measurement frequency and evaluation of results.

One of the most significant impacts of ABS, in terms of the production cycle, is related to the consumption of electrical energy and the resulting greenhouse gas emissions. In order to manage energy resources in the best possible way, ABS has implemented an **Energy Management System** at its Cargnacco and Sisak plants **in accordance with the UNI EN ISO 50001:2018 international standard**.

By implementing the management system, ABS is able to accurately monitor energy consumption and achieve important containment results. Continuous investments and the progressive reduction of impacts on the environmental matrices air, water and soil are actions consistent with ABS's strategy to reduce its environmental footprint in order to achieve virtuous medium- to long-term goals. In line with this vision, ABS invested more than 9.5 million euro in the ESG area, of which 6 million euro was dedicated to the installation of the photovoltaic system.

# SCRAP AND OTHER RAW MATERIALS

Ferrous scrap, a resource usable countless times, is the main raw material in the production process of ABS for making special steels using electric furnace technology. The electric furnace, compared to full-cycle technology using iron ore, involves the use of scrap, thus minimising the use of virgin, non-renewable natural resources.

The operational methods for managing scrap metal that is classified as waste according to the regulations in force are described in detail in the environmental management manual, which defines the steps of acceptance, radiometric and documentary verification of the material, checks on the incoming scrap metal, and possible rejection of the load in case of non-conformity.

Noble gasses and fluids used in the production process and/or as ancillary materials, given their physical form, are quantifiable almost exclusively by volume.
This year, the **percentage of raw materials used from recycled sources, expressed by weight, is over 95% of the total, an improvement on last year**, and includes, in addition to ferrous scrap, some of the cast iron, ferro-alloys and refractory materials used. Any metals used in the production process and subject to the Conflict Minerals Regulations are managed consistently with what ABS has defined in its mineral procurement policy in accordance with IPC-1755, maintaining the due diligence requirements for EU importers of minerals from conflict or high-risk areas (Regulation (EU) 2017/821 (D)), and in line with the US conflict minerals regulations (US Dodd-Frank Act - Section 1502).

ABS is also required to collect and assess information on the properties of chemicals and on the hazards arising from them according to the European REACH regulation, in order to improve the protection of human health and the environment. Moreover, in 2021, a specific training activity was started with regard to the EU Directive restricting the use of certain hazardous substances in electrical and electronic equipment (2011/65/EU, ROHS), with regard to due diligence for EU importers of minerals from conflict-affected and high-risk areas (Regulation (EU) 2017/821 (D)), and with regard to the US Conflict Minerals Regulations (US Dodd-Frank Act - Section 1502).

The Danieli Group, and in particular the Danieli Research Centre and Danieli Centro Cranes, together with ABS, has invested about 2 million euro in the last two years in an innovative project called **Scrap Yard & Metal Management**, aimed at improving the management of scrap arriving at the Cargnacco (UD) plant and its use in the steel mill furnaces.

The objectives of the project can be summarised as follows:

- automatic check of the documentation accompanying the scrap;
- automation of the classification of incoming material and adequacy analysis with what the supplier declared;
- tracking scrap to the various unloading positions in the park and then charging the furnace;

**95%**
*raw materials of recycled origin*

**+1%**
*compared to 2022*

- integration between the charging process and the cost and quality objectives of the casting process;
- accuracy in the inventories of the Scrap Park.

The management process starts with a railway portal that directly collects and records data and images of wagons entering the factory, enabling the immediate start of the subsequent tracking phases within the scrap park.

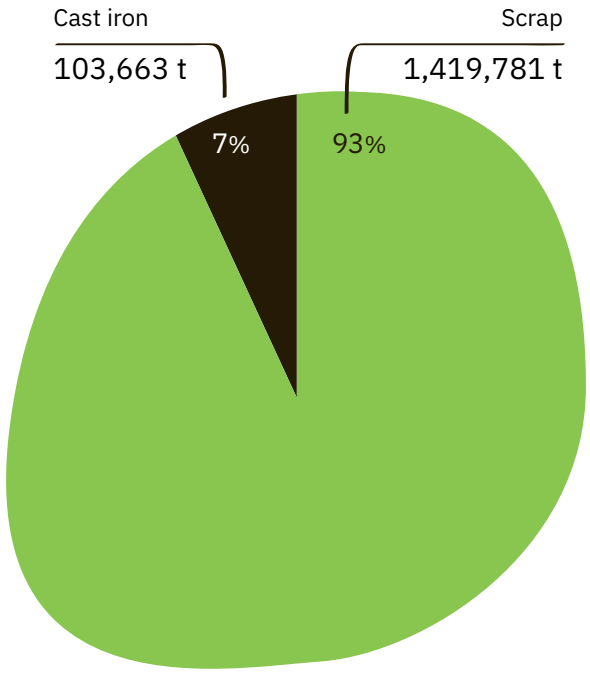
The classification of the scrap is carried out by the processing of images acquired by means of hand-held terminals carried by dedicated personnel.

The material classification process is carried out with the use of machine learning techniques. The system also makes it possible to optimise the management of complaints to suppliers: photos and supporting documentation are automatically captured for each load.

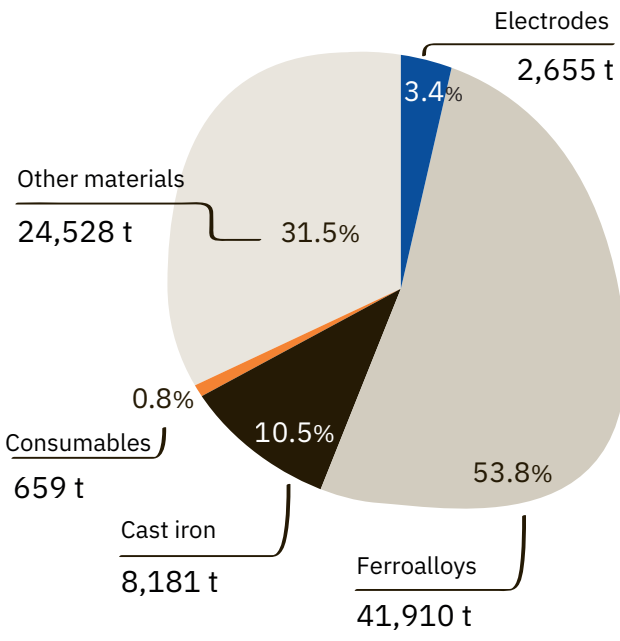
The system is integrated with the railway portal that collects data and images of incoming wagons and records them directly, enabling the immediate start of the subsequent tracking phases within the scrap park.

## RAW MATERIALS BY WEIGHT FROM RECYCLED SOURCES

### RECYCLED (1,523,444 t)




### NON-RECYCLED (77,933 t)



## Raw materials of recycled origin (t)

| | Not recycled | Recycled | Total |
|---|---|---|---|
| **2023** | **77,933** | **1,523,444** | **1,601,377** |
| Scrap | - | 1,419,781 | 1,419,781 |
| Electrodes | 2,655 | - | 2,655 |
| Ferroalloys | 41,910 | - | 41,910 |
| Cast Iron | 8,181 | 103,663 | 111,844 |
| Consumables | 659 | - | 659 |
| Other materials | 24,528 | - | 24,528 |
| **2022** | **112,898** | **1,632,737** | **1,745,635** |
| Scrap | - | 1,536,851 | 1,536,851 |
| Electrodes | 2,848 | - | 2,848 |
| Ferroalloys | 41,206 | - | 41,206 |
| Cast Iron | 42,523 | 95,886 | 138,409 |
| Consumables | 828 | - | 828 |
| Other materials | 25,493 | - | 25,493 |

## Materials used by weight or volume

| | Not recycled | Recycled | Total |
|---|---|---|---|
| **2023** | **66,940,647** | **1,523,526** | **68,464,173** |
| **Cubic metres (m³)** | **66,760,666** | **83** | **66,760,749** |
| Gas | 66,760,666 | 83 | 66,760,749 |
| **Tonnes (t)** | **179,981** | **1,523,444** | **1,703,125** |
| Packaging | 951 | - | 951 |
| Ancillary materials | 92,719 | - | 92,719 |
| Raw materials | 77,933 | 1,523,444 | 1,601,377 |
| Refractory materials | 8,078 | - | 8,078 |
| **2022** | **69,957,188** | **1,632,800** | **71,589,988** |
| **Cubic metres (m³)** | **69,730,918** | **63** | **69,730,981** |
| Gas | 69,730,918 | 63 | 69,730,981 |
| **Tonnes (t)** | **226,270** | **1,632,737** | **1,859,007** |
| Packaging | 719 | - | 719 |
| Ancillary materials | 101,976 | - | 101,976 |
| Raw materials | 112,898 | 1,632,737 | 1,745,635 |
| Refractory materials | 10,597 | - | 10,597 |

*Two-year investment plan defined in 2022/2023.*

**9 m EUR** *for energy efficiency*

**16 m EUR** *for renewable electricity production*

# ENERGY: METHANE AND ELECTRICITY

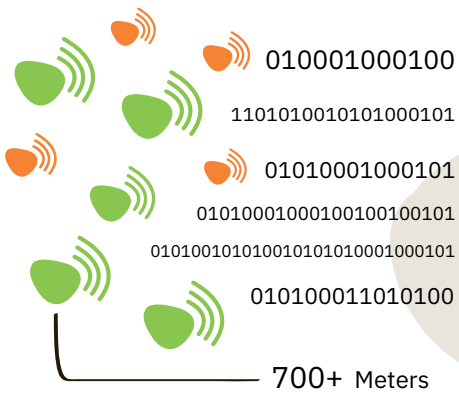
**Energy expenditure ranks second in steelmaking costs** after raw materials and **first in direct and indirect emissions** in the carbon footprint assessment. As a result, ABS considers energy management to be one of the key drivers in defining its business development strategies and setting its business plan.

During the past financial year, ABS faced one of the most severe energy crises ever experienced in Europe. The recovery of industry and construction in the aftermath of the pandemic, together with government aid, had already inflated energy markets. The geopolitical crisis in Ukraine and sanctions against Russia have disrupted the main natural gas supply route in just a few months, leading to both shortages and speculation.
The spread of the culture of energy efficiency and training, topics on which time and resources have been invested for years, have enabled ABS to quickly and effectively implement an energy strategy aimed, on the one hand, at a secure supply of energy carriers and, on the other, at reducing risk through process optimisation and plant care.

Awareness of the importance of energy consumption and its primary value in achieving sustainability goals has led ABS production plants to adopt effective and efficient management, certified by the Energy Management System in accordance with the international standard ISO 50001:2018, and to integrate its fundamental values into the company's integrated policy.

At ABS Cargnacco (UD) and Sisak, energy performance of the production plants is periodically monitored and reviewed together with the production and maintenance functions to identify and reconcile deviations and undertake the most effective corrective measures, in compliance with the objectives defined by Top Management during periodic reviews.

## ENERGY PERFORMANCE MONITORING





Energy efficiency table with monthly update

Information technology (IoT) platform for monitoring methane and electricity consumption

**In view of the important milestones achieved in recent years, ABS has defined a two-year investment plan for 2022/23 (FY22/23 and FY23/24), consisting of approximately 9 million euro for energy efficiency and 16 million euro for the production of renewable electricity.**

**The energy saving target set for the previous financial year of 5000 tonnes of oil equivalent (TOE) was far exceeded in the NFS financial year, achieving a reduction in consumption of more than 6,000 TOE.**

ABS is also completing the development of an innovative IT platform (IoT) for real-time consumption monitoring and the development of automatic reporting to continuously improve the management of production processes.

Energy performance is monitored on a monthly basis at energy efficiency tables attended by the company's production, maintenance and management control functions in order to identify, reconcile and correct any deviations and drifts in real time.

The monitoring and continuous improvement is based on the company's comprehensive metering system: to date, **over 700 meters are installed in the main plant in Cargnacco to continuously monitor electricity and methane consumption.**

The projects implemented to date have resulted in a reduction in methane consumption of approximately 3.3 million $Sm^3$ in the year under review, which corresponds to a **5% reduction in the plant's methane consumption**.

| **Energy consumption in gigajoule (GJ) by fuel type** [14] | **2023** | **2022** |
|---|---|---|
| LPG (GJ) | 3,576 | 3,715 |
| Methane gas (GJ) | 2,580,635 | 2,948,118 |
| Gas oil (GJ) | 8,316 | 9,306 |
| Petrol and other fuels (GJ)[15] | 4,959 | 4,672 |
| Industrial coal (GJ) | 588,047 | 687,977 |
| Polymer[16] | 129,318 | - |
| **Electricity purchased from the grid (GJ)** | **3,645,245** | **4,009,997** |
| **Total electricity produced and consumed internally (GJ)** | - | - |
| **Total energy consumption within the organization (GJ)** | **6,960,096** | **7,663,785** |
| **of which from renewable sources** | - | - |

[14] Conversion factors to GJ for various fuels: UK Government - GHG Conversion Factors for Company Reporting 2022

[15] The consumption figure for company cars has been estimated using criteria capable of providing as accurate and exhaustive a representation as possible.

[16] The polymer has been included as an energy source from FY 2022/23.

*Over 700 meters monitor electricity and methane usage on a continuous basis.*

***- 5%*** *methane consumption*

*Reduction in consumption of more than* ***6,000*** **TOE**

**The action plans are made up of two strands: the first concerns the reduction of methane gas consumption, from which half of direct greenhouse gas emissions are derived, while the second concerns the reduction of electricity consumption, associated to indirect emissions.**

More specifically, the main projects that the company is pursuing at the Cargnacco plant are concerned with:

- Using the **waste heat** generated by the production processes: ORC heat recovery projects totalling **3.5 MW** and other innovative process fluid recovery systems are being studied.
- The **feasibility study for a project to extend the district heating network in Udine** using heat from industrial cooling, for which ABS collaborated with the local government and the University of Udine.

The digital primary metallurgy furnace at Sisak is fully operational. Its melting power is ensured by the Q-ONE, which allows for more flexible and reliable handling of irregular loads. Q-ONE technology replaces classic oven transformers, enabling improved efficiency, reliability, reduced power consumption, flicker and $CO_2$ emissions. Q-ONE also enables high process optimisations, increased oven productivity and reduced electrode consumption.

Feasibility studies were carried out to introduce more efficient electric motors with the possibility of installing variable frequency drives for the flue gas treatment plant.

Improving the thermal energy efficiency of production/machining processes is also being analysed, both through the recovery of waste heat and through the introduction of more efficient casting cooling systems.

In compliance with French regulations, ACM completed the replacement of its lighting sources with LED lamps this year.

The use of polymers to replace the anthracite used in the production of foamed ABS slag began this year. It is a secondary raw material derived from the recycling of post-consumer plastic packaging, which acts as a reducing and/or foaming agent due to its special chemical composition.

For ABS, the use of this material has several advantages in terms of environmental sustainability, including an increase in the degree of circularity of processes due to the use of recycled plastic material and a consequent reduction in direct GHG emissions, with an emission factor approximately 35% lower than that of anthracite, and indirect emissions associated with a reduction in transport, as the supply of virgin materials is reduced.

Energy consumption fell by just over 10% last year, due to a drop in production and a consequent reduction in consumption of all energy carriers.

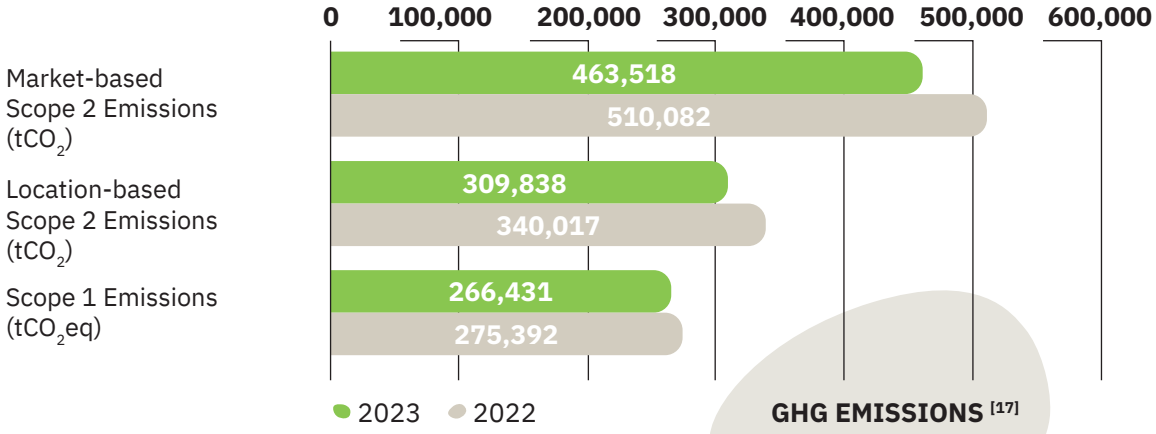
*A system is in place at both Cargnacco and Sisak to monitor the consumption of raw materials and energy carriers of the plants.*

**- 6%**
*of $CO_2$ Scope 1 + Scope 2 (Location Based) emissions*

*2023 energy intensity*
**5.26**

# CLIMATE-CHANGING EMISSIONS

The performance of ABS in the last financial year, calculated on a cumulative Scope 1 + Scope 2 Location Based basis, totalled 576,269 tonnes of $CO_2$ equivalent: this figure represents an absolute reduction of 6% compared to the previous year.




**GHG EMISSIONS** [17]

The energy intensity for 2022-2023 is 5.26 GJ/tonne cast.

The carbon intensity for Scopes 1 and 2 using the Location Based method for 2022-2023 is 0.44 t $CO_2$ eq/tonne cast.

ABS has been on a virtuous path towards decarbonisation for a number of years, both to add value to its product and to comply with legal requirements.

The Cargnacco (UD) and Sisak production sites are subject to direct emissions reporting under the Emissions Trading Scheme (ETS) mechanism. To this end, an extensive monitoring system was implemented to monitor both the consumption of raw materials and the energy carriers used in the plants.

In line with what has been described above, electricity consumption linked to indirect emissions is also monitored in detail. In this context, investments in energy efficiency, as described above, are also evaluated for their direct impact on reducing emissions.

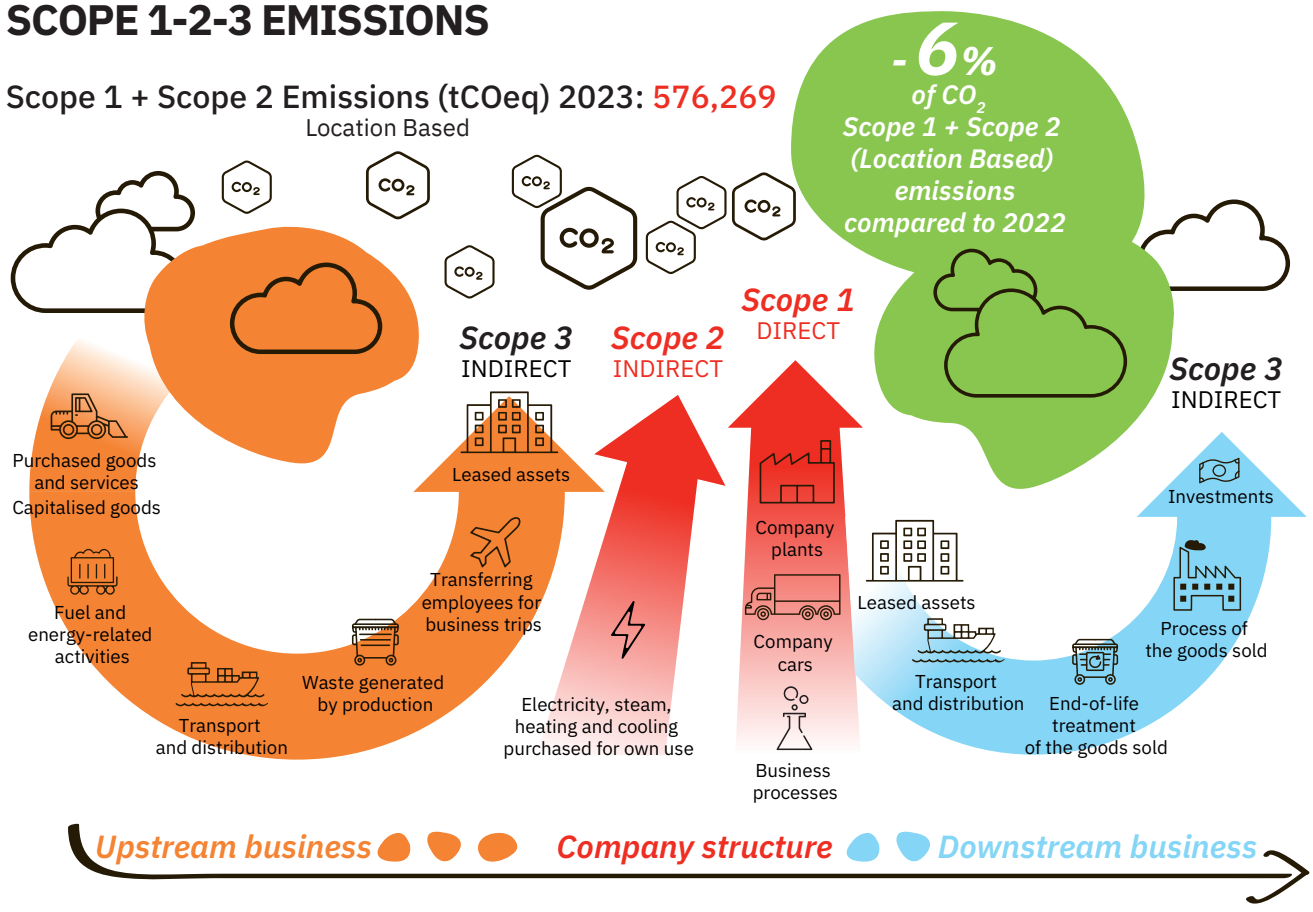
In addition to monitoring, the implementation of automated and predictive systems for lean process management plays a central role to further rationalise the use of raw materials and optimise the chemical reactions that take place in the smelting process.

The picture is completed by the implementation of BAT and the experimentation of innovative technologies for future large-scale application.

| Financial year 2022-2023 | Direct GHG emissions (Scope 1) (tonnes $CO_2$eq) | Indirect GHG emissions (Scope 2) (tonnes $CO_2$) | |
|---|---|---|---|
| | | Location based | Market based |
| ABS S.p.A. - Cargnacco (UD) | 241,724 | 281,685 | 408,667 |
| ABS Sisak - Croatia | 24,698 | 28,114 | 54,817 |
| ABS Centre Métallurgique - Metz | 9 | 39 | 34 |
| **Total** | **266,431** | **309,838** | **463,518** |

## SCOPE 1-2-3 EMISSIONS

Scope 1 + Scope 2 Emissions (tCOeq) 2023: 576,269
Location Based




[17] The calculation of direct $CO_2$ emissions – Scope 1 has been estimated on the basis of the certification issued by the Emission Trading System (ETS). The emission factors used for the calculation of indirect emissions are those proposed by Terna for Location-based Scope 2 indirect emissions (Terna, International Comparisons 2019), and the residual mixes for Market-based Scope 2 indirect emissions (AIB, European Residual Mixes 2022, Vers. 1.0 of May 31 2022). Emissions of Scope 2 are expressed in tonnes of $CO_2$; however, the percentage of methane and nitrous oxide has a negligible effect on total greenhouse gas emissions ($CO_2$ equivalent) as can be inferred from the technical literature of reference.

# AIR

One consequence of the ABS activity is the production of channelled and dispersed atmospheric emissions.

**Channelled emissions** are generated at the stacks and are directly related to specific production steps. There are **more than 50 authorised emission points** in the ABS production plants: compliance is monitored in accordance with the monitoring and control plan issued by the competent Italian and Croatian authorities. The emission channelling stacks connected to the smelting area **are equipped with a continuous emission monitoring system that** enables any approach to the permitted limits to be detected and the necessary corrective measures to be taken immediately.

To monitor **diffuse emissions** generated during internal handling and secondary processing, ABS Cargnacco (UD) set up samplers to monitor air quality at four points located on the borders of the plant.

While ABS largely complies with the limits approved by the relevant authorities, it is continually researching new technologies to further reduce its impact on air pollution. **With this vision, ABS has been using clay inert material instead of coal since 2017 to reduce the emission of dioxins into the atmosphere. Compared to another adsorbent material such as activated carbon, the inert clay material is more advantageous than the latter mainly because:**

- **it is safer, as it is non-flammable and non-explosive;**
- **it is natural as it is a clay product from deposits;**
- **it is extremely effective in the removal of dioxins.**

The emission data for the current year are in line with last year's data for the Cargnacco and Sisak plants and are below the limits set by the applicable regulations.

| **Nitrogen oxides (NOX), sulphur oxides (SOX), and other significant emissions** | **2023** | **2022** | **% emission in 2023 vs. limit values** |
|---|---|---|---|
| Particulate matter (PM) (t) | 30.49 | 22.21 | -69.6% |
| NOx Nitrogen oxides (t) | 394.96 | 381.82 | -75.8% |
| CO (t) | 978.23 | 904.42 | -72.1% |
| Dioxins (gr) | 0.29 | 0.35 | -75.3% |

Data referring to the Cargnacco (UD) plant.

# WATER: SUPPLIES AND DISCHARGES

In terms of water consumption, ABS uses advanced treatment and cooling technologies to reuse water resources as much as possible, avoiding waste and/or pollution.

In ABS, water for industrial use is supplied by pumped groundwater, surface water and, to a small extent, waterworks. The supply from surface water, the Sava River, is for use in the Sisak plant. For civil uses (refectory, toilets, changing rooms, etc.), the water comes exclusively from the waterworks.

Most of the water taken from groundwater and rivers is pre-treated with chemical additives to make it suitable for industrial use.

ABS Cargnacco (UD) draws water from the public water system, for civil uses (canteen, toilets, locker rooms, etc.), and from a well (abstraction from groundwater by pump) that provides the water necessary for its industrial uses. The water abstracted from the well is processed to make it suitable for industrial use.

In ABS Sisak, the water is drawn from the Sava River, and from the water system. In ACM, the water needs are completely ensured by groundwater extraction.

| **Water withdrawal by source (ML)** | **2023** | | **2022** |
|---|---|---|---|
| | **All areas** | **Water stressed areas**[18] | |
| **Surface water** | **422** | - | **355** |
| Fresh water ≤ 1000 mg/l total dissolved solids | 422 | - | 355 |
| Other water > 1000 mg/l total dissolved solids | - | - | - |
| **Third-party water resources (waterworks)** | **136** | **86** | **168** |
| Fresh water ≤ 1000 mg/l total dissolved solids | 136 | 86 | 168 |
| Other water > 1000 mg/l total dissolved solids | - | - | - |
| **Underground water** | **1,318** | **1,317** | **1,533** |
| Fresh water ≤ 1000 mg/l total dissolved solids | 1,318 | 1,317 | 1,533 |
| Other water > 1000 mg/l total dissolved solids | - | - | - |
| **Total water withdrawals** | **1,875** | **1,403** | **2,055** |

[18] The water stress measures the ratio of total water withdrawal to the available renewable resources of surface water and groundwater.

The impacts related to water resources record a total water withdrawal of just over 1.8 million cubic metres per year, of which 70% is associated with water consumption from wells, and 22% from surface water. For the Udine Cargnacco (UD) plant, water withdrawals take place in an area identified as high risk (40% - 80%), while the Sisak plant in Croatia is located in a low risk area (<10[19]).

Water is a precious resource and, in order to keep water consumption as low as possible, the Italian plant adopted semi-closed cooling circuits to minimise water losses. The decision to use evaporative towers to cool the temperature of the water allows it to be re-circulated a large number of times, considerably limiting the consumption of water abstracted from the well.

In the Saturno - QWR production line, the first rainwater will be reused within the production cycle by flowing into the water treatment plant.
At the Sisak plant, the state of the water transport infrastructure is causing a loss of efficiency, so last year investments were made to restore the integrity of the pipelines to ensure a more economical and sustainable use of water resources. Moreover, in order to reduce water withdrawal from the Sava river, the rainwater recovery system, damaged after the 2020 earthquake, is being rebuilt, thanks to which more than 10,000 m³ of rainwater can be reused.

The ABS Cargnacco (UD) plant has a total of 11 discharge points into the sewer system and one discharge point into a watercourse (Roggia di Palma); Wastewater in ABS Cargnacco:

- "black" water, i.e. the first rainwater runoff from roofs and yards;
- wastewater equivalent to domestic waste;

is discharged into the municipal sewerage system and sent to the consortium purification plant.

| Water discharges by source (ML) | 2023<br>All areas | 2022<br>All areas |
|---|---|---|
| **Surface water** | **559** | **675** |
| Fresh water ≤ 1000 mg/l total dissolved solids | 559 | 675 |
| Other water > 1000 mg/l total dissolved solids | - | - |
| **Third-party water resources (sewer system)** | **31** | **19** |
| Fresh water ≤ 1000 mg/l total dissolved solids | 31 | 19 |
| Other water > 1000 mg/l total dissolved solids | - | - |
| **Total water discharges** | **590** | **694** |

[19] Source WATER RISK ATLAS - WRI (*https://www.wri.org/aqueduct*). The analysis used the results of the "Baseline Water Stress" column. Water-stressed areas are defined as those having a High and Extremely High risk.

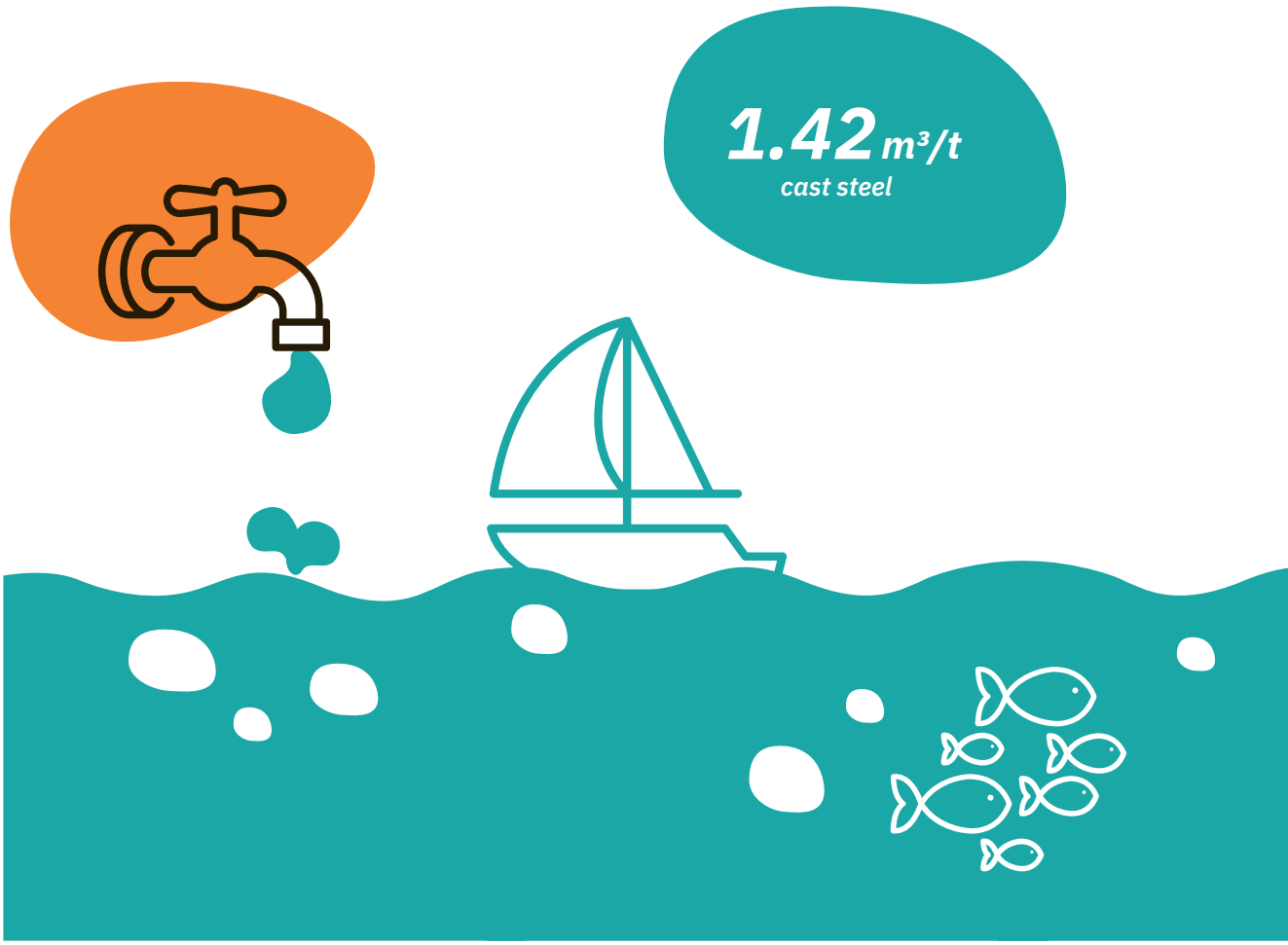
"White" water, i.e. the second rainwater, does not undergo treatment as it is considered clean and is sent into the sewerage system and/or dispersed.
Finally, a small portion of the industrial water from the cooling circuits is discharged into surface water (Roggia di Palma), after being checked for flow rate, pH, temperature and conductivity.

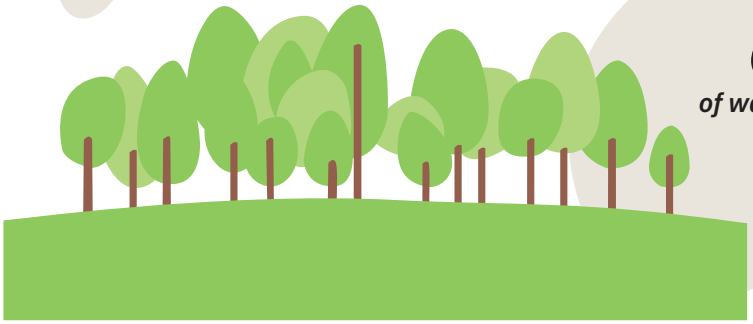
The ABS Sisak plant feeds most of its water directly into surface.

**The intensity of water use, in terms of withdrawals and discharges, shows a decrease in 2022-2023 compared to the quantities withdrawn and discharged in absolute terms. The water withdrawal intensity is 1.42 m³/t of cast steel.**

## INTENSITY OF WATER USED

Water used to produce 1 tonne of steel





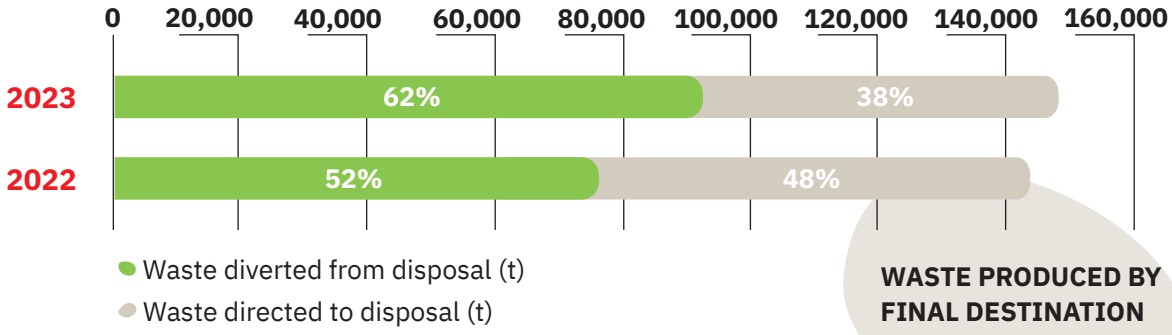
**62%**
*of waste recovered in 2023*

# EARTH: WASTE MANAGEMENT AND CIRCULAR ECONOMY

The strategy adopted by ABS in relation to waste management and the circular economy is in line with the principles of the waste management hierarchy as defined by the European Commission, which states that proper waste management should give priority to measures aimed at preventing the generation of waste and, where this option is not feasible, setting management priorities with a preference for reuse and recycling activities.
Where waste is to be disposed of, incineration with or without energy recovery is the preferred option, with landfilling as the last option.

For a number of years, ABS has been carrying out a training process to raise awareness of waste generation and its potential impact, with the aim of ensuring the correct management of waste, particularly hazardous waste, which can be potentially harmful to the environment and people.

The percentage of the approximately 150,000 tonnes of waste produced in 2023 by ABS that is sent for recovery is well above 60%, with a clear predominance of waste for recycling over other operations. This is an improvement of more than 10 percentage points on last year's deliveries and confirms ABS ongoing commitment to finding more sustainable alternatives in waste management.

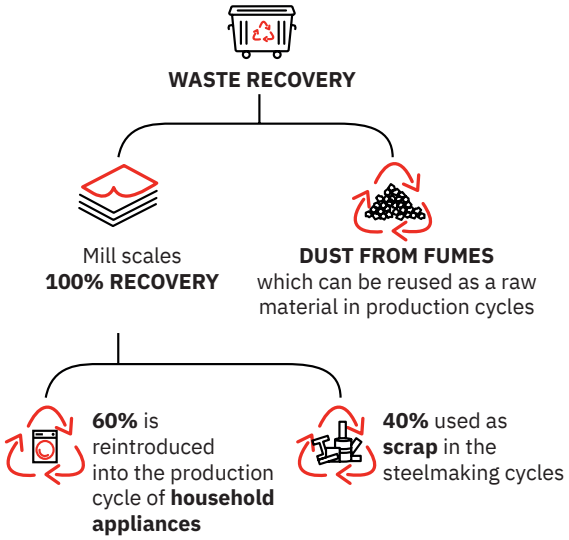



**WASTE PRODUCED BY FINAL DESTINATION**

In particular, the most significant types of waste recovered are flake and dust from fume abatement. Mill scale is 100% recovered: about 60% is reintroduced into the production cycle of household appliances to make counterweights for washing machines; the remaining 40% is instead used as scrap in the steelmaking cycles of other mills also. The average quantity of scale recovered in the last two years amounted to just over 15,000 tonnes, reused in the manufacture of about 350,000 washing machines.

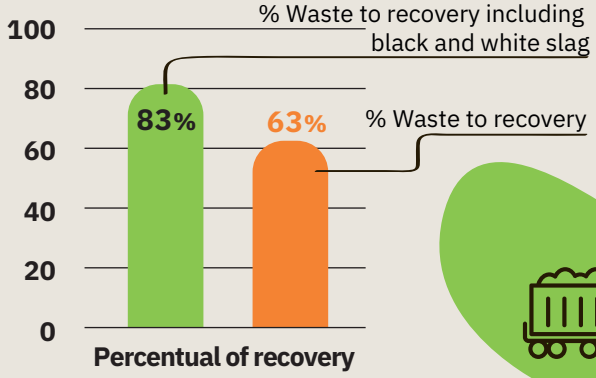
Even the dust resulting from flue gas abatement of smelting processes, which is rich in metals (especially zinc), is sent by ABS to modern separation plants, where the metals can be recovered and reused as raw material in other production cycles.

## WASTE RECOVERY AND REUSE




# THE REUSE OF 100% OF THE SLAG

The percentage of ABS waste destined for recycling/reuse is 63% of the total. This percentage rises to 83% if the slag from the liquid steel production process is included. In fact, slag is not considered waste in ABS because it is 100% recycled as a raw material for the production of Ecogravel®, an aggregate for the construction industry that replaces natural aggregates used in the production of concrete, asphalt and civil engineering works.




**+ 21%**
*waste to recovery compared to 2022*

**92,356 t**
*total waste to recovery in 2023*

| Waste diverted from disposal (t) | 2023 | | 2022 | |
|---|---|---|---|---|
| | On-site | External Site | On-site | External Site |
| **Hazardous waste** | | | | |
| Recycling | - | 17,695 | - | 22,907 |
| Preparation for reuse | - | 3,366 | - | - |
| Other recovery operations | - | 10 | - | 18 |
| **Hazardous waste diverted from disposal (t)** | - | **21,071** | - | **22,925** |
| **Non-hazardous waste** | | | | |
| Recycling | - | 30,822 | - | 53,184 |
| Preparation for reuse | - | 21,478 | - | - |
| Other recovery operations | - | 18,985 | - | 8 |
| **Waste Non-hazardous waste diverted from disposal (t)** | - | **71,285** | - | **53,192** |
| **Total** | - | **92,356** | - | **76,117** |

| Waste directed to disposal (t) | 2023 | | 2022 | |
|---|---|---|---|---|
| | On-site | External Site | On-site | External Site |
| **Hazardous waste** | | | | |
| Incineration (with energy recovery) | - | 1 | - | - |
| Incineration (without energy recovery) | - | 24 | - | 441 |
| Landfill disposal | - | 13,912 | - | 12,551 |
| Other disposal operations | - | 1,122 | - | 1,189 |
| **Hazardous waste directed to disposal (t)** | - | **15,059** | - | **14,182** |
| **Non-hazardous waste** | | | | |
| Incineration (with energy recovery) | - | - | - | - |
| Incineration (without energy recovery) | - | - | - | 6 |
| Landfill disposal | - | 40,522 | - | 56,146 |
| Other disposal operations | | 28 | - | 112 |
| **Non-hazardous waste directed to disposal (t)** | - | **40,550** | - | **56,265** |
| **Total** | - | **55,609** | - | **70,447** |

| | Waste diverted from disposal (t) | | Waste directed to disposal (t) | |
|---|---|---|---|---|
| | 2023 | 2022 | 2023 | 2022 |
| **Non-hazardous waste** | **71,285** | **53,192** | **40,550** | **56,265** |
| Other waste | 38,752 | 21,600 | 27,105 | 45,993 |
| Paper and cardboard | 65 | 68 | - | - |
| Metals | 4,423 | 8,843 | - | - |
| Plastic | 36 | 47 | - | 2 |
| Refractory materials | 6,424 | 4,067 | 13,425 | 10,170 |
| Mill scales | 18,392 | 18,397 | - | - |
| Sludge | - | - | 20 | 98 |
| Metal-content dust | 3,193 | 171 | - | - |
| **Hazardous waste** | **21,071** | **22,925** | **15,059** | **14,183** |
| Other waste | 21,071 | 22,925 | 13,127 | 11,640 |
| Sludge | - | - | 1,932 | 2,421 |
| Refractory materials | - | - | - | 121 |
| **Total** | **92,356** | **76,117** | **55,609** | **70,447** |

ABS's waste prevention strategy dates back more than 15 years, when it began trials to recycle black and white slag from melting processes, which was a significant portion of the waste produced. Today, steel slag represents a resource that, after a series of deferrisation, crushing and screening processes carried out in two plants located at the Cargnacco production site, is transformed into Ecogravel, a CE-marked product used in the construction market.

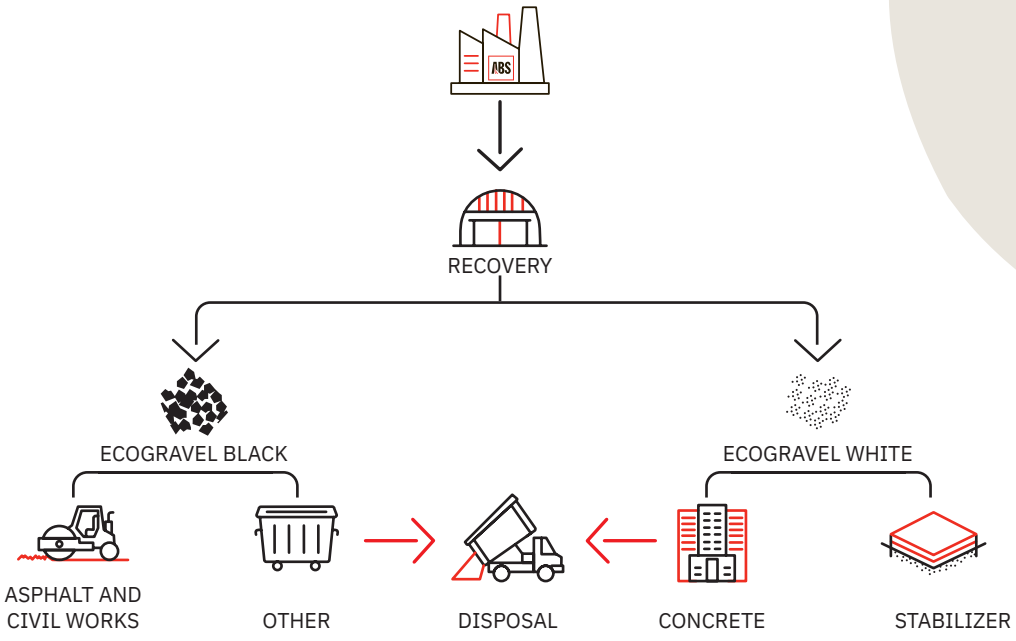
Ecogravel Black is produced by processing the slag from the electric arc melting furnace, and accounts for the most significant share of Ecogravel produced (about 90%). It is used as a substitute for natural aggregates in the production of concrete, asphalt and civil engineering works.

Ecogravel White, which accounts for the remaining 10% of Ecogravel's total production, is produced by processing slag from ladle furnaces and is mainly used as a substitute for lime in soil stabilisation, especially in road foundations where the load-bearing properties of the soil on site must be improved.

The production of Ecogravel in the last two years is in line, and considering the last five years, more than 800 km of roads have been built using Ecogravel in Friuli Venezia Giulia, Veneto and Slovenia.

| **Ecogravel production** | **2023** | **2022** |
|---|---|---|
| Ecogravel Black | 132,958 (t) | 121,342 (t) |
| Ecogravel White | 17,088 (t) | 10,228 (t) |
| **TOTAL Ecogravel** | **150,046 (t)** | **131,571 (t)** |

## ECOGRAVEL: CYCLE AND USES



# NOISE AND VIBRATION

Limiting the impact associated with noise and vibration is an extremely important activity identified by all ABS production plants in Italy and Croatia.

In particular, this activity is monitored at the Cargnacco plant where the receptors that are monitored in terms of output and input values, day and night, are points coinciding with private houses located near the plant.

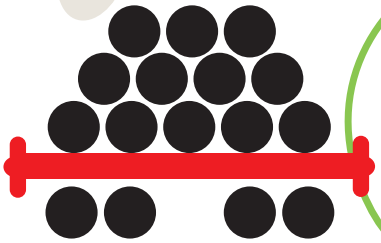
In recent years, ABS has embarked on a programme of technical measures to **significantly reduce the noise impact** of its operations. Work has already been carried out on the **fume systems**, specifically the replacement of the Cooler fans with equivalent technologies with reduced acoustic impact and the installation of a silencer on the fume emergency valve. The **evaporative towers** of a cooling plant are also being replaced in order to reduce noise emissions. For the same purpose, among other initiatives, **mitigation barriers were constructed along the southern and western borders** of the plant. These barriers represent real hills, made of stabilised and inert steel slag. They reduce noise emissions by more than 2 decibels and also provide a visual filter of the industrial core, benefiting citizens living in the immediate vicinity of the steelworks.

**Over 24.4% of the environmental** investments made by ABS Cargnacco (UD) in the last three years were dedicated to projects aimed at reducing and limiting the acoustic impact caused by production activities in the surrounding area, and meet the needs of the local community and residents. In the near future, the installation of mitigation hills in noisy areas or exposed receptors will continue in order to minimise

the impact of the Cargnacco plant's operations on the territory.

The ABS Sisak plant has plenty of vegetation around the production premises to mitigate the impact of noise and vibration, and the production site does not border on residential areas. For these reasons, there are no particular critical issues for compliance with emission limits.

Tens of thousands of plants bed out in the woods that metaphorically embrace the ABS plants in Cargnacco as in Croatia, forming not only a green lung thanks to the oxygen produced by the plant species present, but also a natural barrier to noise and vibration. Forested areas totalling more than 13 hectares protect air quality and reduce pollution.



*16% of the total shipped is by rail.*

# INTERNAL HANDLING AND TRANSPORT

ABS focuses on increasing intermodal land and sea transport with a view to sustainable processes, up to the achievement of the green transport of its products. In fact, this approach has many advantages, such as:

- reduction of $CO_2$ emissions;
- less impact on the community by reducing the number of vehicles on the road;
- cost reduction and optimisation of the volume managed on intermodal/maritime vehicles compared to a road vehicle (with a lower capacity).

In 2022-23, the number of tonnes of products managed by intermodal in ABS is about 59,898 (FY 22/23), while the number of tonnes shipped direct by rail is 196,938, or 16% of the total shipped.

The breakdown of flows by train is as follows:

| | 07/22 | 08/22 | 09/22 | 10/22 | 11/22 | 12/22 | 01/23 | 02/23 | 03/23 | 04/23 | 05/23 | 06/23 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **shipped by train** | 16,427 | 9,866 | 19,726 | 13,019 | 17,532 | 10,726 | 17,256 | 14,666 | 20,228 | 17,016 | 20,482 | 19,994 | 196,938 |
| **% of total sent by train** | 19% | 20% | 19% | 15% | 18% | 14% | 17% | 14% | 16% | 15% | 16% | 15% | 16% |

The total Finished Product handled internally is approx. **2,495,369 tonnes**, consisting of shipments to customers in 41 countries.

In order to optimise the flow while maintaining a focus on sustainability, the ABS logistics department is involved in numerous projects that are already helping to reduce the environmental impact of our shipments of finished products and will continue to have a positive impact in the medium to long term.

The most important projects are listed below:

**Level Up Luna:** a project created with the intention of reducing internal transfers (thus reorganising the use of flatbed transport, thereby reducing $CO_2$ emissions within the parks). The installation of tracks in the Luna area will optimise the transfer of finished product, with an expected saving of 1,040 km, and will also increase the possibility of transporting this material easily by rail.

**ABS Service packaging strips and rings:** The project was created with the intention of reusing the protective materials needed for shipping in two directions: replacing the plastic polyboard with cardboard between the different levels and, at the same time, optimising wood consumption with a view to a **circular economy**. By raising the awareness of the companies providing the logistics handling services, it has been possible to recover some of the wood and introduce the practice to external suppliers. An initial test was organised with ABS Service, from which 23

pallets of mixed material were returned, including wood of different sizes and retaining rings. **More than 80% of the returned material was reused and some of it was also allocated to the Production Departments.**

This test was necessary in order to understand concretely how necessary it is to continue introducing this type of processes, extending them to other Suppliers/Customers as well, in order to reduce waste and optimise resources.

At QWR, the purchase of plastic panels for non-scratch product packaging has been reduced and replaced with recycled cardboard panels.

**Pesmel - automatic warehouse.**
The installation of this automatic ABS warehouse has made it possible to reduce the use of forklifts in the park. In fact, thanks to PESMEL, we are able to load the truck close to the automated warehouse, thus reducing the PARK/TRUCK journey. The project resulted in an estimated saving of **3,625 km.**

**Elimination of the lorry transfer to the station, with loading and dispatch of the diffuse wagon traffic handled in ABS, by means of internal traction.**

From November 2022, shipments by troop-train are processed directly in ABS. The decision to centralise this activity made it possible to eliminate all truck transfers from ABS to the Udine station. The environmental and social benefits of this choice are many, from reducing $CO_2$ emissions and particulate matter to reducing the number of vehicles on the road.

The estimated savings in terms of km travelled by wheeled vehicles was **9,432 km and the resulting $CO_2$ savings.**

# SOCIAL ASPECTS

"We enhance the characteristics of the individual so that everyone feels appreciated and well integrated".

Throughout its history, ABS has always recognised the fundamental role played by the relationship with every person who directly or indirectly interacts with the company. ABS has gone through many stages of growth and during them, it has developed innovative and sustainable tools, recognising the contribution of all the people and communities involved.

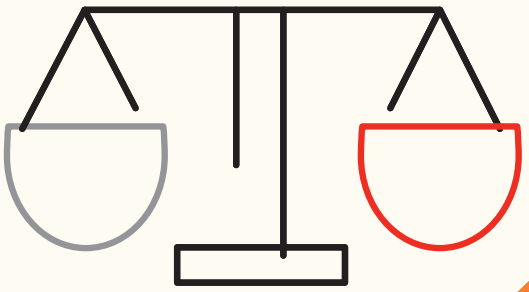
**ABS engages with its people because it believes that each of them must have the opportunity to assert themselves and bring out the valuable talents within them, a distinctive and indelible trait that can generate continuous growth and innovation for the entire community.**

The cornerstones of our "human capital" approach can be found in:

- the Code of Ethics, which is also an active personnel management tool;
- the team spirit and teamwork, in which ABS strongly believes, and whose effectiveness is reviewed every year;
- the development of training paths to enhance the skills of people working within ABS and to attract new talent;
- the creation of a clear, transparent and open internal communication channel with all ABS employees.

All employees, but also suppliers and partners who subscribe to the ABS Code of Ethics, must personally contribute to promoting and maintaining a climate of mutual respect in the work environment, paying particular attention to respecting the sensitivities of others.

The ABS Code of Ethics contributes to promoting and maintaining a climate of mutual respect in the work environment, paying particular attention to respecting the sensitivities of others.



# PERSONNEL

Maintaining a stimulating and proactive organisational climate is an unwritten rule followed by all ABS personnel, thanks to the value attributed to teamwork also. This orientation is the cornerstone of the efficiency and quality of ABS, enhanced by the sharing of experience, knowledge and professionalism. This is why different team members are rotated to meet organisational requirements as they arise.
ABS is a culturally, geographically, historically and linguistically unique integrated company. Diversity is considered to be an opportunity for sharing and growth, both of the people and of the company's know-how.

Diversity is protected and respected, the Code of Ethics explicitly prohibits any form of harassment related to personal diversity, as stated in the Code of Ethics.

*49% of our company population has been in ABS for more than a decade.*

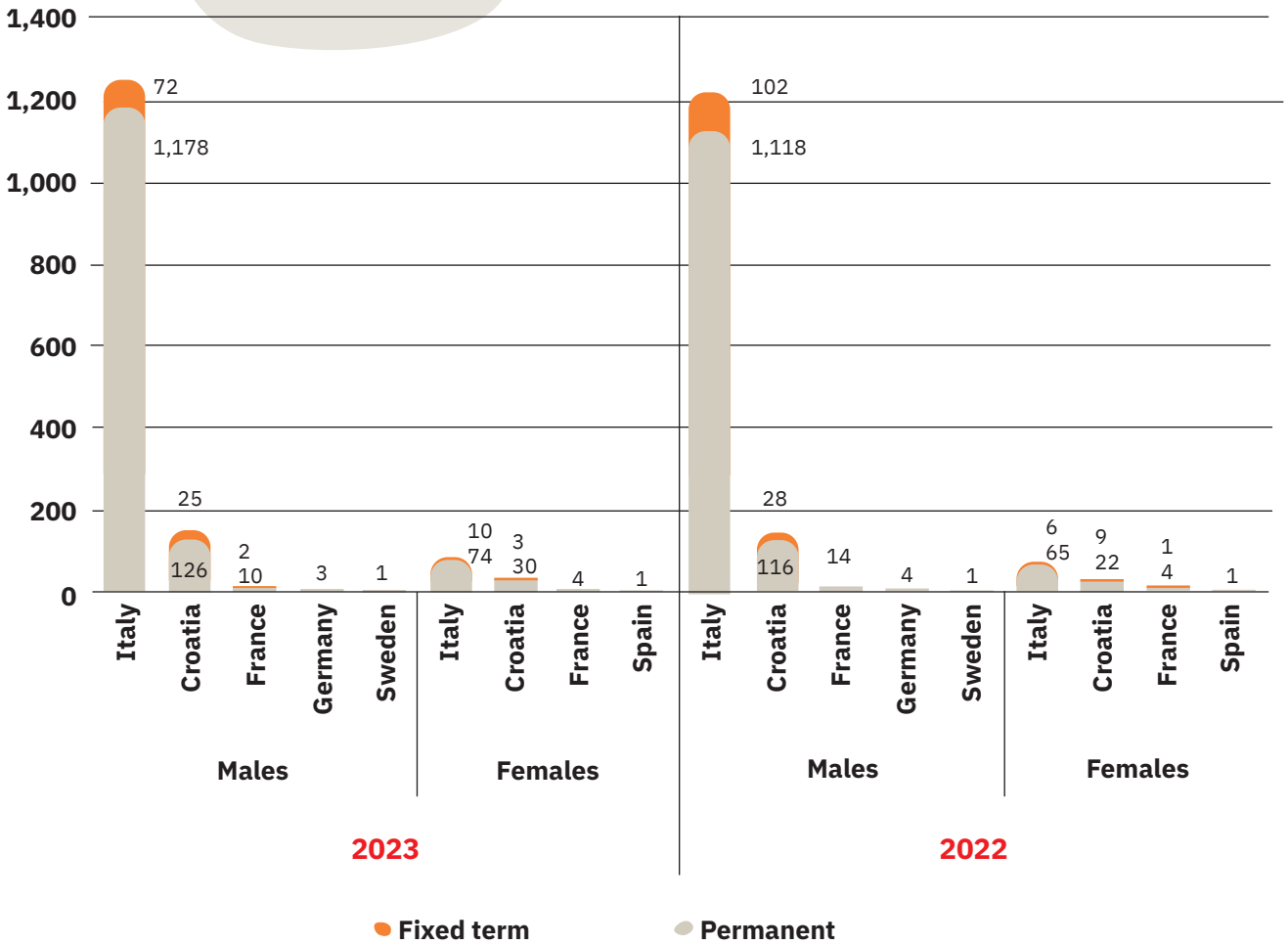
***+12.9%*** *increase in female employment compared to 2022*

***93%*** *permanent employees*

Again this year, ABS maintained its approach and focus on its people. At the headquarters in Cargnacco, activities continued to involve the group of **Brand Ambassadors**, bearers of new ideas and insights, who meet regularly to share the activities and events organised.

At ABS, we continuously work to improve the knowledge, skills and expertise of our people through internal and external training courses and personal development plans. In Croatia, Sisak being the largest steel plant in the country, lower wages were revised with the intention of retaining resources and know-how.

**EMPLOYEES BY COUNTRY AND BY TYPE OF CONTRACT**

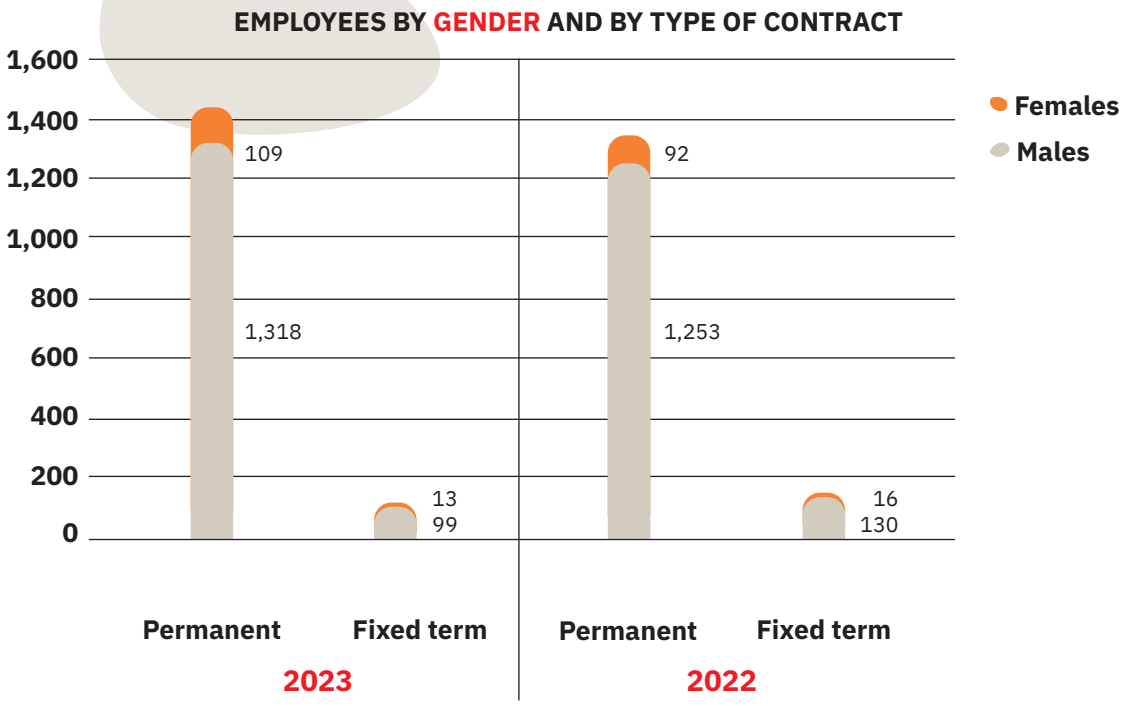


A total of 1,539 employees work in the ABS Group companies as at June 30, 2023, of whom 122 belong to the female gender and 1,417 to the male gender. Almost all people are currently employed on a full-time contract and 93% on a permanent basis. Moreover, there are also three external employees working in the Cargnacco office [20].
ABS is committed to promoting gender equality and removing barriers that may limit women's participation in the steel industry. Aware of the male dominance in both office and operational positions, concrete measures are being taken to create an increasingly inclusive and attractive environment.

At the Cargnacco (UD) plant there is a total of 1,334 employees, then we have the Croatian site, 184, the French site, 16, the German site, 3, and the Spanish and Swedish sites where there is only one employee.

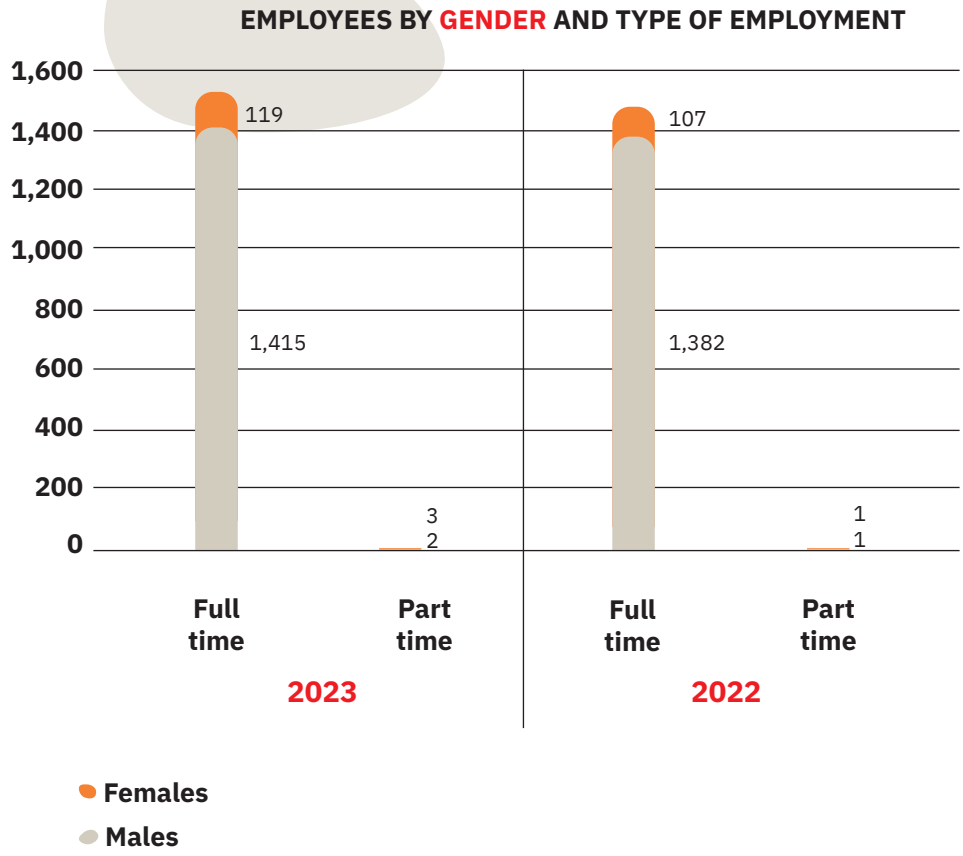
**Employees by gender and by type of contract**

| | Males | Females | Total |
|---|---|---|---|
| **2023** | **1,417** | **122** | **1,539** |
| Fixed term | 99 | 13 | 112 |
| Permanent | 1,318 | 109 | 1,427 |
| **2022** | **1,383** | **108** | **1,491** |
| Fixed term | 130 | 16 | 146 |
| Permanent | 1,253 | 92 | 1,345 |




[20] There are no non-guaranteed hourly employees.

| Employees by gender and type of employment | | | |
|---|---|---|---|
| | **Males** | **Females** | **Total** |
| **2023** | **1,417** | **122** | **1,539** |
| Full time | 1,415 | 119 | 1,534 |
| Part Time | 2 | 3 | 5 |
| **2022** | **1,383** | **108** | **1,491** |
| Full time | 1,382 | 107 | 1,489 |
| Part Time | 1 | 1 | 2 |



A combined analysis of employee data for the last year shows a positive balance, with 198 new hires, an overall increase in the company population of around 13%; on the other hand, 150 people have left ABS, either due to having reached age limits or to explore new job opportunities, with an average turnover rate of 10% resulting in an overall positive delta of about 3%.

| | Employees hired (No.) | | New hires (%) | |
|---|---|---|---|---|
| | Males | Females | Males | Females |
| **2023** | **171** | **27** | **12%** | **22%** |
| < 30 y.o. | 58 | 14 | 26% | 54% |
| 30 - 50 y.o. | 101 | 12 | 13% | 16% |
| > 50 y.o. | 12 | 1 | 3% | 5% |
| **2022** | **203** | **20** | **15%** | **19%** |
| < 30 y.o. | 94 | 9 | 41% | 50% |
| 30 - 50 y.o. | 101 | 11 | 15% | 16% |
| > 50 y.o. | 8 | - | 2% | - |

ABS is committed to building long-term relationships with its employees based on mutual trust. The company encourages the growth of skills through training and development programmes, recognising and enhancing the talent of collaborators. This focus on the well-being and professional development of employees is reflected in the significant fact that more than 49% of our company population chose to remain in ABS for more than ten years. This has helped to consolidate the company's know-how and bears witness to the strong corporate cohesion and collaborative climate that pervades the ABS working environment.

| | Employee turnover (No.) | | Turnover (%) | |
|---|---|---|---|---|
| | Males | Females | Males | Females |
| **2023** | **136** | **14** | **10%** | **11%** |
| < 30 y.o. | 33 | 4 | 15% | 15% |
| 30 - 50 y.o. | 63 | 8 | 8% | 11% |
| > 50 y.o. | 40 | 2 | 9% | 10% |
| **2022** | **128** | **16** | **9%** | **15%** |
| < 30 y.o. | 33 | 2 | 15% | 11% |
| 30 - 50 y.o. | 54 | 12 | 8% | 17% |
| > 50 y.o. | 41 | 2 | 9% | 10% |

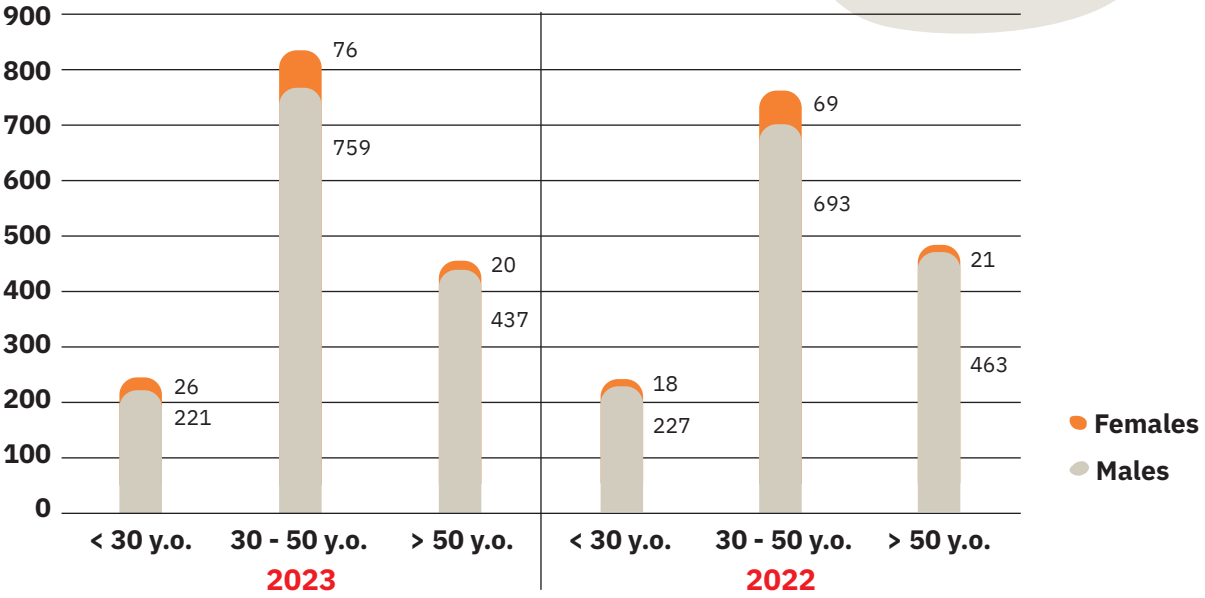
*70% of employees are under 50.*

*In 2023, we hired 198 people, which corresponds to an overall increase in the company population of about 13% compared to the workforce on June 30, 2022.*

ABS is a dynamically evolving company.

Its young and medium-high educated workforce enables it to embrace new perspectives on innovation and sustainability. 70% of employees are under 50 and about 84% of the workforce have at least a secondary school qualification, up 1% from 2022, while 15% have a university education.

**EMPLOYEES BY GENDER AND AGE**




| Percentage figure by category (%)[21] | 2023 | | | 2022 | | |
|---|---|---|---|---|---|---|
| **GRI 405-1** | **Males** | **Females** | **Total** | **Males** | **Females** | **Total** |
| Trainees | 1(0%) | (0%) | **1(0%)** | 2(0%) | (0%) | **2(0%)** |
| Workshop technicians | 1,101(72%) | 21(1%) | **1,122(73%)** | 1,084(73%) | 25(2%) | **1,109(74%)** |
| White collars and middle managers | 301(20%) | 98(6%) | **399(26%)** | 283(19%) | 80(5%) | **363(24%)** |
| Managers | 14(1%) | 3(0%) | **17(1%)** | 14(1%) | 3(0%) | **17(1%)** |
| **Total personnel** | **1,417(92%)** | **122(8%)** | **1,539(100%)** | **1,383(93%)** | **108(7%)** | **1,491(100%)** |

| Age (%)[21] | 2023 | | | | 2022 | | | |
|---|---|---|---|---|---|---|---|---|
| **GRI 405-1** | **Under 30 years old** | **30 - 50 years old** | **Over 50 years old** | **Total** | **Under 30 years old** | **30 - 50 years old** | **Over 50 years old** | **Total** |
| Trainees | 1(0%) | (0%) | (0%) | **1(0%)** | 2(0%) | (0%) | (0%) | **2(0%)** |
| Workshop technicians | 199(13%) | 568(37%) | 355(23%) | **1,122(73%)** | 207(14%) | 521(35%) | 381(26%) | **1,109(74%)** |
| White collars and middle managers | 47(3%) | 259(17%) | 93(6%) | **399(26%)** | 36(2%) | 232(16%) | 95(6%) | **363(24%)** |
| Managers | (0%) | 8(1%) | 9(1%) | **17(1%)** | (0%) | 9(1%) | 8(1%) | **17(1%)** |
| **Total personnel** | **247(16%)** | **835(54%)** | **457(30%)** | **1,539(100%)** | **245(16%)** | **762(51%)** | **484(32%)** | **1,491(100%)** |

[21] Please note that the percentages were calculated on the total number of employees as at June 30 of the reporting period.

Following confirmation of employment, the employee is provided with **specific training on the job** they will be doing and on the correct use of PPEs, as well as **general training on different management** systems adopted by the organisation (safety management system, environmental management system, quality management system and energy management system). Additional specific training can be provided for the professional development of the employee based on feedback from their function manager.

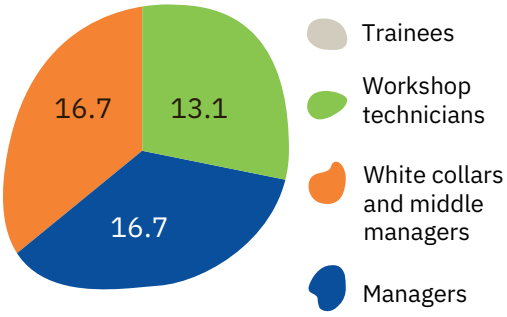
Throughout their working life in the company, employees are encouraged to take part in **technical and professional development training**. All ABS affiliates are convinced that the growth of the company goes hand in hand with the growth of the skills and knowledge of the people who work in it.

During the last two financial years, all mandatory training activities required by law were carried out, as well as many non-compulsory training activities planned internally to meet the development and growth needs of our employees.

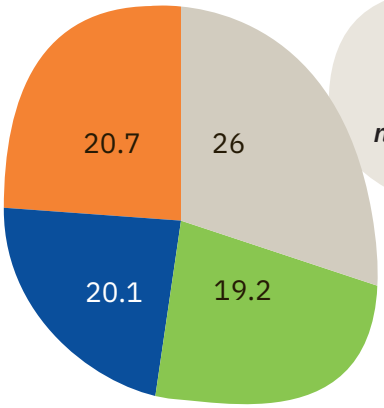
Overall, more than 30,000 hours of training were provided in over 700 courses last year, with an average of **almost 20 hours per employee and an average increase of six hours per employee compared to 2022.**

## AVERAGE TRAINING HOURS BY FUNCTION

Average hours 2022: 14




Average hours 2023: 20




**+40%** *of average number of total training hours*

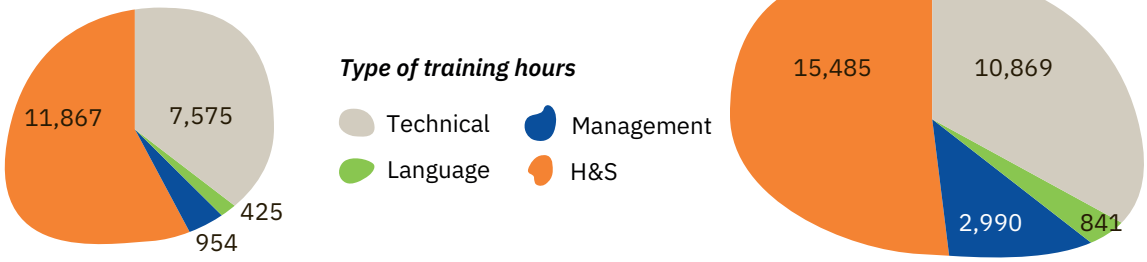
**20**
*average hours per employee*

**30,185**
*hours of training*

The training provided included courses dedicated to the development of technical skills, about 36% of the total number of hours provided, and to the development of transversal skills (individual coaching), the improvement of English and Italian language skills and management skills, about 13% of the total number of hours provided. More than half of the training hours provided were related to occupational health and safety topics, 51% of the total.

## HOURS OF TRAINING PER TYPE

Total hours 2022: 20,821 Total hours 2023: 30,185




Achieving positive results is the result of a shared commitment and is everyone's merit; with this idea, ABS recognises annually rewards determined based on economic parameters that allow the performance of each individual department to be evaluated from different aspects. Following a similar philosophy, employee performance assessment is carried out annually with various meetings between managers and their subordinates.

In order to manage, facilitate and share evaluations with ABS people, there is a specific tool for the formal management of the annual employee performance appraisal based on a platform – **Success Factors** – built on the company's value system and on the job characteristics of each individual employee. This tool is used throughout the year for the evaluation of human resources with regard to specific KPIs, behaviours and technical aptitudes.

ABS Sisak is the only steel plant in Croatia: this is why there is constant work to improve the knowledge, skills and expertise of employees through external and internal training courses, as well as through personnel development plans. Furthermore, ABS Sisak regularly reviews the salaries of its personnel in order to retain people, knowledge and know-how within the company.

ABS Cargnacco (UD) offers a number of initiatives to its employees to ensure high standards of corporate welfare.
One of the most valuable initiatives dating back more than 10 years is the “Fondo Tranquillo”, the Quiet Fund, used for solidarity and support in the event of bereavements. The fund is financed by contributions by the company and participating employees. Since 2016, employees can also donate hours of leave, which can then be used voluntarily by other employees who no longer have statutory leave available to assist seriously ill relatives.

Although not every year, ABS Cargnacco (UD) has provided numerous **scholarships to cover, in full or in part, educational costs for the children of ABS employees** enrolled in secondary schools and university. Employees with young children can take advantage of the nursery, kindergarten and primary school available at the Danieli Group. The Group also sponsors the "Sporting Club", where employees can practice sports such as tennis, football, running, cycling, volley ball and basket ball.

To strengthen a team spirit and encourage healthy lifestyles, ABS Cargnacco (UD) has organised **introductory running courses**, held in the park, and martial arts courses. This year, in cooperation with Danieli Sporting Club, the Danieli intra-group 2022 Corporate Football Tournament was organised in which four teams of employees from ABS participated.

ABS has chosen to allocate the parking spaces near the main entrance to female staff, for easier and faster access to the buildings and the plant. In addition, a number of reserved parking spaces have been set up for mothers-to-be inside the plant.

To make it easier for employees to receive online purchases, a self-service pick-up point with lockers has been set up in the ABS Cargnacco (UD) office building, where employees can have their purchases delivered, to be collected at their convenience.

ABS also provides its employees, who work in the Cargnacco office, with the **Edenred portal**, where employees can request refunds for health and school expenses or claim shopping vouchers for discounts at participating businesses, or the **Corporate Benefits app** that offers discounts and online services at a favourable price.

**Once again this year, ACM participated in the challenge "Au boulot j'y vais à vélo!"** that promotes the use of bicycles, public transport and smart working in order to avoid $CO_2$ emissions by minimising the use of cars with a single driver. ACM employees managed to avoid the emission of 256 kg $CO_2$eq [22] into the atmosphere.

[22] The competition platform calculated according to the kilometres entered and the type of means of transport.


# HEALTH AND SAFETY

Protecting people's health and safety is a core value of ABS.

**Achieving zero accidents is a top priority at all our production plants.** To ensure an operational and integrated process, we have implemented a management system that comprehensively addresses all aspects of occupational health and safety. Both the Cargnacco and Sisak plants are certified according to ISO 45001.

The certified management system carefully monitors and assesses all potential risks to the health and safety of our workers. All ABS companies are constantly renewing their personal protective equipment (PPE), as well as regularly inspecting and maintaining all equipment.

To ensure that its employees wear suitable PPE that complies with regulatory requirements, a **service for washing, sanitising, checking the conditions and repairing company uniforms** has been in operation at the Cargnacco plant since 2016, while a similar project is currently being developed in Croatia.

Safety at work is everyone's responsibility, and we are constantly working to create a safe and secure working environment for all members of our teams.

Accidents, near misses and injuries are reported promptly to the Health and Safety Department, where available, also using the company intranet. The department provides an immediate analysis of the case, suggests corrective and preventive actions, archives documentation, develops and produces reports that will help manage risks more effectively and prevent future occurrences.

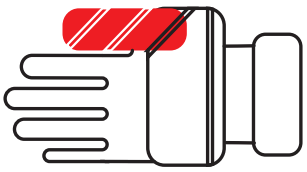
"Zero Accidents" is therefore not just a slogan but a real goal that ABS pursues through investment, training, by spreading a safety culture, and through awareness and good practice.

Aware of the fact that in order to achieve this challenging goal, it is necessary to act on behaviour, the **ABS = Accountable Behaviours for Safety** project was resumed. The project, now extended to all ABS S.p.A. production plants, aims to provide specific training to the personnel in charge, with the aim of **raising their awareness** concerning the importance of adopting codified and safe behaviour, as well as emphasising the personal responsibilities related to the failure to comply with shared safety rules. Work is also being done to prevent accidents by training employees who lead teams **to be proactive and to set an example for new employees** on how to prevent accidents.
Specific management tools were implemented to increase the involvement of external personnel working within ABS Cargnacco (UD); a dedicated e-learning platform was developed for the **safety induction activity**, which can also be used remotely. A software has been developed for the management of interference risks (DUVRI), which enables the **digital management of coordination activities**, allowing a more dynamic assessment of specific and interference risks and the application of prevention and protection measures.

ABS pursues the continuous improvement of its health and safety performance by actively participating and promoting comparison with other industries, both domestic and foreign, through active participation in initiatives of industry organisations such as Federacciai and the World Steel Association.

**At the Cargnacco site, the company infirmary has been open 24 hours a day since October and is staffed by a professional nurse.** The company implemented the "ABS Azienda Cardio protetta" (ABS Cardio-protected Company) project, which provides special clinical examinations for certain categories of workers; a total of 13 semi-automatic defibrillators (AEDs) are available and all members of the first aid team are trained in their use.

In the area of health protection, **"Zero Alcohol"** is an initiative implemented by the company whereby plant employees and external contractors must never have, while working within ABS premises, any alcohol or drugs in their blood at all. All workers who find themselves in a difficult situation may access recovery programmes at specialised facilities, if they want to, in full respect of their privacy, with the guarantee that they will retain their job.



***The injury frequency index in ABS is 35% lower [23] than the national average for this sector.***

***- 1.60***
***injury rate compared to 2022***

The "Zero Accidents" project – which has been carried out for years by the Italian ABS office in Cargnacco – and the "Zero Alcohol" project have been extended to the Steelmaking perimeter and are one of the priority projects for the coming 2023-2024 in Sisak.
Every year, as the winter season approaches, the company offers all its employees the opportunity to receive a free flu vaccine, administered directly at the internal medical centre, during working hours, under the supervision of the company doctor.

The focus on health and safety at ABS is a tangible sign of the company's commitment to the well-being of its employees and the community in which it operates.

ABS promotes a culture of safety at work not only in all its plants and locations, but also in the social context in which it operates, through its employees, its suppliers and its own presence. This approach makes ABS a best practice in Italy and, as the largest steel plant in Croatia, a model for health and safety abroad.

With more than 2,500,000 hours worked in the last year, there were 26 accidents among employees. On the other hand, there were four injuries to external workers, including one serious injury, which resulted in a prognosis of more than 180 days.

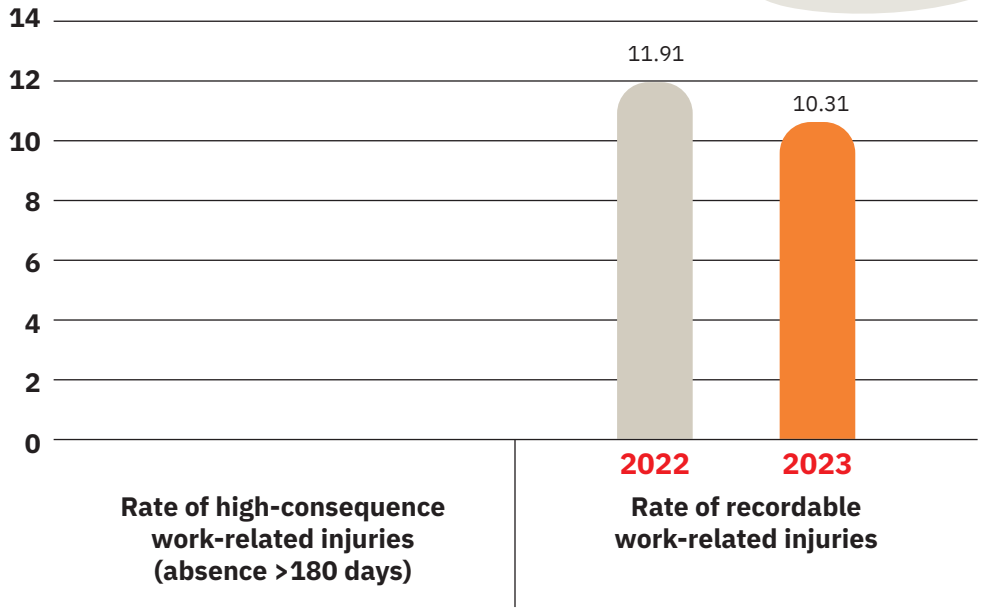
[23] *"Report osservatorio sicurezza"* prepared by **Federacciai** for 2022.

## "POP" ORDER AND CLEANLINESS PROJECT

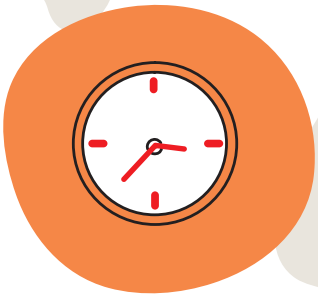
Sisak has also started to implement the **POP Order and Cleanliness Project**, which is already well established at the Cargnacco site and is expected to have a positive impact on the rate of work-related accidents. The project, based on Lean Enterprise principles, introduced an innovative approach that optimises working practices and promotes care and attention to the working environment. This approach has made a significant contribution to creating a safer and healthier environment for all employees by optimising operations and promoting order and cleanliness.

**The rate of recordable work-related injuries in 2023 is 10.31, down more than one point from the previous year (11.91).**

## RATE OF WORK-RELATED INJURIES




Since 2020, the Cargnacco plant has had a **Fire Prevention Certificate**, which certifies compliance with the requirements of fire prevention and fire safety regulations, placing ABS at the top of steelmakers in Italy in terms of safety.



*A special focus scheduled each day in all operational teams generates 5,500 minutes of additional security awareness and information.*

*In ABS, it is known as the SAFETY MINUTE.*

| Work-related injuries[24] | 2023 | 2022 |
|---|---|---|
| Total injuries while travelling to/from work (if transport is organised by the organization) | - | - |
| Total injuries at work | 26 | 32 |
| Total high-consequence work-related injuries (absence >180 days) | - | - |
| Total fatalities as a result of work-related injuries | - | - |
| **Total recordable work-related injuries** | **26** | **32** |
| Total hours worked by employees (number) | **2,522,216** | **2,686,853** |
| Rate of recordable work-related injuries | 10.31 | 11.91 |
| Rate of high-consequence work-related injuries | - | - |

| Type of work-related injuries | 2023 | 2022 |
|---|---|---|
| Bruises and lacerations | 14 | 17 |
| Sprains and fractures | 6 | 9 |
| Muscle tears and joint pain | 2 | 1 |
| Others (loss of consciousness, burns, inhalation of fumes) | 4 | 5 |
| **Total type of work-related injuries** | **26** | **32** |

| Injuries of external workers | 2023 | 2022 |
|---|---|---|
| Total injuries while travelling to/from work (if transport is organised by the entity) | - | - |
| Total injuries at work | 3 | 4 |
| Total high-consequence work-related injuries (absence >180 days) | 1 | 1 |
| Total fatalities as a result of work-related injuries | - | - |
| **Total recordable work-related injuries of external workers** | **4** | **5** |

| Type of injuries of external workers[25] | 2023 | 2022 |
|---|---|---|
| Bruises and lacerations | 3 | 3 |
| Sprains and fractures | - | 1 |
| Muscle tears and joint pain | - | 1 |
| Others (loss of consciousness, burns, inhalation of fumes) | 1 | - |
| **Total type of injuries of external workers** | **4** | **5** |

[24] The data includes ABS internal employees and external workers who are not employees but whose work and/or workplace is under the control of ABS where it is possible to monitor at the main production sites.
The rate of work-related injuries represents the ratio between the total number of injuries and the total number of hours worked in the same period, multiplied by 1,000,000; injuries while travelling to/from work are included only when transport was organised by the organisation.
The rate of high-consequence work-related injuries represents the ratio between the total number of injuries that have caused more than 180 days of absence and the total number of hours worked in the same period, multiplied by 1,000,000.
The rate of fatalities as a result of work-related injury represents the ratio between the total number of fatalities and the total number of hours worked in the same period, multiplied by 1,000,000.
In the table on injuries of external workers, the rates of work-related injuries, of high-consequence work-related injuries and of fatalities as a result of work-related injury are not calculated because the data on hours worked by this category of workers is not available, as ABS has no direct control over the data provided by the employers of these workers.
[25] External workers refer to directly contracted and subcontracted workers.

# SUPPORT TO THE COMMUNITY


The local community is and will always be one of the focal points of ABS's work. This translates not only into concrete actions aimed at eliminating, reducing and/or mitigating environmental impacts, or at ensuring a good work-life balance for its employees, but also into concrete support for many projects aimed at improving the quality of life within the local community.
In particular, **we support youth sports, cultural, social, medical and environmental projects, assessing their impact on the territory.**

Collaboration with some organisations is well-established and renewed year after year. Also during the last year, donations were made to cultural associations and non-profit organisations. These include **Associazione Percoto Canta, which is celebrating its 36th anniversary this year**. In support, the Company was involved through the provision of a contribution for 3 scholarships for the winners of the international music event "Percoto Canta".

The **Circolo Culturale del Gruppo Alpini of Buttrio** has achieved its goal of purchasing a portable electrocardiograph for adult and paediatric patients that is internationally recognised for its absolute precision and quality, which will enhance and add value to the Cividale Health District.

The **Associazione Operaprima-Wien**, with the Verdi 2023 initiative in the municipality of Pozzuolo del Friuli, receives support from ABS for the staging of the opera initiative "IL TROVATORE" outside the prestigious Villa Sabbadini.

In May 2023, thanks to the support of ABS, the **Istituto Comprensivo di Pozzuolo del Friuli** organized an event dedicated to Don Pierluigi Di Piazza, which was attended by the authorities, pupils from local schools and their families, and other local associations and entities.


Sports sponsorship included contributions to the **Telethon relay** and to a number of local sports associations, including A.S.D. Pozzuolo Basket and A.S.D. UCC Pozzuolo, which enabled the replenishment of uniforms.

At the suggestion of an employee and following an internal evaluation, a new collaboration was also set up to support the **Pordenone Amyotrophic Lateral Sclerosis Association**, aimed at realising the dream of a young girl suffering from ALS: to run in the New York Marathon.

Since the second quarter of 2021, ABS Cargnacco (UD) has started a collaboration project with the **Associazione Banco Alimentare FVG ONLUS**, aimed at reducing food waste. With this initiative, all surplus food from the internal canteen is collected by the company running the canteen and delivered to a charity, the Associazione Famiglie Numerose (Large Families Association), providing new value to perfectly good food.

ABS has long supported the **activities of the AFDS Section Officine Danieli**. In 2023, **thirty ABS employees had the opportunity to donate blood directly at the Cargnacco site**, in a **bloodmobile**, without having to travel to a hospital.

Once the booking and eligibility checks were completed, this opportunity brought many colleagues closer to their first donation experience.

**ABS Sisak** is one of the most important companies in the area and is very sensitive and attentive to contributing actively to the community by supporting and subsidising various initiatives. Various projects and associations are supported both financially and operationally to create a lively and vital social fabric.

ABS SISAK provides financial support through donations to various civil associations, to name but a few: **Faculty of Metallurgy of Sisak, "Metalac" football club, "KAS" association, Cresce do Children's choir, "Top Step" Sisak Sports dance club, Petrinja basketball club, "Lađari i Lađarice" sports club and Sisak Athletic club.**

ABS SISAK supplies water to the park pond, which is located near the plant in a children's playground with various sports fields.

A few years ago, ABS SISAK also donated the funds for the construction of this work as a gift to the city.

The 2021 earthquake damaged much of Sisak and the water stopped flowing.

In the spring of 2022, ABS SISAK's maintenance team inspected the infrastructure and carried out repairs, allowing the public to enjoy the work again.

ABS SISAK owns several square metres of forest, which is continuously maintained with the aim of making a positive contribution to the environment.

## DONATION TO THE "SANTA MARIA DELLA MISERICORDIA" HOSPITAL

Caring for your territory also means caring for the health of the people who live there. The initiative of ABS and Danieli & C. Officine Meccaniche S.p.A., which will enable ASUFC to modernise the operating theatres of the Santa Maria della Misericordia hospital, is in line with this principle.

Specifically, the intervention is part of the "Extraordinary maintenance of basement spaces" and will see the upgrading of the operating theatres in Pavilion 5 with the installation of an angiograph.
The machine will be set up in the new haemodynamic room and will mainly be used for electrophysiology procedures, but can also be used for haemodynamic procedures and/or transcutaneous heart valve implantation. Specifically, the Artis zee system is a floor-mounted interventional imaging system: built by Siemens, it allows for a wide range of configurations and 3D applications and can be used in a variety of specialties, providing an accurate, three-dimensional image of the brain, abdomen and peripheral areas of patients, making decision-making safer.

The equipment will be used primarily for electrophysiology applications such as catheter placement for implantable pacemakers/defibrillators, cardiac ablation to correct arrhythmias and cardiac mapping.

The capabilities of the new instruments can also be applied to other types of operations such as cardiac and peripheral angioplasty, minimally invasive valve implantation and minimally invasive vascular procedures in general.

The work, the installation of the new equipment and the various tests are expected to be completed by spring 2024.

The total cost of the redevelopment is 990,000 euro, of which 190,000 euro comes from regional funds and the rest is a free contribution of 600,000 euro from ABS Acciaierie Bertoli Safau S.p.A. and 200,000 euro from Danieli & Co. Officine Meccaniche S.P.A.: the deed was signed in April 2023.

The equipment extends and strengthens the angiography fleet available to Interventional Cardiology at the Hospital of Udine, increasing the current number of machines from two to three: this will ensure an increase in available resources both in sudden emergency situations and during normal but essential breaks for equipment maintenance.

## PROJECTS WITH SCHOOLS AND OTHER ASSOCIATIONS

ABS collaborates with the universities of Udine, Padua, Venice, and Trieste, accepting dissertation and research proposals. Ongoing collaborations and projects with a number of technical institutes in the region are very important.

In particular, a three-year cooperation agreement was signed last October 2022 between ABS and the **Istituto Statale di Istruzione Superiore "Arturo Malignani"** in Udine, whose main objective is to facilitate the transfer of knowledge and skills, bringing young people closer to the world of work and the steel industry. The collaboration includes, among other activities, a training course on Soft Skills and Orientation for third/fourth/fifth grade Mechanical-Mechatronics students. The training course is part of the activities in the production area; specifically, the students are involved in educational activities divided into training modules whose delivery is accompanied by factory visits and internships, thus becoming part of the pathways for soft skills and orientation (PCTO).

From these important meetings came the need to continue developing relationships in a capillary network in the area for years to come, by activating meetings and attractive development plans for young talent.

In addition to schools, ABS continues to maintain and foster institutional relations within the steel industry as an active member of industry associations such as Federacciai, Eurofer, Unisider, Siderweb and Worldsteel.

Collaborations and research projects with local universities are also very active. **The research project developed in collaboration with the University of Udine** envisages the study of the **role played by emerging technologies**, Internet of Things, Cloud Computing, Blockchain and the new production paradigms, Industry 4.0, Intelligent Industry, in achieving environmental sustainability objectives. The research will focus on the relationship between enabling technologies, operation organisation and management and new business models.
The collaboration with the University of Udine is constant and ongoing, including the **Industrial Engineering for Environmental Sustainability course**. ABS has been involved in the classes for several years, participating with the technicians and illustrating the company's projects and how they are implemented over time. In 2023, students from the degree course also participated in the ABS **materiality matrix** for the "New Generations" category.
Innovation, sustainability and human capital were the topics of the meeting organised also in 2023 by ABS in collaboration with the **Association of Management Engineering Graduates - ALIg** and the participants of the **Executive MBA at the University of Udine.**

During the last year, a collaboration was also set up with the **University of Padua** to finance a PhD course. The subject matter of the PhD is set in a circular economy perspective applied to the steel industry, seeking to optimise methods and approaches for the reuse (upcycling) of electric arc furnace slag (black slag) as a potential material for the elimination of water contaminants and as a filler for insulating polymeric materials.

**ABS ACM is a benefactor of A3TS, Association de Traitement Thermique et de Traitement de Surface**, of FVA (Forschungsvereinigung Antriebstechnik e.V.) following and participating on a case-by-case basis in research and development projects promoted by the German gear manufacturing industry and the local group of companies of the Metz economic and academic campus "club Metz Technopole".

ACM has developed active collaborations with several working groups over the years, including:

- the dilatometry working group with the aim of sharing best practices and standardising techniques using the dilatometer;
- **the UltraSound (US) working group**, which brings together users of ultrasonic immersion test tanks who try to standardise the techniques used for the meso-cleaning of steel;
- **CETIM (Centre Technique des Industries Mécaniques)** with the aim of collaborating with French forging companies to better predict the distortion of forged and heat-treated parts in order to reduce rejects due to high distortion.

ACM has collaborated since its creation with **ENSAM (French Engineering School of Arts & Crafts)** through doctoral theses.

Over time, **ABS Sisak** established important relationships with the **College for Metallurgy in Sisak** and the Technical Institute with whom it is carrying out several projects with the common goal of contributing to the sustainable development of the sector, identifying the creation of skilled labour and the design of innovative solutions for the steel industry as key factors.

ABS Sisak plays an active role in the recently established Metallurgical Council formed by the Croatian Chamber of Commerce in order to undertake shared and sustainable industrial development.

Over the past decades, ABS SISAK has developed and continues to develop an exceptional relationship with the Faculty of Metallurgy at the University of Zagreb in Sisak. As part of the Faculty-led initiative, we took part in the newly formed Economic Council of the Faculty of Metallurgy.

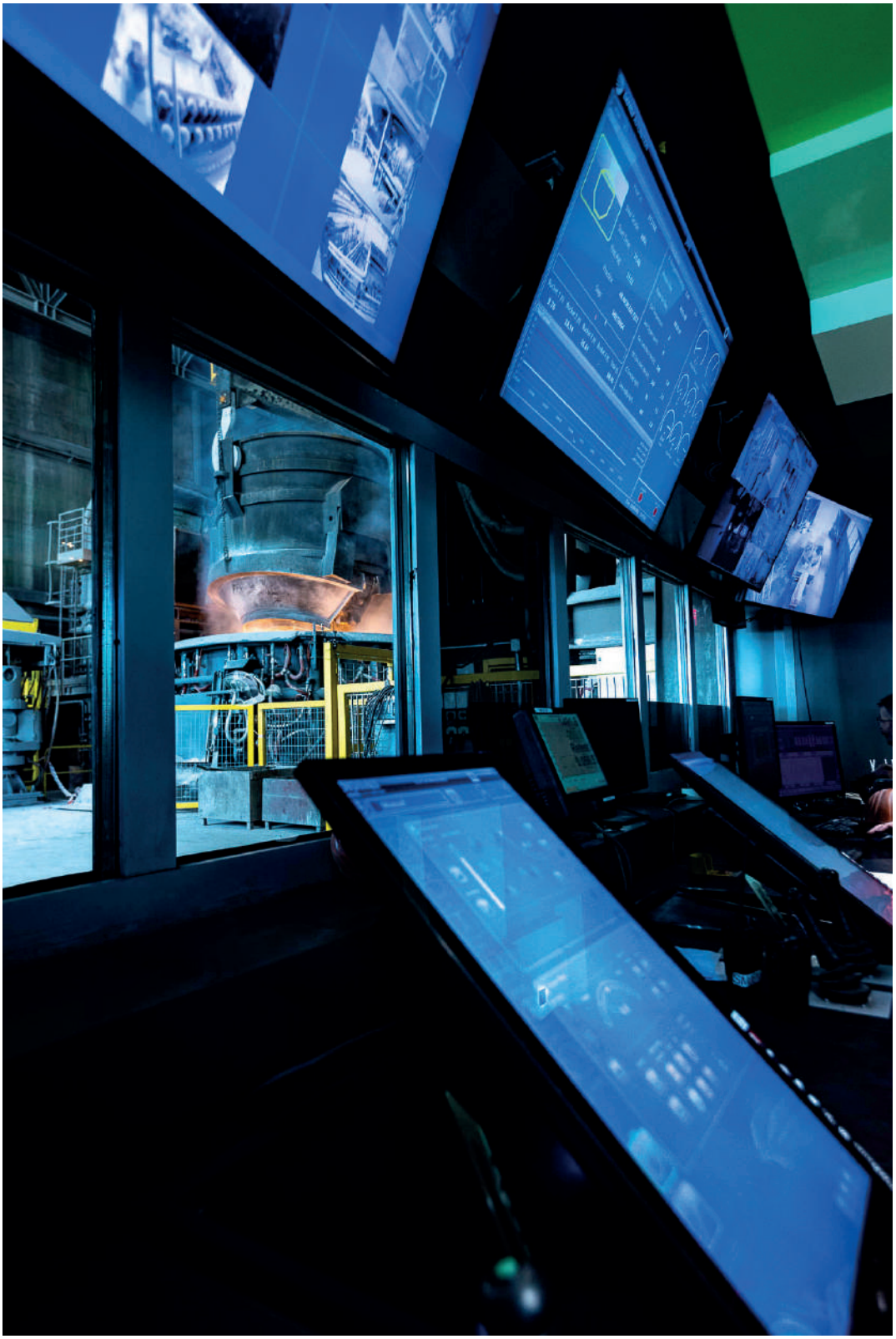
ABS SISAK is currently launching several projects with the Faculty of Metallurgy in Sisak and the Technical School in Sisak with the aim of contributing to a sustainable development approach in the sector, identifying key factors and addressing them mainly through the creation of manpower and the design of innovative solutions in the sector. "Tehnologijada" is a project that represents one of the most important forms of cooperation between the faculties of technology in the fields of science and sport, and ABS SISAK donated the necessary equipment and also supported various events.

The collaboration with the Faculty of Metallurgy also continues through the facilitation and continuity of teaching: during the renovation of the Faculty's premises after the earthquake of December 29, 2020, ABS SISAK provided company premises at very favourable conditions.

ABS SISAK donated two second-hand ovens to the Braća Bobetko primary school, which will be used by the school in cooperation with the "Leptirići" NGO to carry out arts and crafts workshops aimed at developing different skills and interests. The furnaces will allow the school to enrich its educational offer with ceramics courses in the students' free time.

ABS SISAK provides training and membership to the local association of engineers and is a member of the Regional Competence Centre, where it collaborates in the planning of vocational education and training, lifelong learning programmes and other forms of formal and non-formal education (work-based learning, competitions and presentations of knowledge and skills).

ABS SISAK is also involved in EU projects to improve the company and make it sustainable for all stakeholders.



# OUR SUPPLY CHAIN

Every day, more than 400 people from external companies work at ABS production sites, a figure that almost triples to 1,100 during production downtime for maintenance. The need to develop a structured process for monitoring suppliers of products and services, including regular audits at their premises, is therefore of paramount importance.

The selection of the supply chain is guided by a detailed and defined evaluation process aimed at identifying the best suppliers of products and services that offer economic benefits while respecting ethical principles with working conditions that respect human rights, as well as seeking to minimise environmental impact and paying attention to health and safety risk management practices.

ABS does not have a Code of Conduct for suppliers, but requires suppliers to sign its own Code of Ethics and embrace the principles and values expressed in it. The document specifically mentions the supplier selection process, which is carried out according to principles of fairness, cost-effectiveness, quality and transparency.

The assessments carried out on the supply chain allowed ABS to establish a Vendor Rating, a tool for analysing and evaluating suppliers. The ABS acquisitions department reviews and assesses the presence of formalised and shared policies with stakeholders regarding the management of environmental and social issues.

These policies include anti-corruption, non-discrimination, freedom of association and the absence of forced, compulsory or child labour. This approach reflects the commitment of ABS to ensuring that suppliers comply with ethical and responsible standards.
With regard to environmental issues, in addition to compliance with current regulations and the presence of the appropriate authorisations, suppliers are required to provide information on the presence or absence of certifications and environmental management systems, any disputes/sanctions they have incurred, and to identify the environmental benefits of projects developed in the last three years on the topics of water conservation, the circular economy and emission reduction.

In line with these criteria, each ABS provider undergoes a detailed assessment. If non-conformities are found during the analysis and audit, the supplier is required to take corrective measures in order to remain on the list of approved suppliers. As evidence of the effectiveness of the assessment process and in order to maintain high standards, it should be noted that in the last two years there has only been one request from ABS to a supplier for a significant environmental improvement. 378 is the number of suppliers operating at the Cargnacco site, used and assessed, who have recorded at least one activity with a product class considered potentially hazardous to the environment.

100% of new suppliers to ABS Cargnacco (UD) are asked to provide information on environmental and social aspects. New suppliers assessed for social and environmental aspects were, for the ABS Cargnacco (UD) site, 62% of the total of new suppliers in the 2022/2023 financial year, while they accounted for 74% in the previous financial year.

Our commitment to minimise negative impacts and increase positive ones also involves our value chain and marked the start of an ambitious project to improve the sustainability of our supply chain. We believe that the ability to positively influence each stage of our value chain, throughout the entire product life cycle, is essential to maintaining our business reputation.

Promoting sustainability in the supply chain is a key pillar as it contributes to the strength of our brand, ensures business continuity and optimises the management of operating costs.

During the year, ABS initiated a specific sustainability assessment focused on the decarbonisation of its supply chain to promote the systematic adoption of sustainability practices, reduce reputational risk, stimulate collaborative innovation and increase transparency.

The main objectives of the project are:

1. **Improving sustainability:**
   The supplier assessment approach we have developed allows us to accurately measure and evaluate the performance of our suppliers across multiple dimensions of sustainability, particularly in relation to GHG emissions.

2. **Risk mitigation:**
   The structured and weighted analysis of suppliers' answers to sustainability-related questions allows us to identify critical points and potential risks in our supply chain.

3. **Promoting collaboration:**
   Our approach to supplier assessment encourages collaboration and active engagement with our supply partners. By providing them with a clear overview of our expectations, we encourage them to work together with us to improve their performance and meet our standards.

4. **Transparency and communication:**
   The supplier assessment approach provides us with a solid basis for transparently communicating our sustainability and risk management initiatives and progress.

In summary, the 2022/23 process included the following steps:

1. **Definition of subject areas and questions:** 57 questions covering different topics (Human Rights, Environment, Compliance and Code of Ethics, Diversity, Health Safety, General Issue) were developed in order to assess the various dimensions of sustainability.

2. **Selection of target suppliers:**
   Identification of suppliers with the highest order value per strategic product class.

3. **Distribution of a structured survey.**


The next steps in assessing and monitoring the social and environmental impact of our suppliers include integrating sustainability information into the rating in the following steps:

4. **Scoring and weighting the topics;**

5. **Classification and comparison:** suppliers will be divided according to their scores;

6. **Planning and control:** An action plan will be developed to work with suppliers in need of improvement;

7. **Summary and reports.**

During 2022/23, 50 suppliers were involved for ABS, of which 37 respondents made it possible to initiate this important analysis, which will serve as a basis for expanding and systematising analyses and reports in the coming years.

During the year, **ACM** carried out a survey of 107 suppliers on the presence of quality, environmental and energy certifications, as well as on sustainability approaches, policies and strategies.

ABS invests in a local supply chain; during the last year, the procurement of products and services from local suppliers in the province of Udine alone amounted to 12% of the overall procurement budget.

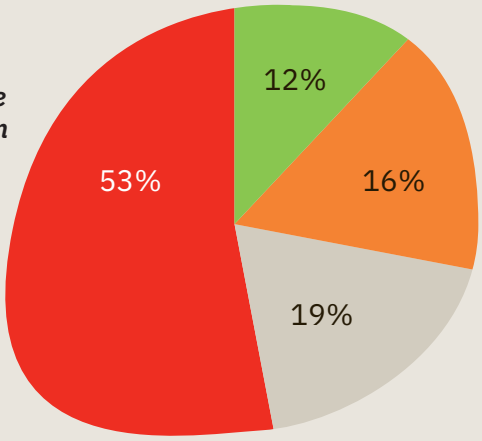
Regional suppliers represent approximately 28% of the procurement budget. On average, almost half of the purchases made by the Italian branch come from suppliers located in Italy.

## ORIGIN OF SUPPLIERS

- Province of Udine
- Friuli Venezia Giulia Region*
- Rest of Italy
- International

* excluding the Province of Udine

**28%**
*from the Province of Udine and from the FVG Region*




The graph refers to suppliers from ABS Cargnacco (UD).

## ACM AUTONOMY OF THE SUPPLY CHAIN

The commitment to consolidate ACM's independence and reliability is also reflected in the autonomy that characterises the definition of its supply chain. The management method used involves assessing the supplier on the basis of seven criteria. The results of these assessments are reviewed annually and corrective action is taken where necessary.

Moreover, ACM promotes the implementation of local supply chains by increasing the positive economic benefits to the surrounding community.

- **Technical support**
- **Price**
- **Delivery time**
- **Ecological responsibility**
- **Training and technical support**
- **Quality**
- **After-sales services**

# OUR FUTURE OBJECTIVES

"We strive to be the partner of choice, while we work to secure valuable solutions using state-of-the-art processes and technologies for a sustainable progress",

is the Vision that ABS pursues in its daily activities.

We firmly believe that a company can only be truly "sustainable" if it is able to guarantee its operations in the long term, and today this condition cannot be separated from the consideration of the ecosystem in which it operates and the integration of ESG topics within the core business strategy.

This is why the new 2023/24 - 2028/29 business plan of ABS is based on a careful analysis of the main risks and, above all, of emerging market opportunities related to sustainability topics.

In a rapidly changing economic and social environment, ABS has always recognised the importance of constantly challenging itself and adapting to the demands of the future. As part of this, we work with our stakeholders to review the materiality analysis and assess the financial impact of ESG topics on the business ("double materiality"). This allows us to accurately calibrate the relevance of each topic and prioritise corporate initiatives to maximise the positive impact on both the external environment and on the business of ABS.


**The strategic plan, called VISION DIGITAL GREEN, envisages the implementation in ABS Steelmaking of an investment plan with actions of almost 1 billion euro over the period from 2023 to 2028.**

The development measures, which will support **an increase in shipment volume from around 1,400,000 to over 2,000,000 tonnes**, have been organised around **five strategic priorities** that address the main emerging trends in the market:

- **Resilient supply chain;**
- **Decarbonisation and circular economy;**
- **Rationalisation and efficiency of production;**
- **Innovation, expansion and specialisation of the offer;**
- **Social and Governance.**

The initiatives for each focus are then presented with three different time horizons: **2023-24 target, 2-5 years target and 2030 target.**

# 2023-24 TARGETS

## RESILIENT SUPPLY CHAIN

During the next financial year, ABS will start a programme to **increase its supply chain awareness**, with the aim of developing sustainability initiatives with its suppliers. One of the first activities to be included in the programme is the strengthening of ESG criteria within the supplier qualification process, ultimately supported by the improvement of the existing digital portal. Moreover, ABS plans to **engage suppliers in virtuous initiatives to quantify and reduce their GHG emissions.**

With regard to the procurement of raw materials, ABS is committed to strengthening the resilience of its supply chain through targeted initiatives, given the high price volatility and scarcity risks.

## DECARBONISATION AND CIRCULAR ECONOMY

***Science Based Target Initiative (SBTi):*** In line with the Danieli Group's direction, ABS intends to strengthen the validity of its decarbonisation strategy by **joining SBTi**, an international partnership that aims to help companies set targets based on solid scientific considerations and in line with the 1.5 °C global temperature containment objectives of the Paris Agreement.

***Responsible Steel:*** This non-profit organisation aims to promote and drive sustainability in the steel sector. The **membership of ABS in Responsible Steel** represents an important step towards the full integration of ESG topics within the company's strategy, while contributing to the definition of new international standards for steel with a low environmental and social impact.

***Energy from renewable sources:*** with the aim of increasing the share of energy from renewable sources and decreasing its indirect emissions of climate-changing gases, ABS started the **gradual installation of photovoltaic panels to produce around 16MW**, of which 7MW will be used entirely for the production of green hydrogen.

***Governance ESG:*** ABS intends to embark on a programme to strengthen ESG Governance, starting with **strengthening the role of the sustainability committee** set up in 2021 and going on to include ESG logics in all major business processes.

***Logistics and transport:*** Two charging stations for electric vehicles will be installed in Sisak next year.

## RATIONALISATION AND EFFICIENCY OF PRODUCTION

***Revamping plants in Cargnacco (UD):*** The company is engaged in implementing an ambitious revamping project of the steel plant. By adopting state-of-the-art technologies and innovative processes, we aim to reduce carbon emissions and improve the overall energy efficiency of the entire production process.

*Up to **50%** less methane by improving plant efficiency*

## INNOVATION, EXPANSION AND SPECIALISATION OF THE OFFER

***Plant for the production of grinding balls:*** During the last financial year, ABS installed its first plant for the production of a finished product, namely steel grinding balls for the mining industry's grinding mills.
The ambitious goal is to produce customised grinding balls with mechanical characteristics tailored to each customer. To ensure high quality standards, the entire production process is carefully controlled, from the selection of raw materials to the steel casting and bar rolling process. After the trial period, ABS will start full-scale production, aiming for an annual production of 150,000 tonnes. This new initiative represents a significant step in the growth and establishment of ABS in the global market. Building on the sustainable characteristics of the product, which is obtained by melting scrap in an electric arc furnace and then processed in induction furnaces, the next step will be to **strengthen the market presence of grinding balls** by meeting customers' needs for materials with a low environmental impact.

***Life Cycle Assessment (LCA) – ISO 14067 and EPD certification:*** ABS intends to carry out **life cycle analyses of its products** in order to identify key areas where action can be taken to improve the efficiency and sustainability of production processes, reducing emissions and resource consumption. This scientific analysis will be instrumental in obtaining the Environmental Product Declaration (EPD) for our products.

***Carbon Neutral Digital certification:*** Thanks to a collaboration with the RINA certification body, ABS will be able to **supply its customers with "carbon neutral" steel,** obtained through the implementation of initiatives to reduce carbon intensity and the purchase of credits to offset hard-to-abate emissions.

***Carbon Capture for the production of sodium bicarbonate:*** ABS and Danieli are collaborating on the CUSTARD Project being submitted under the Innovation Fund, with project development assistance (PDA) from the European Investment Bank (EIB). By **implementing Carbon Capture and Utilisation (CCU) technology**, this innovative solution aims to **decarbonise up to 50% of the $CO_2$** emissions generated by one of the company's reheating furnaces **by capturing GHG gas and using it to produce sodium bicarbonate**.
The methodology developed in the project may be replicated both by ABS in its plants and by Danieli globally, paving the way for decarbonisation also in other industries, such as chemical and power plants.

## SOCIAL AND GOVERNANCE

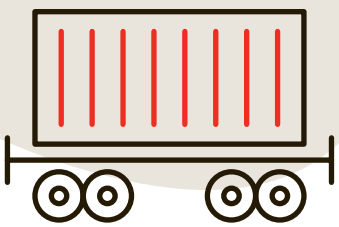
***DUVRI digitalisation and training courses:*** initially at the Cargnacco site, the **digital DUVRI** will be implemented and **it will enable the digital management of all steps related to the coordination of contract works**. Moreover, the company's e-learning platform will be launched and the video course for external personnel will be realised with recording of attendance, learning verification and outcome in digital form.

***Specific health and safety interventions:*** ABS **will invest more than 6 million euro** in improvements to further reduce risks and increase the safety of people working in production plants.

***Other initiatives:*** ABS will implement further measures to better engage its employees through regular **feedback collection and the introduction of Diversity & Inclusion policies** to promote an inclusive, respectful and diverse work environment and increase the overall productivity of the organisation. Moreover, ABS is launching **training programmes that focus on the development of soft skills** to improve communication, teamwork and leadership, with the aim of developing efficiency, teamwork and job satisfaction.

***ISO 22301 certification:*** The certification is expected to be obtained, initially for ABS Cargnacco site alone, within 2024.

*ABS aims to transport 70% of the material by rail.*



# 2-5 YEAR TARGETS

## DECARBONISATION AND CIRCULAR ECONOMY

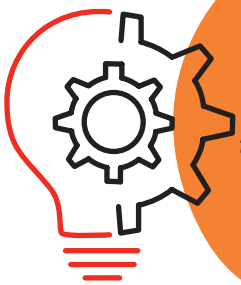
***Increase in rail transport:*** with a view to reducing emissions from incoming and outgoing material transports as well as those generated by in-house transport, ABS has set itself the goal of **transporting 70% of its material by rail.** For this reason, an internal railway network will be developed at the Cargnacco plant, enabling the site's old and new plants to be connected, reducing the emissions into the atmosphere.

***Implementation of technologies to reduce gas consumption:*** ABS will continue its plan of action to **reduce methane gas consumption**, with the aim of reducing it by a total of **10%**.

***Recovery of waste heat:*** ABS is designing its production plants by introducing, wherever possible, a **closed-loop water treatment plant** so that the water used for cooling the steel can be reused for both heating and cooling needs.

***Implementation of sound-absorbing barriers:*** ABS will continue the **installation of mitigation hills in noisy areas or exposed receptors in order to** minimise the impact of the plant operations on the territory.

***Maximising internal reuse of production waste:*** as part of its Vision programme, ABS is committed to maximising the recovery and reuse of production waste. The programme aims to increase the amount of products from steel slag, expanding its applications and value. Moreover, special attention will be given to the improvement of lower quality scrap and related waste, thus contributing to a more



***OUR ROAD TO NET ZERO***
***-30% $CO_2$***
***emissions by 2050***
***through investment in R&D***
***and innovation.***

sustainable and environmentally friendly approach throughout the production process.

Specifically, the **production activity** of the Global Blue plant, which is intended for the production of the innovative **"Ecogravel"**, the **partial replacement of the use of lime** in the scrap melting process with **Ecogravel White**, and the **construction of a treatment plant capable of recovering refractory magnesite and dolomite materials are expected to increase**.

***Responsible Steel Certification:*** ABS intends to undergo the audit to obtain Responsible Steel's **"Certified Steel" certification**. Passing the independent assessment will demonstrate the strength and commitment of ABS to the highest sustainability standards in the steel industry. Certification will provide tangible assurance of our operational efficiency and business resilience and help us build a strong reputation with our stakeholders, including customers, suppliers and the community.

***Introduction of ESG parameters in MBO:*** ABS is planning to **introduce ESG parameters in the remuneration of its managers** to reward the achievement of the company's environmental and social goals.

## INNOVATION, EXPANSION AND SPECIALISATION OF THE OFFER

***Periodic collection of feedback:*** The company will carry out annual customer satisfaction surveys to better understand customer needs. The feedback collected is used to implement corrective actions to improve the experience, offer high quality services and maintain a high level of customer satisfaction. The aim is to ensure solid and lasting relationships with customers and continuous improvement of the services offered.

***Monitoring system of impacts on local communities:*** ABS will develop an internal observatory to assess the environmental and social impact of operations on local communities. This tool will help us to manage our activities in a responsible and conscious way, while protecting the different communities in which we operate.

## SOCIAL AND GOVERNANCE

***Digitalisation of procedures and information:*** at the Cargnacco (UD) site, the Safety procedural system and information on Occupational Health and Safety of activities carried out in confined spaces and at heights will be digitalised.

The latter part will be enabled by the development of webAPPs capable of reading QRCodes containing the applicable information and documentation.

## RATIONALISATION AND EFFICIENCY OF PRODUCTION

***Hybrid Digital Green Steel plant:*** see specific in-depth box in this regard.

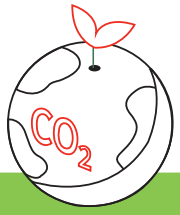
# 2030 TARGETS

## DECARBONISATION AND CIRCULAR ECONOMY

ABS remains committed to its ambitious goal of reducing its Scope 1 and 2 emissions by 30% from the 2017 baseline by 2030, and each project or initiative in the business plan is designed to achieve this. However, the above-mentioned compliance with Science-Based Targets will further refine this target in terms of ABS activities to ensure that **Net Zero is achieved by 2050.**

# OUR FUTURE OBJECTIVES

**Resilient Supply Chain**




**Decarbonisation and Circular Economy**

## 2023-24 TARGETS

1. *Strengthening of ESG qualification criteria;*
2. *Involvement in projects to reduce emissions.*

1. *Joining SBTi;*
2. *Starting Responsible Steel membership;*
3. *Installation of photovoltaic panels totalling 16 MW;*
4. *Electric vehicle charging stations.*

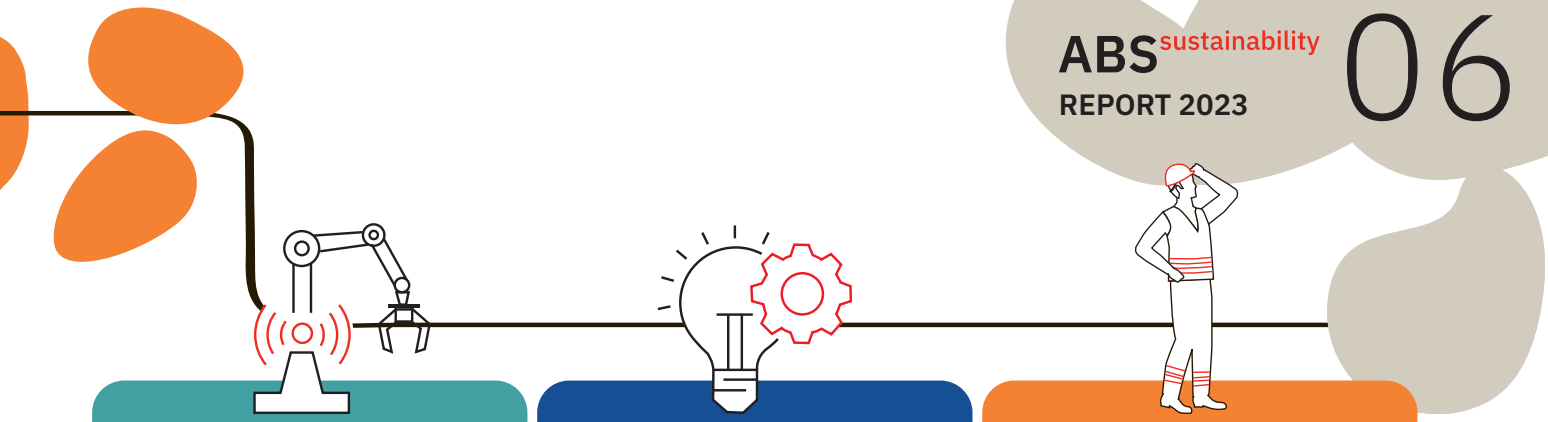
## 2-5 YEAR TARGETS

1. *Strengthening presence in the scrap collection market*
2. *Consolidation of the relationship with suppliers on ESG topics.*

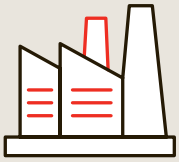
1. *Increase of 70% of material by rail;*
2. *10% reduction in methane gas consumption;*
3. *Recovery of waste heat with closed-loop water treatment plant;*
4. *Installation of sound-absorbing barriers and mitigation hills;*
5. *Maximising internal waste reuse;*
6. *Responsible Steel Certification.*

## 2030 TARGETS

## - 30% $CO_2$



| Rationalisation and efficiency of production | Innovation, expansion and specialisation of the offer | Social and Governance |
|---|---|---|



***Revamping of plants in Cargnacco (UD)***

1. *Strengthening the presence of ABS in the market for grinding balls;*
2. *Life Cycle Assessment (LCA) ISO 14067 and EPD certification;*
3. *Obtaining the Carbon Neutral Digital Certification;*
4. *Implementation of CCU technology for the production of sodium bicarbonate.*

1. *DUVRI (Document for the assessment of interference risks) digitalisation;*
2. *Digital training for external personnel;*
3. *Improvements in operator health and safety;*
4. *Periodic collection of feedback;*
5. *Diversity and inclusion policies;*
6. *Improving personnel soft skills;*
7. *ISO 22301 certification.*
8. *Strengthening ESG governance in all processes.*

***Hybrid digital Green Steel Plant***

*Increase in the number of innovation projects presented at European level.*

*Digitalisation of procedures and information at the Cargnacco (UD) site.*

# *Scope 1 and Scope 2 emissions*

(compared to Scope 1 and Scope 2 emissions in 2017)

# ANNEX
# GRI CONTENT INDEX

The ABS Group has reported the information specified in this GRI Content Index for the period 1 July 2022 - 30 June 2023 with reference to the GRI Standards.
The GRI 1 used: GRI 1 - Foundation 2021.

| GRI | DISCLOSURE | REFERENCE | Page | NOTES |
|---|---|---|---|---|
| **GRI 2** | **GENERAL DISCLOSURES** | | | |
| 2-1 | Organizational details | Corporate Identity | 8 - 10 | |
| 2-2 | Entities included in the organization's sustainability reporting | Corporate Identity Methodological Note | 8 - 10 ; 120 | |
| 2-3 | Reporting period, frequency and contact point | Methodological note | 120 - 121 | |
| 2-4 | Restatements of information | Methodological note | 120 | |
| 2-5 | External assurance | Methodological note, Report of the independent auditors | 122 - 125 | |
| 2-6 | Activities, value chain and other business relationships | Corporate Identity, Our supply chain | 8 -10 ; 12 - 19 ; 98 - 101 | |
| 2-7 | Employees | Personnel, Annex | 20 - 21 ; 40 - 41 ; 110 | |
| 2-9 | Governance structure and composition | Corporate governace, Our approach to sustainability, GRI content index | 20 - 21 ; 40 - 41 | There are no independent Directors on the BoD.<br>Directors hold office for three financial years, are eligible for re-election and expire on the date of the shareholders' meeting. (Articles of Association).<br>There are no under-represented social groups on the BoD.<br>The BoD also receives information from the environmental and human resources delegates and makes decisions based on this information.<br>Directors represent the following stakeholders: shareholders, employees. |
| 2-11 | Chair of the highest governance body | Corporate governace | 20 | The ABS Code of Ethics, Model 231 and policies are designed to eliminate and, where appropriate, manage conflicts of interest. |
| 2-12 a. | Role of the highest governance body in overseeing the management of impacts | Our approach to sustain-ability | 40 - 41 | |
| 2-13 a. | Delegation of responsibility for managing impacts | GRI content index | 110 | The BoD appointed senior managers responsible for impact management on the following topics<br>Environmental permits.<br>Environmental management system.<br>Emissions into the atmosphere<br>Water protection. Waste.<br>Noise emissions.<br>Health and safety. |
| 2-14 | Role of the highest governance body in sustainability reporting | Methodological note GRI content index | 110 ; 120 | The BoD approves the annual non-financial statement and the evaluation of material topics. |
| 2-16 a. | Communication of critical concerns | Ethics | 22 - 23 | |
| 2-22 | Statement on sustainable development strategy | Letters to the stakeholders | 2 - 3 | |

| GRI | DISCLOSURE | REFERENCE | Page | NOTES |
|---|---|---|---|---|
| 2-23 c. | Policy commitments | GRI content index | 111 | Company policy documents *(https://www.absacciai.com/wp-content/uploads/2023/01/Politica-sicurezza-informatica -rev-0.pdf; https://www.absacciai.com/wp-content/uploads/2022/11/Politica-integrata-rev-12.pdf; https://www.absacciai.com/wp-content/uploads/2023/02/Codice-etico-ABS_2022_ITA.pdf).* |
| 2-26 | Mechanisms for seeking advice and raising concerns | Ethics, Our approach to risk | 22 - 23 ; 26 - 27 | |
| 2-27 | Compliance with laws and regulations | Ethics | 23 | |
| 2-28 | Membership associations | Support to the community | 94 - 96 | |
| 2-29 | Approach to stakeholder engagement | Stakeholder, Material topics and SDGs | 42 | |
| 2-30 a. | Collective bargaining agreements | Ethics | 23 | |
| **GRI 3** | **MATERIAL TOPICS** | | | |
| 3-2 | List of material topics | Stakeholders, Material topics and SDGs | 44 - 45 | |
| | **TOPIC STANDARD** | | | |
| **200** | **ECONOMIC SERIES** | | | |
| **201** | **Economic Performance** | | | |
| 201-1 | Direct economic value generated and distributed | Value generated and distributed to stakeholders | 46 | |
| **204** | **Procurement Practices** | | | |
| 204-1 | Proportion of spending on local suppliers | Supply Chain | 101 | |
| **205** | **Anti-corruption** | | | |
| 3-3 | Management of material topics | Ethics | 22 - 23 | |
| 205-3 | Confirmed incidents of corruption and actions taken | Ethics | 23 | |
| **206** | **Anti-competitive Behavior** | | | |
| 3-3 | Management of material topics | Ethics | 22 - 23 | |
| 206-1 | Legal actions for anti-competitive behavior, anti-trust, and monopoly practices | Ethics | 23 | |
| **300** | **ENVIRONMENTAL SERIES** | | | |
| **301** | **Materials** | | | |
| 3-3 | Management of material topics | Scrap and other raw materials | 55 - 56 | |

# GRI CONTENT INDEX

| GRI | DISCLOSURE | REFERENCE | Page | NOTES |
|---|---|---|---|---|
| 301-1 | Materials used by weight or volume | Scrap and other raw materials | 56 - 57 | |
| **302** | **Energy** | | | |
| 3-3 | Management of material topics | Energy; Methane and electricity | 58 - 61 | |
| 302-1 | Energy consumption within the organization | Energy; Methane and electricity | 59 | |
| **303** | **Water and Effluents** | | | |
| 3-3 | Management of material topics | Water: supplies and discharges | 65 - 67 | |
| 303-1 | Interactions with water as a shared resource | Water: supplies and discharges | 65 - 67 | |
| 303-2 | Management of water discharge-related impacts | Water: supplies and discharges | 65 - 67 | |
| 303-3 | Water withdrawal | Water: supplies and discharges | 65 | |
| **305** | **Emissions** | | | |
| 3-3 | Management of material topics | Climate-changing emissions | 62 - 64 | |
| 305-1 | GHG direct emission Scope 1 | Tables of GRI and Custom KPI indicators | 114 | |
| 305-2 | Energy indirect (Scope 2) GHG emissions | Tables of GRI and Custom KPI indicators | 114 | |
| 305-7 | Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions | Tables of GRI and Custom KPI indicators | 115 | |
| **306** | **Waste** | | | |
| 3-3 | Management of material topics | Earth - Waste management and circular economy | 68 - 72 | |
| 306-1 | Waste generation and significant waste-related impacts | Earth - Waste management and circular economy | 68 - 72 | |
| 306-2 | Management of significant waste-related impacts | Earth - Waste management and circular economy | 68 - 72 | |
| 306-3 | Waste generated | Earth - Waste management and circular economy | 71 | |
| 306-4 | Waste diverted from disposal | Earth - Waste management and circular economy | 70 | |
| 306-5 | Waste directed to disposal | Earth - Waste management and circular economy | 70 | |
| **308** | **Supplier Environmental Assessment** | | | |
| 308-1 | New suppliers that were screened using environmental criteria | Our supply chain | 98 - 99 | |

| GRI | DISCLOSURE | REFERENCE | Page | NOTES |
|---|---|---|---|---|
| **400** | **SOCIAL SERIES** | | | |
| **401** | **Employment** | | | |
| 3-3 | Management of material topics | Personnel | 77 - 82 | |
| 401-1 | New employee hires and employee turnover | Tables of GRI and Custom KPI indicators | 118 - 119 | |
| **403** | **Occupational Health and Safety** | | | |
| 3-3 | Management of material topics | Health and safety | 86 - 90 | |
| 403-1 | Occupational health and safety management system | Health and safety | 86 - 88 | |
| 403-2 | Hazard identification, risk assessment, and incident investigation | Health and safety | 86 - 88 | |
| 403-3 | Occupational health services | Health and safety | 86 - 88 | |
| 403-4 | Worker participation, consultation, and communication on occupational health and safety | Health and safety | 86 - 88 | |
| 403-5 | Worker training on occupational health and safety | Personnel, Health and safety | 84 ; 87 | |
| 403-6 | Promotion of worker health | Health and safety | 86 - 88 | |
| 403-7 | Prevention and mitigation of occupational health and safety impacts directly linked by business relationships | Health and safety | 86 - 88 | |
| 403-9 | Work-related injuries | Health and safety | 90 | |
| **404** | **Training and Education** | | | |
| 3-3 | Management of material topics | Personnel | 83 - 85 | |
| 404-1 | Average hours of training per year per employee | Tables of GRI and Custom KPI indicators | 115 | |
| **405** | **Diversity and Equal Opportunity** | | | |
| 3-3 | Management of material topics | Personnel | 77 - 82 | |
| 405-1 | Diversity of governance bodies and employees | Corporate governace, Personnel | 20 ; 82 | |
| **406** | **Non-discrimination** | | | *https://www.absacciai.com/Allegati/Sostenibilita/Codice%20Etico%20ABS%20rev%200.pdf* |
| 3-3 | Management of material topics | Ethics, Social aspects | 22 ; 76 | |
| 406-1 | Incidents of discrimination and corrective actions taken | Ethics | 23 | |
| **414** | **Supplier Social Assessment** | | | |
| 414-1 | New suppliers that were screened using social criteria | Our supply chain | 98 - 99 | |

# TABLES OF GRI AND CUSTOM KPI INDICATORS

| CUSTOM KPI | | Page | |
|---|---|---|---|
| Information on industrial buildings and travels made with car fleet | The ABS Group | 8 | |
| Certification's scheme | Our approach to risk | 27 | |
| Level of education | Personnel | 82 | |
| Seniority | Personnel | 81 | |
| Noise: percentage of investments in the last three years for activities seeking to contain noise impacts and/or vibrations | Noise & vibration | 73 | |
| Climate Risk | Our approach to risk | 26 | For further information on the risks related to Climate Change as well as the Group policy adopted, please refer to the Danieli Group Annual Report (section "Management of business risks"). |

## Climate-changing emissions (page 63)

| Emissions into the atmosphere | 2023 | 2022 |
|---|---|---|
| **GRI 305-1** | | |
| Direct $CO_2$ emissions - Scope 1 ($tCO_2eq$) | 266,431 | 275,392 |
| **GRI 305-2** | | |
| Indirect $CO_2$ emissions - Scope 2 Location based ($tCO_2$) | 309,838 | 340,017 |
| Indirect $CO_2$ emissions - Scope 2 Market based ($tCO_2$) | 463,518 | 510,082 |
| **Total Scope 1 + Scope 2 Location Based** | **576,269** | **615,409** |
| **Total Scope 1 + Scope 2 market based** | **729,949** | **785,474** |

The calculation of direct $CO_2$ emissions – Scope 1 has been estimated on the basis of the certification issued by the Emission Trading System (ETS). The emission factors used for the calculation of indirect emissions are those proposed by Terna for Location-based Scope 2 indirect emissions (Terna, International Comparisons 2019), and the residual mixes for Market-based Scope 2 indirect emissions (AIB, European Residual Mixes 2022, Vers. 1.0 of May 31 2022). Emissions of Scope 2 are expressed in tonnes of $CO_2$; however, the percentage of methane and nitrous oxide has a negligible effect on total greenhouse gas emissions ($CO_2$ equivalent) as can be inferred from the technical literature of reference.

## Channelled emissions (page 64)

| Nitrogen oxides (NOX), sulphur oxides (SOX), and other significant emissions | 2023 | 2022 |
|---|---|---|
| Particulate matter (PM) (t) | 32.52 | 24.82 |
| NOx Nitrogen oxides (t) | 412.15 | 403.83 |
| CO (t) | 1,361.73 | 1,399.05 |
| Dioxins (gr) | 0.30 | 0.37 |

## Total training hours by function (page 83)

| Training hours by function | Average number of hours of training (male) | Average number of hours of training (female) | Average number of hours of training (total) |
|---|---|---|---|
| **2023** | **19.7** | **18.9** | **19.6** |
| Trainees | 26.0 | - | 26.0 |
| Workshop technicians | 19.4 | 11.6 | 19.2 |
| White collars and middle managers | 20.8 | 20.4 | 20.7 |
| Managers | 20.1 | 19.7 | 20.1 |
| **2022** | **14.1** | **12.4** | **14.0** |
| Workshop technicians | 13.2 | 5.7 | 13.1 |
| White collars and middle managers | 17.3 | 14.4 | 16.7 |
| Managers | 17.2 | 14.3 | 16.7 |

## Total training hours by type (page 84)

| | 2023 | | | 2022 | | |
|---|---|---|---|---|---|---|
| | Males | Females | Total | Males | Females | Total |
| Hours of technical training | 10,193 | 676 | **10,869** | 7,144 | 431 | **7,574** |
| Hours of language training | 570 | 271 | **841** | 415 | 10 | **425** |
| Hours of management training | 2,626 | 364 | **2,990** | 744 | 210 | **954** |
| Hours of H&S training | 14,492 | 993 | **15,485** | 11,183 | 684 | **11,867** |
| **Total** | **27,881** | **2,304** | **30,185** | **19,486** | **1,335** | **20,820** |

# TABLES OF GRI AND CUSTOM KPI INDICATORS

**Employees by gender, country and type of contract**
(table supplementing page 79)

| Employees by gender, country and type of contract | | | |
|---|---|---|---|
| | **Permanent** | **Fixed term** | **Total** |
| **2023** | **1,427** | **112** | **1,539** |
| **Males** | **1,318** | **99** | **1,417** |
| Italy | 1,178 | 72 | 1,250 |
| Croatia | 126 | 25 | 151 |
| France | 10 | 2 | 12 |
| Germany | 3 | 0 | 3 |
| Sweden | 1 | 0 | 1 |
| **Females** | **109** | **13** | **122** |
| Italy | 74 | 10 | 84 |
| Croatia | 30 | 3 | 33 |
| France | 4 | 0 | 4 |
| Spain | 1 | 0 | 1 |
| **2022** | **1,345** | **146** | **1,491** |
| **Males** | **1,253** | **130** | **1,383** |
| Italy | 1,118 | 102 | 1,220 |
| Croatia | 116 | 28 | 144 |
| France | 14 | 0 | 14 |
| Germany | 4 | 0 | 4 |
| Sweden | 1 | 0 | 1 |
| **Females** | **92** | **16** | **108** |
| Italy | 65 | 6 | 71 |
| Croatia | 22 | 9 | 31 |
| France | 4 | 1 | 5 |
| Spain | 1 | 0 | 1 |
| **Total** | **2,772** | **258** | **3,030** |

**Employees by gender, country and type of employment**
(table supplementing page 80)

| Employees by gender, country and type of employment | | | |
|---|---|---|---|
| | **Part time** | **Full time** | **Total** |
| **2023** | **5** | **1,534** | **1,539** |
| **Males** | **2** | **1,415** | **1,417** |
| Italy | 1 | 1,249 | 1,250 |
| Croatia | 1 | 150 | 151 |
| France | 0 | 12 | 12 |
| Germany | 0 | 3 | 3 |
| Sweden | 0 | 1 | 1 |
| **Females** | **3** | **119** | **122** |
| Italy | 2 | 82 | 84 |
| Croatia | 0 | 33 | 33 |
| France | 1 | 3 | 4 |
| Spain | 0 | 1 | 1 |
| **2022** | **2** | **1,489** | **1,491** |
| **Males** | 1 | 1,382 | 1,383 |
| Italy | 0 | 1,220 | 1,220 |
| Croatia | 1 | 143 | 144 |
| France | 0 | 14 | 14 |
| Germany | 0 | 4 | 4 |
| Sweden | 0 | 1 | 1 |
| **Females** | **1** | **107** | **108** |
| Italy | 0 | 71 | 71 |
| Croatia | 0 | 31 | 31 |
| France | 1 | 4 | 5 |
| Spain | 0 | 1 | 1 |
| **Total** | **7** | **3,023** | **3,030** |

# TABLES OF GRI AND CUSTOM KPI INDICATORS

**Total number of newly hired employees and percentage by age group, gender and geographical area** (table supplementing page 81)

| Employees hired (No.) | | | New hires (%) | |
|---|---|---|---|---|
| **GRI 401-1** | **Males** | **Females** | **Males %** | **Females %** |
| **2023** | **171** | **27** | **12%** | **22%** |
| **Italy** | **123** | **22** | **10%** | **26%** |
| < 30 y.o. | 40 | 10 | 22% | 71% |
| 30 - 50 y.o. | 78 | 11 | 12% | 18% |
| > 50 y.o. | 5 | 1 | 1% | 13% |
| **Croatia** | **47** | **4** | **31%** | **12%** |
| < 30 y.o. | 17 | 4 | 50% | 36% |
| 30 - 50 y.o. | 23 | 0 | 29% | 0% |
| > 50 y.o. | 7 | 0 | 18% | 0% |
| **France** | **1** | **1** | **8%** | **25%** |
| < 30 y.o. | 1 | 0 | 33% | 0% |
| 30 - 50 y.o. | 0 | 1 | 0% | 50% |
| > 50 y.o. | 0 | 0 | 0% | 0% |
| **2022** | **203** | **20** | **15%** | **19%** |
| **Italy** | **162** | **10** | **13%** | **14%** |
| < 30 y.o. | 78 | 3 | 41% | 33% |
| 30 - 50 y.o. | 81 | 7 | 13% | 13% |
| > 50 y.o. | 3 | 0 | 1% | 0% |
| **Croatia** | **39** | **9** | **27%** | **29%** |
| < 30 y.o. | 15 | 5 | 43% | 63% |
| 30 - 50 y.o. | 19 | 4 | 26% | 36% |
| > 50 y.o. | 5 | 0 | 14% | 0% |
| **France** | **1** | **1** | **7%** | **20%** |
| < 30 y.o. | 1 | 1 | 33% | 100% |
| 30 - 50 y.o. | 0 | 0 | 0% | 0% |
| > 50 y.o. | 0 | 0 | 0% | 0% |
| **Germany** | **1** | **0** | **100%** | **0%** |
| 30 - 50 y.o. | 1 | 0 | 100% | 0% |

**Total number of outgoing employees and percentage by age group, gender and geographical area** (table supplementing page 81)

| Employee turnover (No.) | | | Turnover (%) | |
|---|---|---|---|---|
| **GRI 401-1** | **Males** | **Females** | **Males %** | **Females %** |
| **2023** | **136** | **14** | **10%** | **11%** |
| **Italy** | **93** | **9** | **7%** | **11%** |
| < 30 y.o. | 16 | 3 | 9% | 21% |
| 30 - 50 y.o. | 43 | 6 | 6% | 10% |
| > 50 y.o. | 34 | 0 | 9% | 0% |
| **Croatia** | **40** | **2** | **26%** | **6%** |
| < 30 y.o. | 16 | 1 | 47% | 9% |
| 30 - 50 y.o. | 18 | 0 | 23% | 0% |
| > 50 y.o. | 6 | 1 | 16% | 9% |
| **France** | **3** | **3** | **17%** | **75%** |
| < 30 y.o. | 1 | 0 | 33% | 0% |
| 30 - 50 y.o. | 1 | 2 | 13% | 100% |
| > 50 y.o. | 0 | 1 | 0% | 100% |
| **2022** | **128** | **16** | **9%** | **15%** |
| **Italy** | **94** | **13** | **8%** | **18%** |
| < 30 y.o. | 22 | 2 | 12% | 22% |
| 30 - 50 y.o. | 41 | 9 | 7% | 16% |
| > 50 y.o. | 31 | 2 | 7% | 29% |
| **Croatia** | **31** | **2** | **22%** | **6%** |
| < 30 y.o. | 10 | 0 | 29% | 0% |
| 30 - 50 y.o. | 12 | 2 | 17% | 18% |
| > 50 y.o. | 9 | 0 | 24% | 0% |
| **France** | **2** | **1** | **14%** | **20%** |
| < 30 y.o. | 1 | 0 | 33% | 0% |
| 30 - 50 y.o. | 0 | 1 | 0% | 50% |
| > 50 y.o. | 1 | 0 | 100% | 0% |
| **Germany** | **1** | **0** | **25%** | **0%** |
| 30 - 50 y.o. | 1 | 0 | 50% | 0% |

# METHODOLOGICAL NOTE

This document represents the voluntary consolidated Non-Financial Statement (hereinafter also “NFS” or “Sustainability Report” or "Non-Financial Statement") of the ABS Group, drawn up in accordance with Article 3 and 4 of Italian Legislative Decree 254/2016, containing information relating to environmental, social, personnel topics, respect for human rights and the fight against corruption, in a transparent and complete way.

ABS has chosen to voluntarily comply with the provisions of Legislative Decree no. 254 of 30 December 2016, concerning the communication of non-financial information, in implementation of European Directive 2014/95/EU.

The Sustainability Report of ABS S.p.A. is published annually and was approved by the Board of Directors on 22 September 2023 and will subsequently be published on the institutional website.
ABS reported the information mentioned in this document according to a selection of the "GRI Sustainability Reporting Standards", published by the Global Reporting Initiative (GRI) with reference to the 2021 update.

The Sustainability Report by ABS has been prepared with a strategic approach in view of the creation of sustainable value for stakeholders. The information contained in the Sustainability Report refers to the topics identified as material based on the results of the materiality analysis that identified the material aspects for the Group and its Stakeholders of the main impacts on the environment, economy and people, including impacts on human rights.
The process of identifying the most important topics, on which to focus efforts and resources, started in 2016 and updated over the following years, led to the definition of material topics, understood as “topics that can generate significant economic, social and environmental impacts” on ABS activities or that could substantially influence stakeholders' assessments and decisions. In particular, the definition is based on the principles of accuracy, balance, clarity, comparability, completeness, sustainability context, timeliness and verifiability.

The data and information in this document refer to the financial year 2023 (from 1 July 2022 to 30 June 2023), a period coinciding with the reporting of the ABS Group's Consolidated Financial Statements. Where possible, the information in the NFS has been complemented with a comparison to the 2022 financial year in order to ensure the principle of comparability between the data presented.

The boundary of the economic, financial and social data and information in this document is the same as that of the Consolidated Financial Statements of ABS S.p.A. Please refer to the latter for the method of data consolidation.

For environmental indicators, in addition to referring to the two production companies, ABS S.p.A. in Cargnacco and ABS Sisak d.o.o. in Croatia, the company ACM - ABS Centre Métallurgique Sarl in Metz, France, was included, while the companies ABS Deutschland GmbH (Germany) - ABS Scandinavia AB (Sweden) - Acciaierie Bertoli Safau Iberica S.L. (Spain) were excluded in that commercial offices with an impact that can be considered insignificant. It should be noted that the method of consolidation of data on environmental indicators is on a line-by-line basis.

In order to provide a correct representation of performance and to ensure the reliability of the data, the use of estimates was limited as much as possible.

There were no significant changes in the size, structure or supply chain of the organisation during the year compared to the previous reporting period

The reporting process of the indicators in this document is based on a comprehensive collection per operating site. Indicators for which the data origin is exclusively central are excluded due to intrinsic characteristics of the management model.

A correspondence table "GRI Content Index" identifies each indicator used taken from the **GRI Sustainability Reporting Standards** and provides a clear view of the information and sustainability content following the standard.

This document has been submitted for conformity assessment ("limited assurance engagement" according to the criteria indicated by the ISAE 3000, revised) by Deloitte & Touche S.p.A., which certifies in a separate report the conformity of the information provided pursuant to Article 3, paragraph 10, of Legislative Decree 254/2016.

The audit was carried out in accordance with the procedures set out in the "Independent Auditors' Report", included in this document.

For information on the contents of this report, please write to:
**sustainability@absacciai.com.**

# REPORT OF THE INDEPENDENT AUDITORS

Deloitte.

Deloitte & Touche S.p.A.
Via Giovanni Paolo II, 3/7
33100 Udine
Italia

Tel: +39 0432 1487711
Fax: +39 0432 1487712
www.deloitte.it

INDEPENDENT AUDITOR'S REPORT
ON THE CONSOLIDATED NON-FINANCIAL STATEMENT PURSUANT TO ARTICLE 3, PARAGRAPH 10 OF LEGISLATIVE DECREE No. 254 OF DECEMBER 30, 2016 AND ART. 5 OF CONSOB REGULATION N. 20267/2018

To the Board of Directors of
Acciaierie Bertoli Safau S.p.A.

Pursuant to article 3, paragraph 10, of the Legislative Decree no. 254 of December 30, 2016 (hereinafter "Decree") and to article 5 of the CONSOB Regulation n. 20267/2018, we have carried out a limited assurance engagement on the Consolidated Non-Financial Statement of Acciaierie Bertoli Safau S.p.A. and its subsidiaries (hereinafter "ABS Group" or "Group) as of June 30, 2023 prepared, on a voluntary basis, in accordance with art. 4 of the Decree, and approved by the Board of Directors on September 22, 2023 (hereinafter "NFS").

**Responsibility of the Directors and the Board of Statutory Auditors for the NFS**

The Directors of Acciaierie Bertoli Safau S.p.A. (hereinafter "Company") are responsible for the preparation on a voluntary basis of the NFS in accordance with art. 7 of the Decree, and in accordance with the provision of articles 3 and 4 of the Decree and the "Global Reporting Initiative Sustainability Reporting Standards" established by GRI – Global Reporting Initiative (hereinafter, "GRI Standards"), which they have identified as reporting framework.

The Directors are also responsible, within the terms established by law, for such internal control as they determine is necessary to enable the preparation of a NFS that is free from material misstatement, whether due to fraud or error.

The Directors are moreover responsible for defining the content of the NFS, within the topics specified in article 3, paragraph 1, of the Decree, taking into account the activities and characteristics of the Group and to the extent necessary in order to ensure the understanding of the Group's activities, its trends, performance and the related impacts.

Finally, the Directors are responsible for defining the business management model and the organization of the Group's activities as well as, with reference to the topics detected and reported in the NFS, for the policies adopted by the Group and for identifying and managing the risks generated or undertaken by the Group.

The Board of Statutory Auditors is responsible for overseeing, within the terms established by law, the compliance with the provisions set out in the Decree.

Deloitte.



### Auditor's Independence and quality control

We are independent with respect to the Company in compliance with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. Our audit firm applies International Standard on Quality Control 1 (ISQC Italia 1) and, accordingly, maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

### Auditor's responsibility

Our responsibility is to express our conclusion based on the procedures performed about the compliance of the NFS with the Decree and the GRI Standards. We conducted our work in accordance with the criteria established in the "International Standard on Assurance Engagements ISAE 3000 (Revised) – Assurance Engagements Other than Audits or Reviews of Historical Financial Information" (hereinafter "ISAE 3000 Revised"), issued by the International Auditing and Assurance Standards Board (IAASB) for limited assurance engagements. Such standard requires that we plan and perform the engagement to obtain limited assurance whether the NFS is free from material misstatements. Therefore, the procedures performed in a limited assurance engagement are less than those performed in a reasonable assurance engagement in accordance with ISAE 3000 Revised, and, therefore, do not enable us to obtain assurance that we would become aware of all significant matters and events that might be identified in a reasonable assurance engagement.

The procedures performed on the NFS are based on our professional judgement and included inquiries, primarily with Company personnel responsible for the preparation of information included in the NFS, analysis of documents, recalculations and other procedures aimed to obtain evidence as deemed appropriate.

Specifically, we carried out the following procedures:

1. analysis of relevant topics with reference to the ABS Group's activities and characteristics disclosed in the NFS, in order to assess the reasonableness of the selection process in place in light of the provisions of art.3 of the Decree and taking into account the adopted reporting standard;

2. analysis and assessment of the identification criteria of the consolidation area, in order to assess its compliance with the Decree;

3. comparison between the financial data and information included in the NFS with those included in the consolidated financial statements of the ABS Group as of June 30, 2023;

4. understanding of the following matters:

   - business management model of the Group's activities, with reference to the management of the topics specified by article 3 of the Decree;
   - policies adopted by the entity in connection with the topics specified by article 3 of the Decree, achieved results and related fundamental performance indicators;
   - main risks, generated and/or undertaken, in connection with the topics specified by article 3 of the Decree.

# REPORT OF THE INDEPENDENT AUDITORS

Deloitte.



Moreover, with reference to these matters, we carried out a comparison with the information contained in the NFS and the verifications described in the subsequent point 5, letter a) of this report;

5. understanding of the processes underlying the origination, recording and management of qualitative and quantitative material information included in the NFS.

   In particular, we carried out interviews and discussions with the management of Acciaierie Bertoli Safau S.p.A. and performed limited documentary verifications, in order to gather information about the processes and procedures which support the collection, aggregation, elaboration and transmittal of non-financial data and information to the department responsible for the preparation of the NFS.

   In addition, for material information, taking into consideration the Group's activities and characteristics:

   - at the Group's level:

     a) with regards to qualitative information included in the NFS, and specifically with reference to the business management model, policies applied and main risks, we carried out interviews and gathered supporting documentation in order to verify consistency with the available evidence;
     b) with regards to quantitative information, we carried out both analytical procedures and limited verifications in order to ensure, on a sample basis, the correct aggregation of data.

   - For Acciaierie Bertoli Safau S.p.A., which we selected based on its activities, its contribution to the performance indicators at the consolidated level and its location, we carried out site visits, during which we have met management and gathered supporting documentation with reference to the correct application of procedures and calculation methods used for the indicators.

**Conclusion**

Based on the work performed, nothing has come to our attention that causes us to believe that the NFS of the ABS Group as of June 30, 2023, is not prepared, in all material aspects, in accordance with article 3 and 4 of the Decree and the GRI Standards, with reference to the selection of GRI Standards.

DELOITTE & TOUCHE S.p.A.

Signed By
**Barbara Moscardi**
Partner

Udine, Italy
October 5, 2023

*This report has been translated into the English language solely for the convenience of international readers.*

SECURITYSELECTIONSENIORSENSESERVICESFERE**SHARE**SHIFTSHIPPINGSH
TERVIEWSHOWSITUATIONSKILLSSKYLINESMARTSMILESOCIALSOLUTIONSS
SOULSOURCINGSPIRITSPORTSTAFFSTAGESTANDARDSTARTSTORAGESTORYT
GSTRUCTURESTUDYSTYLESUCCESSFULSUGGESTIONSUMMARYSUMMITSUPP
TYSYMPOSIUMSYNERGYSURVEYSAFETYSALESSALUTESAMPLE**SCRAP**SATISFA
SELECTIONSAFETYSEMESTERSENIORSERVICESHIFTSHIPPINGSHOOTSKILLS
CIALSOLUTIONSOLVING-PROBLEMSOONSOULSOURCHINGSPIRITSTAFFSTAG
LINGSTRATEGYSTUDY**SUMMARY**SUPPORTSYMPOSIUMSYNERGYSAMPLESCH
SAFETYSALESSALUTESAMPLESATISFACTIONSAVINGSAYSCHEDULESCHOOLS
CURITYSELECTIONSENIORSENSESERVICESFERESHARESHIFTSHIPPINGSHO
VIEWSHOWSITUATIONSKILLS**SOUL**SKYLINESMARTSMILESOCIALSOLUTIONS
SOULSOURCINGSPIRITSPORTSTAFFSTAGESTANDARDSTARTSTORAGESTORYT
STRUCTURESTUDYSTYLESUCCESSFULSUGGESTIONSUMMARYSUMMITSUPPO
POSIUMSYNERGYSURVEYSAFETYSALESSALUTESAMPLESATISFACTIONSEARC
FETYSEMESTERSENIORSERVICE**SECURITY**SHIFTSHIPPINGSHOOTSKILLSSKY
SOLUTIONSOLVING-PROBLEMSOONSOULSOURCHINGSPIRITSTAFFSTAGESTE
GSTRATEGYSTUDYSUMMARYSUPPORTSYMPOSIUM**SOCIAL**SYNERGYSAMPLES
SAFETYSALESSALUTESAMPLESATISFACTIONSAVINGSAYSCHEDULESCHOOLS
SECURITYSELECTIONSENIORSENSESERVICESFERESHARESHIFTSHIPPINGSH
TERVIEWSHOWSITUATIONSKILLSSKYLINESMARTSMILESOCIALSOLUTIONSS
SOULSOURCINGSPIRITSPORTSTAFFSTAGESTANDARDSTARTSTORAGESTORYT
STRUCTURE**SEMESTER**STUDYSTYLESUCCESSFULSUGGESTIONSUMMARYSUM
NABILITYSYMPOSIUMSYNERGYSURVEYSAFETYSALESSALUTESAMPLESATISFA
SELECTIONSAFETYSEMESTERSENIORSERVICESHIFTSHIPPINGSHOOT**SKILLS**
CIALSOLUTIONSOLVING-PROBLEMSOONSOULSOURCHINGSPIRITSTAFFSTAG
LINGSTRATEGYSTUDYSUMMARY**SUPPORT**SYMPOSIUMSYNERGYSAMPLESCH
SAFETYSALESSALUTESAMPLESATISFACTIONSAVINGSAYSCHEDULESCHOOLS
SECURITYSELECTIONSENIORSENSESERVICESFERESHARESHIFTSHIPPINGSH
TERVIEWSHOWSITUATIONSKILLSSKYLINESMARTSMILESOCIALSOLUTIONSS
SOULSOURCINGSPIRITSPORTSTAFFSTAGESTANDARDSTARTSTORAGE**STORY**T
GSTRUCTURESTUDY**STYLE**SUCCESSFULSUGGESTIONSUMMARYSUMMITSUPP
TYSYMPOSIUMSYNERGYSURVEYSAFETYSALESSALUTESAMPLESATISFACTION
SAFETYSEMESTERSENIORSERVICESHIFTSHIPPINGSHOOTSKILLSSKYLINESM
TIONSOLVING-PROBLEMSOONSOUL**SUCCESS**SOURCHINGSPIRITSTAFFSTAG
LINGSTRATEGYSTUDYSUMMARYSUPPORTSYMPOSIUMSYNERGYSAMPLESCHE
SAFETYSALESSALUTESAMPLESATISFACTIONSAVINGSAYSCHEDULESCHOOLS
SELECTIONSENIORSENSESERVICESFERESHARESHIFTSHIPPINGSHOOTOFTH
TIONSKILLSSKYLINESMARTSMILESOCIALSOLUTIONSSOLVING-PROBLEMSOO
FSTAGESTANDARDSTARTSTORAGESTORITELLINGSTRATEGYSTRONGSTRUCTU
GESTIONSUMMARYSUMMITSUPPORTSISAKSUSTAINABILITYSYMPOSIUMSYN

ACCIAIERIE BERTOLI SAFAU

ABSOLUTE STEEL QUALITY

absacciai.com