# I,R&D INNOVATION, RESEARCH, AND DEVELOPMENT

The following table provides specific information on SBM-3:

Topic/sub-topic/ sub-sub-topic	Impact, risk, opportunity (IRO)	Description	
Innovation, research, and development	Production innovations	voestalpine invests in research and development to create new processes, technologies, and products to pro- mote the sustainability and provision of innovative products and materials (including hydrogen-based steel production and carbon capture, storage, and utilization technologies), e.g., through the use of hydrogen, plasma technology, and similar technologies as part of the greentec steel program	
	+ USP based on product differentiation	Successful product innovation can strengthen voestalpine's market position and financial performance with measures such as obtaining certification for low-carbon or zero-carbon steel from individual locations (compared to mass balance approach)	
	<ul> <li>Increasing recycling efficiency through technological innovation</li> </ul>	Introducing innovative technologies into the recycling process could increase efficiency and further improve the recycling rate in order to achieve cost savings	
	<ul> <li>Breakthrough technology applications (e.g., HYFOR)</li> </ul>	Successful application of SuSteel and/or HYFOR technologies to maintain high product quality (vs. use of EAF technology)	
	Ensuring product quality with increased use of scrap	Risk of declining product quality due to higher use of scrap (BF-BOF vs. EAF route)	

Impact on strategy and business model	Value chain	Time horizon	Affected stakeholders	_
Adaptation of central production facilities, technologies, and processes	>>>	••••	» Educational institutions and research	_
Strengthens innovative strength			» Customers	
Extensive adaptation of the business model				
Transformation of the product portfolio	>>>>	0000	» Educational institutions and research	_
Strengthens innovative strength			» Customers	
Adaptation of central production technologies as well as the value chain and processes	>>>>		<ul> <li>» Educational institutions and research</li> <li>» Customers</li> </ul>	_
Strengthens innovative strength			" Customers	Кеу
Adaptation of central production technologies as well as the value chain and processes	>>>	0000	» Educational institutions and research	<ul> <li>Actual positive impact</li> <li>Actual negative impact</li> <li>Potential positive impact</li> </ul>
Strengthens innovative strength			» Customers	<ul> <li>Potential negative impact</li> <li>Opportunity</li> <li>Risk</li> </ul>
Adaptation of key produc- tion facilities and techno- logies, as well as the value chain and processes	>>> >	0000	» Customers	<ul> <li>&gt;&gt;&gt; Upstream</li> <li>&gt;&gt;&gt; Own operations</li> <li>&gt;&gt;&gt; Downstream</li> <li>OOO &lt; 1 year</li> <li>OOO 1 5 year</li> </ul>
Continuous risk management			_	- 000 1-5 years

### IMPACT, RISK, AND OPPORTUNITY MANAGEMENT

### I,R&D-1 - Policies related to innovation, research, and development

As key elements of voestalpine's strategy, Research and Development (R&D) and Innovation make a significant contribution to the company's position as a leader in innovation, technology, and quality. The R&D strategies aim to ensure the long-term economic success of the company through innovative processes and sustainable products.

voestalpine's decentralized R&D organization is underpinned by strategic innovation guidelines, a defined innovation process, and the alignment of research projects with the phased implementation of  $CO_2$  emission reduction technologies to achieve net-zero  $CO_2$  by 2050. As research cannot be considered in isolation, no measurable and specific outcome-oriented targets have been set for research and development at this stage (see chapter I,R&D-3 Targets related to innovation, research, and development). A comprehensive realignment of the R&D strategy is planned from the business year 2025/26.

Policies related to innovation, research, and development are not based on external statements or principles, and there are no available frameworks or standards on which this report is based with the exception of MDR-P from the ESRS standard. The geographical area and scope of the policies encompasses all of the Group companies around the world active in R&D. The strategies are communicated internally through the R&D network, namely at internal events and on the Group-wide intranet. The strategies are communicated to external stakeholders, such as customers or applicants, for example at presentations or on company websites.

### Organization of innovation, research, and development at the voestalpine Group

Research and development at the voestalpine Group is organized in a decentralized manner in order to ensure close links are maintained with the respective companies, their production, and quality control as well as with the market and customers. The global research network with more than 70 locations is centrally controlled from Linz by the Research Board and Research Coordination.

The Research Board, which is composed of the members of the Management Board of voestalpine, the divisional technical directors and the Head of Group Development, meets twice a year. It coordinates the Group and divisional innovation roadmaps, thereby setting the research priorities. The research activities within the divisions are led by an R&D coordinator, while digitalization agendas that involve R&D are managed by the divisional digitalization coordinators. The respective steering committees meet quarterly. The Research Committee is primarily composed of the research managers at companies and business units that engage in R&D, and provides a format for the sharing of information between the individual divisions as well as strengthening synergies across divisional boundaries. The Research Committee and Research and Digitalization Coordination are chaired by the Group Head of Research.

Strategic R&D management plays an overarching role within the organization. One of its core tasks is to represent the Group in matters concerning R&D, research policy, and public relations. Other activities include the coordination of committees and steering groups, the preparation of the R&D strategy, and active patent, literature, and funding management. The Group's research organization is complemented by cooperation with external scientific partners.

#### **R&D IN THE voestalpine GROUP**



The decentralized organization of research activity in the voestalpine Group makes a significant contribution to strengthening USPs through product differentiation. Each research site has specific core competencies, which enables a diverse product range. In addition, the pooling of expert knowledge at selected locations promotes the development of production innovations that are geared toward a sustainable society.

### Strategic innovation guidelines

voestalpine's R&D strategy is derived directly from the Group strategy. The following six Strategic Innovation Guidelines underline the importance of R&D in the company and its contribution to the sustainable and successful development of voestalpine:

### 1. From the idea to implementation-working together for success

Research activities are subject to a standardized and cross-departmental innovation process and managed using transparent innovation roadmaps, more information on which can be found under "Prioritized innovation roadmaps." The highest priority is given to the Group's key issues and the needs of customers.

### 2. Fostering the best ideas and creating USPs along the value chain

By creating unique selling points, not only does voestalpine increase its own competitiveness, but also that of its customers. Specific projects are prioritized and allocated the appropriate resources. Each project is analyzed transparently to determine the benefits it brings and projects with little promise are canceled.

### 3. R&D projects aim to achieve sustainability

The sustainability of research projects is accounted for throughout the value chain—starting with the (secondary) raw materials, the production processes in the company, and further processing by customers through to use by end consumers. The main focus is placed on energy and resource efficiency as well as saving greenhouse gases.

### 4. Active know-how management, both internally and externally, is the key to success

The protection of important know-how against external misuse is achieved, among others, through active patent management. Synergies are created and used within the company through Group-wide knowledge sharing.

### 5. Decentralized R&D forms a global voestalpine network

In the voestalpine Group, more than 70 locations are involved in research and development. Decentralized R&D locations allow us to maintain proximity to our customers and local production. Research projects are centrally managed from our headquarters in Linz. This central organization ensures equipment and resources are allocated according to requirements, coordinates cooperation, and optimally utilizes synergies within the Group. Numerous partnerships with universities, colleges of applied sciences, and centers of expertise constitute an important supplement to internal R&D network.

### 6. Obtaining the best researchers for voestalpine

Employees are key to the success of R&D and innovation. Targeted training measures are employed promote their individual strengths and interests. Actively engaging with young talent at schools and universities strengthens our future employees early on.

The strategic innovation guidelines, in particular the first three, focus in particular on product innovation to achieve a sustainable society and the creation of USPs through product differentiation. When formulating the guidelines, the interests of various stakeholders, including customers, employees, and applicants, as well as the Management and Supervisory Board, were taken into account through measures such as dialogues, cooperation, and events.

### Prioritized innovation roadmaps

All R&D activities are aligned with the voestalpine Group strategy, which is geared toward current and relevant megatrends. These activities are assigned to the research priorities of the individual divisions and summarized in the prioritized innovation roadmaps. Each topic focus is broken down in more detail in the corresponding roadmaps of the divisions, companies, and business units until the topic is split up at individual project level. The innovation roadmaps depict development projects and programs with a time horizon of 10 to 15 years.

Preparation of the prioritized innovation roadmaps falls under the responsibility of the R&D coordinator of each division. Once complete, the roadmaps are coordinated with the members of the Management Board in charge of the divisions on the divisional boards. This is followed by annual approval by the Group Management Board in the research board. The prioritized innovation roadmaps—available for all companies that engage in R&D in the individual divisions—aim to define medium and long-term innovation priorities in terms of product and process development and to provide the necessary resources (see IROs of production innovations). With this, voestalpine is able to help shape new market trends and establish successful product innovations (see IROs of USP through product differentiation). The roadmaps take into account the needs of customers and markets along with any new legal requirements and standards.

# R&D strategy for modular implementation of new technologies to achieve decarbonization targets

In order to achieve the decarbonization targets, the R&D strategy pursues a three-pronged approach to prepare for and accompany the Group's decarbonization strategy:

- » In the first stage, the existing blast furnace processes are optimized to minimize  $CO_2$  emissions and to ensure the efficient use of by-products
- » Progress is made on the electrification of processes in the first expansion step. Intensive research activities are required to facilitate the commissioning and successful operation of the electric arc furnaces at the sites in Linz and Donawitz. These activities include test melts, the development of alloy concepts as well as simulations and modeling. Research is focused on upholding our ability to continue producing the highest quality steel grades even after the process route has been changed in order to counteract the risk of decreasing product quality due to a higher use of scrap material in the EAF route. Due to increasing demand for scrap metal, research is needed to make the most efficient use of available resources and to tap into new sources, such as post-consumer scrap, for example through closed loops with customers
- » In order to achieve the net-zero CO<sub>2</sub> target by 2050, new technologies must be developed and brought to market in addition to electric arc furnaces. These breakthrough technologies include SuSteel (Sustainable Steelmaking) and HYFOR (hydrogen-based fine-core reduction), which are already delivering initial results on a pilot scale. The further development and especially the implementation of these methods are research and resource intensive, requiring comprehensive basic research

This research strategy takes into account the interests of management, legislators, customers, and residents near the location and in communities neighboring the steel-producing companies, whose emissions are gradually reduced as a result.

### POLICY OVERVIEW

IROs addressed	Policy	Core content	Scope of the policy	Responsibility and monitoring	Other comments
Production innovations	Strategic innovation guidelines	Description of the orientation of research and development activities within the voestalpine Group, including the areas of active know-how management (internal and external), the organizational structure of R&D (central management and	Own operations	Head of Group-wide Research & Development and Innovation	<ul> <li>The interests of customers, research institutions, employees, and candi- dates are taken into account</li> </ul>
USP based on product differences		decentralized R&D departments), and sustainability in individual projects	Downstream value chain to a partial extent (in line with customer require- ments)		» External communication, e.g., at presentations
	Prioritized innovation roadmaps of the divisions	Summaries of R&D activities are translated into prioritized innovation roadmaps, whereby topics in the development pipeline are considered at the project/program level with a	Own operations to a partial extent	R&D coordinator of the divisions	» The interests of customers, research institutions, universities, and manage- ment are taken into account
Increased recycling efficiency through technological innovation		future time horizon of 10 – 15 years	Downstream value chain to a partial extent (customer innovations)	Approval in the annual research board under the leadership of the CEO	» External communication, e.g., at presentations
Applications of breakthrough technologies (e.g., HYFOR)	R&D for modular implementa- tion of new technologies	Support for the Group-wide decarboni- zation strategy through a phased approach to achieving net-zero by 2050	Own operations	Project managers of R&D sub-projects	» The interests of customers, legislators, neighbors and neighboring communities, and management are taken into account
Ensuring product quality with increased use of scrap	to achieve net-zero by 2050	Steps include research initiatives to electrify processes (e.g., through EAF), development of breakthrough techno- logies such as SuSteel and HYFOR, and ensuring product quality	Downstream value chain to a partial extent (in line with customer require- ments)	Approval in the annual research board under the leadership of the CEO	<ul> <li>» External communication, e.g., at presentations or through Group-wide communication on decarbonization</li> </ul>

### I,R&D-2 - Actions and resources related to innovation, research, and development

Research projects derived from the innovation roadmaps constitute the actions taken in the field of innovation, research, and development to address the related impacts, risks, and opportunities (IROs). For the business year 2024/25, five actions or packages of actions have been identified that will contribute in particular to achieving the projects and objectives of the strategies related to R&D and innovation. Packages of actions refer to a set of several individual R&D projects that contribute to the fulfillment of an overarching priority topic.

Due to their high strategic relevance, two of these actions are also being managed as Group projects. In addition to individual projects, which are usually handled by a team of researchers who are assigned to a company or business unit in organizational terms, division-wide competencies are pooled in Group projects. Group projects address strategically important issues and are associated with high project costs and a higher project risk. This targeted cooperation accelerates implementation, thereby increasing efficiency. The following Group-wide R&D projects were undertaken in the business year 2024/25:

- » Sustainable processes (project duration November 1, 2021 to October 31, 2024)
- » Sustainable products (project duration December 1, 2022 to November 30, 2025)
- » Simulation of complex (supply chain) networks (project duration April 1, 2024 to March 31, 2028)

In line with the voestalpine standard on monitoring the progress of Group research projects, the implementation of actions is monitored as follows:

- i) The definition of targets such as acquiring expertise, future income, or sales
- ii) Project controlling by a steering committee (quarterly)
- iii) Status report to the Management Board within the framework of the Research Board (annual)

A defined monitoring process applies to all projects that are not managed within the scope of Group projects: Monitoring of the implementation of the described actions is carried out within the scope of progress reporting for the entire R&D project portfolio. Milestones are defined and their achievement is monitored within the framework of project management and project controlling. Content, scheduling and cost aspects are taken into account in the process. If milestones are not reached, adjustments are made or the projects are prematurely stopped.

The actions and packages of actions are explained in detail below and are discussed with regard to impacts, risks, and opportunities. The stated R&D expenses are solely OpEx costs and the implementation of the projects is not subject to any preconditions. A total of EUR 19.36 million was spent on the R&D projects in the past business year as a result of the actions listed above. This corresponds to 8.85% of total gross R&D expenditure. Similar levels of expenditure are also planned for the upcoming business year to ensure the ongoing implementation of planned projects.

### R&D for sustainable products and Group project "Sustainable Products"

The Group project "Sustainable Products," which was launched on December 1, 2022 and is scheduled to run for three years, contains 22 sub-projects focused on energy and mobility, products for agriculture and the food industry, and aspects to optimize products in the use phase. A total of 25 Group companies from all divisions are involved in the implementation of this action. Overall project management and coordination falls under the remit of the Metal Forming Division, which is also the division most involved in the sub-projects. By pooling expertise, sustainable products can be brought to market in a relatively short period of time and generate sales within a few years. Examples of sub-projects include the development of complete process chains for high-quality tool repair, on which researchers from the High Performance Metals Division are working, and the further development of fences for wildlife protection in the Metal Forming Division. A budget of EUR 33.7 million will be made available over the entire duration of the project. The R&D expenditure for all sub-projects came to EUR 8.40 million in the business year 2024/25.

# R&D for greentec steel—experimental melting, dynamic alloying, and active interventions in production processes

The production of steel grades of consistent quality even after the transition from the blast furnace to the electric arc furnace route poses a major challenge, especially for the high-quality automotive and wire rod segments. The increasing proportion of scrap in the input material leads to an increase in the level of accompanying elements, which has direct impacts on mechanical properties such as the strength, ductility, and hardenability of the end product. R&D therefore focuses strongly on determining the relationship between the steel grade, the mix of input materials, and the resulting product characteristics.

The package of R&D actions for greentec steel, primarily processed by the Metal Engineering Division and the Steel Division, comprises the following focal points:

### i) Experimental melts and experimental programs (Metal Engineering and Steel Division)

The influence of the level of accompanying elements on the physical and chemical properties can be investigated through the targeted production of melts with a defined composition. These studies provide the basis for further experimental activities.

## ii) Dynamic alloying (Metal Engineering and Steel Division)

Since the exact composition of the scrap is known only after melting in the electric arc furnace, metallurgical counter-measures are necessary during the process. Dynamic alloying allows the alloy quantity to be adjusted so that the final properties of the product remain within specified limits.

### iii) Forecast-driven process adjustments (Steel Division)

Not only the material composition, but also the processing parameters have a significant influence on the final properties of the product. By purposefully adapting the process parameters in the last property-determining step, namely the annealing furnaces, material properties can be adapted to the specified limits.

Since 2021, the transition of the production routes on electric arc furnaces in Linz and Donawitz has been accompanied by intensive research. By the time the first electric arc furnaces are commissioned in 2027, the first intensive phase of R&D is scheduled to be completed. However, research activities to maintain product properties will continue in the years that follow.

The package of actions mitigates the risk of decreasing product quality due to the transition from the blast furnace route to the electric arc furnace route. The described R&D activities can minimize this risk, which is based on physical/chemical principles. The ability to react rapidly to the composition of input materials, in particular the proportion of accompanying elements in scrap, also improves recycling efficiency through technological innovation. A total of EUR 9.26 million was spent on the individual R&D projects for this key research focus in the past business year. After completion of the pre-liminary work in the first year of the project, higher R&D expenses have been earmarked for the upcoming years.

### Simulation of complex networks and post-consumer scrap

Scrap is already playing an essential role at voestalpine's production sites. Due to the limited availability of high-quality steel scrap on the world market, research activities are necessary both to increase the efficiency of recycling processes, especially for old scrap, and to venture into new scrap markets. In particular, the conversion of process routes from blast furnaces to electric arc furnaces is accompanied by a sharp increase in scrap demand. The objectives of the "Simulation of complex networks" action, which is being implemented as part of a Group project since 2024, are to understand and visualize the supply chains relevant to the voestalpine Group, to simulate and optimize the flow of scrap as well as to simulate worst-case scenarios and develop remedies. The duration of the project is four years and EUR 0.22 million was spent on it in the business year just ended.

In other individual projects, the voestalpine experts are intensively researching the treatment and use of scrap, otherwise known as post-consumer scrap. Compared to new scrap, which is produced as waste during punching, for example, the use of post-consumer scrap, which is often mixed with other materials, can present a number of challenges. Composite materials and other non-metallic components need to be separated in a complex process before further processing. The KIRAMET project (artificial intelligence-based recycling of metal composite waste), for example, involves working with partners from academia and industry on Al-based solutions for processing these material flows. During the project period from 2023 to 2026, the aim is not only to increase the value added of secondary raw materials; networking between industrial companies will also enable holistic management of the recycling chain. In another flagship project, voestalpine is cooperating with a recycling company and a premium car manufacturer to close the loop for material cycles between the stakeholders.

### Application of SuSteel technology and operation of the SuSteel pilot plant in Donawitz

Another trial project is currently being undertaken in the SuSteel (sustainable steel) test plant at the voestalpine Stahl Donawitz GmbH site: the production of crude steel using hydrogen plasma in a single process step. In this  $CO_2$ -free method, in which only steam is produced as a by-product, the intermediate stage of pig iron can be completely bypassed. In addition to voestalpine Stahl GmbH and voestalpine Stahl Donawitz GmbH, two long-term academic cooperation partners, namely K1-MET and the University of Leoben, are also involved in the implementation of this project.

In the past business year, R&D expenses of EUR 0.89 million were incurred for individual projects related to SuSteel technology. The SuSteel test plant, which has been successfully operating since 2021, demonstrates that the single-stage reduction of iron ores using hydrogen is an important alternative to fossil-based reducing agents such as coke, coal, or natural gas. The experimental findings on this breakthrough technology will also be of great importance, especially in the third stage of the successively implemented decarbonization plan to achieve net-zero  $CO_2$  by 2050. The package of actions is based entirely on the IRO for the application of the HYFOR and SuSteel technology.

### Application of HYFOR technology and operation of the HYFOR pilot plant in Donawitz

A HYFOR pilot plant is being operated at the voestalpine Stahl Donawitz GmbH site in partnership with partners from the worlds of industry and academia. HYFOR technology (hydrogen-based fine-ore reduction) enables the direct reduction of ultrafine ores using hydrogen without prior sintering or pelleting. This technology and the knowledge gained from the pilot trials will make it possible to process ultrafine ores primarily available on the world market. In a first step, hydrogen-reduced material from the HYFOR test facility was melted down together with scrap in a trial melt at the "Technikum Metallurgie," a metallurgy technical center, and a low-CO<sub>2</sub> bearing steel was produced that met the required quality standards. This demonstrated that it is possible to produce the same steel grades produced using conventional routes in this manner.

Accompanying this pilot plant, several individual R&D projects were carried out to create a database that can be used for later expansion into an industrial plant. In the business year 2024/25, the cumulative R&D expenses for these individual projects amounted to EUR 0.59 million. The R&D pilot HYFOR plant went into operation in 2021 and has been running successfully ever since. The findings obtained can be used to provide extensive scientific fundamental knowledge, in particular in the planned phase 3 of the modular implementation of R&D to achieve net-zero  $CO_2$  by 2050. Starting in fall 2025, the world's first demonstration plant will be built at the voestalpine Stahl GmbH site in Linz. The plant will be able to combine hydrogen-based direct reduction for ultrafine iron ores using HYFOR technology with an electric melting process. This expansion step will result in a significant increase in R&D expenditure for this set of actions.

### **OVERVIEW OF ACTIONS**

IROs addressed	Action	Core content and expected results	
Production innovations USP based on product differences	Package of actions: R&D for sustainable products and Group project "Sustainable Products"	22 sub-projects on the focus topics of energy and mobility, as well as products for agriculture and food and aspects relating to the use phase Expected result: Development of sustainable products to achieve net-zero	
Ensuring product quality with increased use of scrap	Package of actions: R&D for EAF/greentec steel: dynamic alloying, active interventions in the production process, and experimental melting	Research activities to ensure product quality after transition to EAFs Optimization of product properties in scrap through dynamic alloying	
		Influencing of material properties by adjusting the process parameters, especially during annealing Targeted production of melts with defined composition to investigate physical and chemical properties and derive optimization actions	
Increasing recycling efficiency through technological innovation	R&D Group project "Simulation of complex networks" and the use of post-consumer scrap	Build understanding and visualization of voestalpine-relevant supply chains, simulate and optimize scrap flow, simulate worst-case scenarios, and generate remedies	
		Treatment and use of post-consumer scrap (old scrap)	
Applications of breakthrough technologies (e.g., HYFOR)	Package of actions: Application of SuSteel technology and operation of the SuSteel pilot plant in Donawitz	Research on the CO <sub>2</sub> -free production of crude steel in one process step using novel hydrogen plasma technology (Project SuSteel—Sustainable Steelmaking) at a pilot plant Implementation of the package of actions in partnership with scientific cooperation partners	
	Package of actions: Application of HYFOR technology and operation of the HYFOR pilot plant in Donawitz	Research on HYFOR technology (hydrogen-based fine-ore reduction) at the pilot plant enables the direct reduction of ultrafine ores using hydrogen without prior sintering or pelleting Implementation of the package of actions in partnership with scientific cooperation partners	

Time horizon	Scope of the action	Responsibility and monitoring	Significant expenditure (if relevant)	Other comments	
December 2022 – November 2025	Own operations to a partial extent	Project managers of R&D sub-projects	EUR 8.40 million OpEx (Group project)	» Inclusion of customer interests	
		Management of Group project at MFD			
	Downstream value chain to a partial extent	Progress monitoring in line with the voestalpine standard			
2021 – 2027 (Phase 1)	Own operations to a partial extent	Project managers of R&D sub-projects	EUR 9.26 million OpEx	<ul> <li>Inclusion of the interests of customers and legislators</li> </ul>	
		Managers responsible for R&D MED & SD			
	Downstream value chain to a partial extent	Progress monitoring in line with the voestalpine standard			
April 2024 – March 2028	Own operations to a partial extent	Group project manage- ment by divisional logistics management (SD)	EUR 0.22 million OpEx (Group project)	<ul> <li>Inclusion of the interests of customers, suppliers, research institutions,</li> </ul>	
		Project managers of R&D sub-projects		and universities	
	Upstream and downstream value chain to a partial extent	Progress monitoring in line with the voestalpine standard			
Ongoing; Application particularly during Phase 3 of the	Own operations to a partial extent	Project managers of R&D sub-projects	EUR 0.59 million OpEx	<ul> <li>Inclusion of the interests of customers, research institutions, and</li> </ul>	
Climate Transition Plan		Progress monitoring in line with the voestalpine standard		universities <ul> <li>Inclusion of the interests</li> </ul>	
Ongoing; Application particularly during Phase 3 of the	Own operations to a partial extent	Project managers of R&D sub-projects	EUR 0.89 million OpEx	<ul> <li>or customers, research institutions, and universities</li> </ul>	
Climate Transition Plan		Progress monitoring in line with the voestalpine standard			

### **METRICS AND TARGETS**

#### I,R&D-3 - Targets related to innovation, research, and development

In light of its overarching role within the voestalpine Group, research and development forms a link between Group-wide sustainability goals and process and product innovations. The findings from numerous R&D related actions not only affect quantifiable targets, but must also be considered in the context of manufacturing processes. Process innovations in relation to the green transformation contribute significantly to reducing CO<sub>2</sub> emissions; but the savings cannot be attributed exclusively to R&D. Success in setting up and further developing the circular economy at all voestalpine locations largely depends on progress in research and development. As it is not possible to view research as an isolated factor, no R&D-specific measurable and outcome-oriented targets have currently been defined. In the framework of the strategic process in the business year 2025/26, the definition of strategic targets for research and development.

The effectiveness of the R&D projects set forth in the innovation roadmaps, which address material impacts, risks, and opportunities for voestalpine, is subject to a Group-wide guideline for assessing benefits. This ensures that all project benefits undergo consistent, transparent, and accountable monetary and non-monetary assessment, verification, and tracking in relation to R&D and innovation. As part of assessing benefits, a distinction is made between pre-project (ex-ante) and post-project (expost) evaluation. For projects that cannot be assessed in monetary terms, ex post checks are carried out to determine whether the planned intangible benefits have been achieved and whether the resulting projects have resulted in product or process developments. The knowledge gained in the course of this process is used to plan and manage future R&D projects in order to promote continuous improvement and strengthen the company's innovative power.

### I,R&D-4 - Metrics related to innovation, research, and development

Researchers play a central role in the success of innovation, research activities, and development. In the business year 2024/25, 786 people at the various voestalpine sites conducted research on innovative products and improved processes on an ongoing basis. In doing so, they made a significant contribution to achieving the company's environmental objectives. The number of employees in R&D corresponds to the total number of employees (headcount) who are directly assigned to the R&D departments of the individual Group companies. Employees who are involved in R&D projects but assigned to other areas are not included in this figure. In recent business years, the number of employees in R&D and innovation has steadily increased.

The high number of employees in R&D is accompanied by high R&D expenditure (gross). In the business year 2024/25, EUR 218.89 million was spent on research and development activities, reinforcing the key role of these activities in the business model of the voestalpine Group. A significant proportion of R&D expenditure is invested in projects that increase the sustainability of voestalpine processes and products in the long term. A budget of EUR 241.27 million has been earmarked for R&D for the business year 2025/26.

The entire R&D expense (gross) is calculated as the total R&D expenses (gross) of all companies active in R&D. R&D expenditure (gross) includes all expenses (directly attributable costs excluding VAT) for all R&D activities in the business year, which can be undertaken as part of the R&D program, regardless of whether they are carried out in the dedicated R&D departments or in other areas. These include personnel costs (salaries) and direct expenses for R&D (such as material costs, travel costs, use of infrastructure, and third party costs). Depreciation on fixed assets and patent application and maintenance costs are not included.

No assumptions or estimates are made for the calculation of either parameter, there are no limitations and, due to the low complexity of the computation, no validation is performed by external bodies. The two key figures are recorded in the Business Objects Financial Consolidation (BOFC) consolidation tool. The responsibility for data entry lies with the respective consolidation tool officers in the Group companies. The accuracy of the data is verified by internal bodies (R&D managers and controlling) as part of a multi-stage review and approval process, and no external bodies are involved in the reporting.

### NUMBER OF EMPLOYEES IN RESEARCH AND DEVELOPMENT



Headcount, as of the March 31, 2025 reporting date

### EXPENDITURE FOR RESEARCH AND DEVELOPMENT

241 174 153 2019/20 2020/21 2021/22 2022/23 2023/24 2023/24 2024/25 Budget 2025/26

In millions of euros

# OVERVIEW OF METRICS

ESRS disclosure requirement	Paragraph	Datapoint/metric	Basis for the preparation and description of the metrics used; description of the assumptions and methodology
I,R&D (company- specific topic)	-	R&D expense (gross)	Total R&D expenses (gross) of all companies active in R&D. R&D expenditure (gross) includes all expenses (directly attributable costs excluding VAT) for all R&D activities in the BY, which can be undertaken as part of the R&D program, regardless of whether they are carried out in the dedicated R&D departments or in other areas
I,R&D (company- specific topic)	-	Number of employees in R&D	The number of employees in R&D corresponds to the total number of employees (headcount) who are directly assigned to the R&D departments of the individual Group companies

 Where applicable: description of the sources of measurement uncertainty	Resulting level of accuracy	External validation	Where applicable: measures planned to improve accuracy
 Limited-data represents the individual companies	High	No	
Limited—data represents the individual companies	High	No	-
 Limited—data represents the individual companies	High	No	