

# SUSTAINABILITY REPORT 2022

WE MAKE MOBILITY  
SAFER AND MORE SUSTAINABLE

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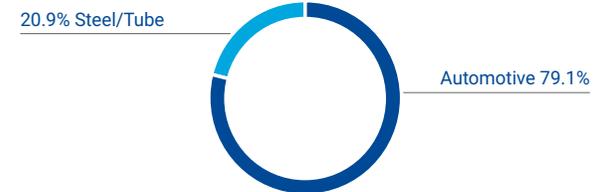
# 2022 IN NUMBERS

## KEY FIGURES 2022

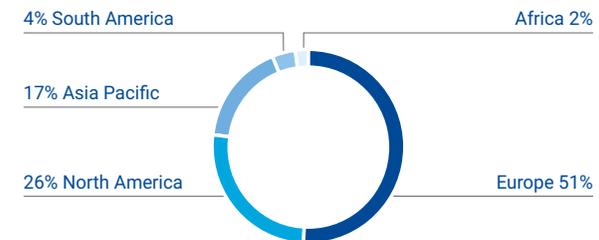
		2022	2021
External revenue – Group	EUR MILLION	8,954	7,258
BENTELER Automotive revenue	EUR MILLION	7,138	6,228
BENTELER Steel/Tube revenue	EUR MILLION	1,882	1,116
EBITDA <sup>1</sup>	EUR MILLION	703	332
R&D budget	EUR MILLION	67	75
Number of patents		30	36
Employees <sup>2</sup>	FTE <sup>3</sup>	21,349	23,319
Trainees <sup>2</sup>	HC <sup>4</sup>	500	565
Reduction of Scope 1 and 2 emissions (Base year 2019)	%	-16	-18
Reduction of Scope 3 emissions (Base year 2019)	%	-6	-8

- 1 Reported EBITDA
- 2 Yearly average
- 3 Full Time Equivalent
- 4 Headcount

## REVENUE BY DIVISION



## REVENUE BY REGION



# FOREWORD BY THE EXECUTIVE BOARD

## Dear Readers,

We are very pleased to present our Sustainability Report 2022. As global metal processing specialists we are excited to share our sustainability efforts with you. We look back with pride on our progress in the year under review. And at the same time we're aware that these are only milestones.

As a company with more than 145 years of tradition, long-term thinking is part of BENTELER's DNA: Our goal is to create a more sustainable future for all of us – our employees, our customers, society. We are convinced that the automotive and steel/tube industries have important roles to play in shaping this future. Our industry is currently facing an unprecedented transformation process. Our aspiration is to shape this change in an ecologically, socially and economically just manner. This is why we pursue a holistic sustainability strategy.

### Sustainable products for the mobility of the future

We make mobility safer and more sustainable with our products. For example, through lightweight components that reduce the weight and thus the fuel consumption of vehicles; through battery cooling plates that improve battery life and performance. With all these innovations, we apply our many years of experience with metal to rethink things and shape the future. Two current examples of this pioneering

spirit are our newly named Thermal & Tubular business unit, which is actively shaping the transformation from products for combustion engines to products for electric vehicles, and our HOLON subsidiary, founded in 2022, which is setting the standard for sustainable mobility with our fully electric, autonomous and inclusive mover.

### Green production and supply chain

We are committed to products that promote sustainable mobility. And we're just as passionate about our own sustainability activities. Here, we are guided by the Sustainable Development Goals (SDGs)



Ralf Göttel, CEO (left)  
Dr. Tobias Braun, CFO (right)



Our goal is to create a sustainable future for all.

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of the United Nations. As an energy-intensive company, our focus is on reducing CO<sub>2</sub> emissions.

For this reason, we are working hard to decarbonize our company. On the one hand, this applies to production processes: By 2030, we want to halve our production-related absolute scope 1 and 2 GHG emissions compared to 2019. We aim to be climate neutral in production by 2040. Our "Green Tubes" initiative is an example of how we are reducing the carbon footprint of production and products in a structured way in our Steel/Tube Division. We are already well on the way to achieving this. Thanks to our own green steel production at the Lingen electric steel mill, we already offer CO<sub>2</sub>-reduced tubes.

The goal for our supply chain is to reduce absolute scope 3 GHG emissions by 30% compared to 2019, also by 2030. We have launched various initiatives to this end over the past year. These include a deal on green aluminum and an agreement with

thyssenkrupp Steel Europe on the purchase of green steel. Through these and other measures, we aim to achieve net zero emissions across the company by 2050.

**Social commitment to employees and society**

In addition to ecological aspects, the well-being of our employees and the communities in which we operate are also important to us. We have taken measures to further improve workplace safety, promote diversity and inclusion even more strongly, and support social projects. We would like to take this opportunity to highlight the commitment of our employees to the victims of the war in Ukraine. Within a few days we initiated a group-wide donation initiative in cooperation with the UN Refugee Agency. In addition, many colleagues got involved privately: For example, through collection campaigns, taking in refugees, or private donations. We are proud of this – and say thank you very much!

**Achievements and outlook**

We know that sustainability is a journey. And the goal is still a long way off – even for BENTELER. We are pleased that our commitment has been acknowledged. BENTELER Steel/Tube was awarded the silver medal in the reporting year by EcoVadis, one of the world's largest providers of sustainability ratings. This puts the division in the top 25% of companies in its sector. The second division – BENTELER Automotive – achieved its best result to

date in the "Carbon Disclosure Project" (CDP) with a rating of "B" in 2022. These successes motivate us to continually set our sights higher. And they show that we are on the right track. This is also confirmed by the recent validation by the Science Based Targets initiative. Specifically, evidence that our 2030 production-related targets go hand-in-hand with the 1.5° climate path.

We would like to thank all our employees and partners who give their all every day to achieve our common sustainability goals. Their courage, their ambition, their respect are what drive us – emission-free, of course.

We hope that this report gives you a comprehensive insight into our sustainability efforts. That it gives you food for thought. And – in the best case – that it inspires you to work for a more sustainable future as well. Together, we can bring about positive change: Together, we can make it happen!

Sincerely,

Salzburg, June 2023

**Ralf Göttel**  
Chief Executive Officer

**Dr. Tobias Braun**  
Chief Financial Officer

 **Together, we can bring about positive change.**

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# COMPANY

We are metal processing specialists for safety-relevant products, systems and services. We develop, produce and distribute our solutions for customers in the automotive, energy and mechanical engineering sectors. We make it happen: With courage, ambition and respect.

Our portfolio includes components and modules for chassis, body, thermal & tubular and system solutions for electric vehicles. We develop seamless and welded steel tubes – from material development to tube applications. We also produce technical equipment for automotive suppliers and the glass processing industry.

We have a global presence with around 23,000 employees at 87 sites in 26 countries. Founded in 1876, we have over 145 years of experience. During this time, we have developed from a specialist for tubes into a multi-technology group. Our production processes cover the entire value chain, from steel production in our electric steel mill in Lingen (Germany) to final processing in forming and assembly. With more than 44 hot-forming lines, we are leaders in the field of hot forming.  
 (→ see **Products chapter, page 27**)



## OUR VALUES

COURAGE	AMBITION	RESPECT
Break new ground with curiosity and take responsibility for making decisions	Strive for excellence every day.	Work together in an appreciative manner and communicate openly as well as honestly.

Sustainability is a central component of our corporate strategy. We are therefore committed to the environment, employee development and society.

### Responsible corporate governance

The BENTELER Group is managed by the strategic management holding company BENTELER International AG, based in Salzburg (Austria). Its share capital is held 50% each by Hubertus Benteler Ges.m.b.H. and Dr. Ing. E. h. Helmut Benteler GmbH.

BENTELER International AG manages the processes, structures and goals of the global business. It is responsible for the following departments and central functions:

- Compliance and Board Affairs
- Finance and controlling
- Internal audit
- IT
- Communication and marketing
- Human resources
- Legal and insurance
- Tax
- Strategy

The Executive Board is the managing body of BENTELER International AG. Its composition in fiscal year 2022 was as follows:

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#### Executive Board of BENTELER International AG

**Ralf Göttel**, Schönau am Königssee, Germany (Chairman of the Executive Board, responsibilities: Strategy & M & A, Compliance & Board Affairs, Communications/Marketing, Human Resources, IT, Divisions)

**Dr. Tobias Braun**, Dorfen, Germany (responsibilities: Finance & Controlling, Legal & Insurance, Tax, Internal Audit), since September 01, 2022

**Frank Jehle**, Salzburg, Austria (responsibilities: Finance & Controlling, Legal & Insurance, Tax, Internal Audit), until August 31, 2022

**Michael Baur**, Zurich, Switzerland (responsibilities: Restructuring Program, Transformation Office, Liquidity Office) until May 15, 2023

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The Supervisory Board is the highest controlling body of BENTELER International AG. It monitors, advises, supports and accompanies the company's Management Board. No member of the Supervisory Board acts in an executive capacity for BENTELER International AG. In fiscal year 2022, the Supervisory Board was composed as follows:

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#### Supervisory Board of BENTELER International AG

**Henri Steinmetz**, Aspelt, Luxembourg, Chairman (former Chairman of the Management Board of Ceramtec Group, Plochingen, Germany)

**Dr. Georg Pachta-Reyhofen**, Vienna, Austria, Vice Chairman (former Chairman of the Executive Board of MAN SE, Munich, Germany)

**Hubertus Benteler**, Salzburg, Austria (former CEO of BENTELER International AG, Salzburg, Austria)

**Prof. Dr. Bernd Gottschalk**, Esslingen a. N., Germany (Managing Partner of AutoValue GmbH, Frankfurt, Germany)

**Joachim Limberg**, Düsseldorf, Germany (former Chairman of the Executive Board of thyssenkrupp Materials Services, Essen, Germany)

**Frederik Vaubel**, Düsseldorf, Germany (Managing Director of H+S Automotive GmbH, Ittlingen, Germany)

**Helmut Wieser**, Anif, Austria (former Chairman of the Board of AMAG Austria Metall AG, Braunau a. I., Austria)

**Dr. Lorenz Zwingmann**, Trittau, Germany (former member of the Executive Board of Marquard & Bahls AG, Hamburg, Germany)

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The two shareholders of BENTELER International AG each appoint one member to the Supervisory Board for an unlimited term. In addition, six further members of the Supervisory Board are elected by the Annual General Meeting for a fixed term. The Annual General Meeting also resolves the fixed compensation of all Supervisory Board members on an annual basis. There are no variable compensation or retirement benefits beyond this.

The shareholders create competence profiles for the members of the Supervisory Board and adapt them to the position to be filled. On this basis, a specialized personnel consultancy creates candidate proposals for the shareholders whenever a position needs to be (re)filled.

The Executive Board informs the Supervisory Board about the market and business situation and about special issues at regular quarterly meetings. In addition, the Supervisory Board receives information on current topics on a monthly basis.

The members of the Supervisory Board meet in plenary session and have also established an Audit Committee and a Personnel Committee on a permanent basis. Among other things, the Audit Committee monitors the individual and consolidated financial statements, the auditing and internal control system as well as the sustainability reporting of the group, the implementation status of sustainability activities and dealing with the German Supply Chain Due Diligence Act. The Personnel Committee deals, among other things, with the fixed and variable compensation of the Executive Board. In 2022, a financing committee was also formed to deal with the preparation and implementation of the group's refinancing.

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Members of the Management Board are appointed as follows: After the Supervisory Board has drawn up competence profiles, the Personnel Committee screens the candidates. This is followed by the presentation of the selected candidates to the entire Supervisory Board. The appointment is made in accordance with Austrian stock corporation law.

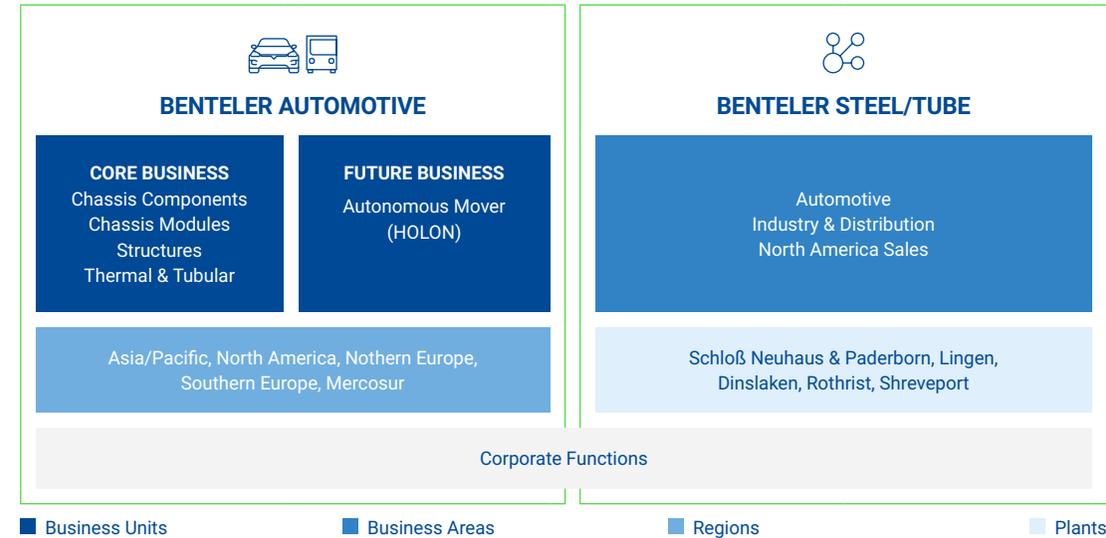
The Automotive and Steel/Tube Divisions are organized under the management of BENTELER International AG.

### BENTELER Automotive

Our BENTELER Automotive division is a preferred development partner for the world’s leading automotive manufacturers. Around 19,000 employees in around 70 plants and over 20 countries develop customized solutions. The core business is divided into three business units, each of which is responsible for business development, products, processes and strategic projects. With regional organizational units, the division is always close to the customer and develops solutions in line with local market requirements.

In 2022, we transferred the previous e-mobility division to the newly founded subsidiary HOLON GmbH. HOLON specializes in the development of autonomous movers (→ see [Products chapter, page 28](#)). The new organizational structure enables us to better implement new business models through partnerships and joint ventures. We have integrated further products and businesses from the former e-mobility business unit into the entire Automotive Division. In this way, we are driving forward the topic of electromobility in a holistic manner.

### THE STRUCTURE OF THE BENTELER GROUP



In 2022, the Automotive Division was headed by:

- Ralf Göttel, CEO
- Dr. Emerson Galina, COO
- Jaroslav Leibl, CFO
- Frank Jehle, Co-CEO (until August 31, 2022)

### BENTELER Steel/Tube

In the BENTELER Steel/Tube Division, around 3,000 employees in six plants and three countries produce highest quality seamless and welded steel tubes.

Customers from the automotive, energy and industrial sectors benefit from the division’s services. BENTELER Steel/Tube products are used throughout the customer’s value chain, from material development to customized tube solutions.

In 2022, the BENTELER Steel/Tube division was managed by:

- Christian Wiethüchter, CEO
- Dr. Tobias Braun, CFO
- Thomas Michels, COO (since October 1, 2022)

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# HIGHLIGHTS 2022

## 01 Sustainable mobility for all: The autonomous HOLON mover

BENTELER underlined its ambitions in the global autonomous mobility business by founding HOLON in 2022. The legally independent subsidiary is focused on the production and deployment of fully electric, autonomous and inclusive movers.

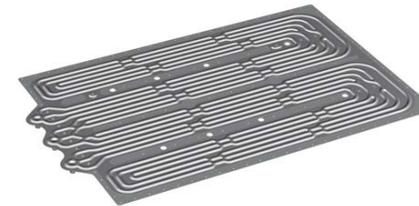


## 04 Responsible use of resources: Water and waste volumes significantly reduced

The conservation of resources is becoming even more important in manufacturing: In 2022, we succeeded, amongst other things, in significantly reducing waste volumes in our two divisions. We also made similar progress on the issue of water: The 17 sites located in areas of high or very high water stress have significantly reduced their specific water withdrawals.

## 02 Sustainable products: Portfolio supports transformation to lower-emission mobility

Our newly named Thermal & Tubular business unit is now focusing more strongly on components for electric vehicles. This shows once again that we're not clinging to the old, but shaping the future in making mobility safer and more sustainable.



## 03 Award-winning commitment: Sustainability efforts rewarded

BENTELER Steel/Tube was awarded the silver medal by EcoVadis, one of the world's largest providers of sustainability ratings. This puts the division in the top 25% of companies in the "Manufacture of Pig Iron and Steel" category. BENTELER Automotive achieved its best result to date in the "Carbon Disclosure Project" (CDP) with a rating of "B" in 2022.



## 05 Clean energy: Production sites rely on green electricity

Our Spanish automotive plants already obtain almost all of their electricity from green sources. We are also installing photo-voltaic systems at more and more plant locations. Preparations are also underway to conclude power purchase agreements (PPAs). This is how we are reducing our emissions.

## 06 CO<sub>2</sub>-reduced primary material: Securing green steel and aluminum

We are also driving decarbonization in our upstream supply chain. As a result, a contract for green aluminum was established in 2022. Partnerships are being prepared for the procurement of green steel in order to be able to offer our customers products made from emission-reduced steel. To do this, we also use green steel from our own electric steel mill in Lingen.

# SUSTAINABILITY STRATEGY

The BENTELER Group has more than 145 years of experience. We have continuously developed our business model. The company has successfully transformed itself several times, supported and driven by our corporate values of courage, ambition and respect. In 2018, we initiated another change process at an early stage, the largest in the company's history. With it, we are repositioning ourselves for the transformation of the automotive industry, for important megatrends such as electromobility, changing mobility behavior in society, digitalization and connectivity, and above all for the pressing global concerns of our time: Climate change and resource consumption.

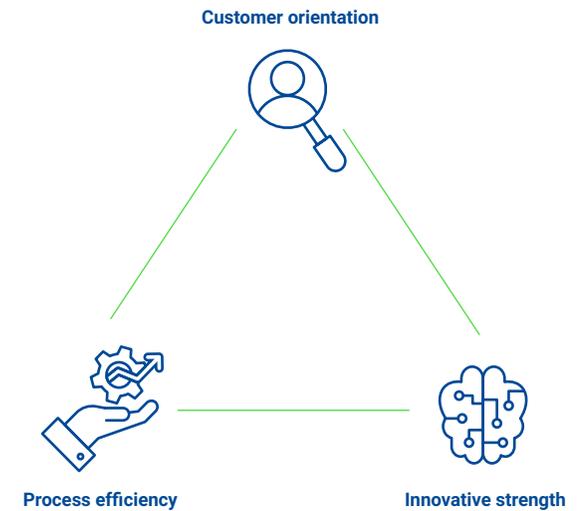
## Sustainability approach and goals

Finding solutions has been BENTELER's aspiration since 1876. This has not changed, even in the face of global challenges, because we know that we can rely on our competence and flexibility. We have learned to deal with volatile markets and changing expectations. Our customers know this too – many have been placing their trust in us for years. Because BENTELER stands for a long tradition that was only made possible by forward-looking and responsible action. That's why we continue to follow our conviction and our understanding of corporate responsibility,

namely the claim to operate sustainably in order to be successful in the future as well. And today, that means conserving resources and taking action to combat climate change.

To achieve this aspiration, we are linking aspects of sustainability to our business activities in an even more targeted manner. To this end, we have integrated the core elements of our Corporate Strategy BENTELER 25+ into the sustainability context. Process efficiency, innovative strength and customer orientation are the overarching major topics for all measures taken as part of our sustainability

### STRATEGIC FOCUS



strategy and to achieve our sustainability goals. To improve process efficiency, we use our specialist knowledge of manufacturing processes and environmentally friendly technologies. We bundle our innovative strength with diverse projects and cooperations in our international network.

In all of this, we keep our customers' needs in mind, because it's also their sustainability goals that we are helping to achieve with our measures to decarbonize the value chain. We do this to ensure that BENTELER continues to make mobility safe and sustainable in the long term.

### Sustainable development goals as a strategic basis

As a global company, we have linked the BENTELER sustainability strategy with the United Nations Sustainable Development Goals. The Sustainable Development Goals (SDGs) set global consistent benchmarks for sustainable development priorities through 2030. We also derive the priorities for BENTELER from this. Having evaluated the SDGs at sub-goal level, we have identified ten on which our business activities have relevant effects:

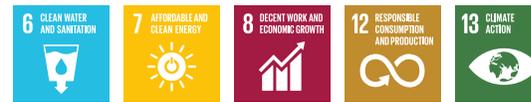
#### RELEVANT SDGS —6



We have prioritized five of these and are implementing strategic measures for them step by step.

- SDG 6: Clean water and sanitation
- SDG 7: Affordable and clean energy
- SDG 8: Decent work and economic growth
- SDG 12: Responsible consumption and production
- SDG 13: Climate action

#### PRIORITIZED SDGS —7



Sustainability is the key to a successful long-term business model. That's why we consistently implement our holistic sustainability and climate strategy.

— Stefan Henkelmann, Leader Sustainability Office, BENTELER Business Services GmbH

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## BENTELER Sustainability Targets at a glance

We focus primarily on climate protection (SDG 13) on which the processes in our industry, which are often energy-intensive, have the greatest impact. We have set ourselves ambitious targets for this. Our central project is the decarbonization of the

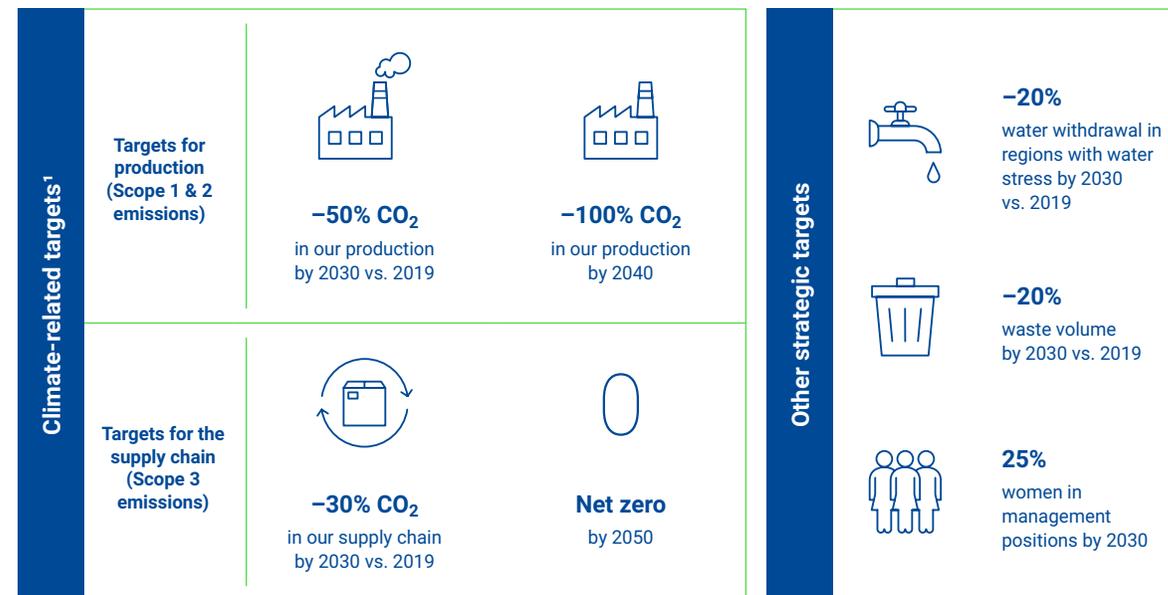
company. By 2030, we want to halve our production-related absolute Scope 1 and 2 GHG emissions compared to 2019. We aim to be climate-neutral in our production by 2040. With regard to the supply chain, our goal, also by 2030, is to reduce absolute Scope 3 GHG emissions by 30% compared to 2019. We aim to achieve net zero emissions across the company by 2050.

We have additional environmental goals in the areas of water and waste (SDG 6 and 12). By 2030, we aim to reduce absolute water withdrawals at sites in regions of high and very high water stress by 20% from the 2019 baseline. We also aim to reduce our waste volume by 20% during this period.

In addition to our environmental and climate targets, the advancement of women is a major priority in our sustainability strategy. By 2030, we aim to achieve a 25% share of women in management positions in our company (SDG 8).

With the newly defined group-wide ESG targets, BENTELER is aligning its previous sustainability commitment in a more focused way. In formulating current and future goals, BENTELER incorporates the expectations of its stakeholders to the best possible extent and takes into account regulatory requirements and developments in the financial market, such as the EU taxonomy, the Task Force on Climate-related Financial Disclosures (TCFD) and the Corporate Sustainability Reporting Directive (CSRD). Due to the extensive developments, one focus of our activities in this area continues to be the regular analysis of regulatory requirements and the continuous review of our sustainability targets in order to further expand the sustainability strategy accordingly.

### BENTELER SUSTAINABILITY TARGETS



<sup>1</sup> BENTELER Steel/Tube plans to achieve group targets early. (→ see Environment chapter, page 46)

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## Science-based climate targets

The BENTELER Group has set itself climate goals in order to act in accordance with the Paris Climate Agreement. After the methodology and emission figures had been assessed and confirmed in advance by external auditors, they were also validated by the Science Based Target Initiative (SBTi). Our aim is not only to reduce our emissions, but also to ensure that our contribution to climate protection is effective and substantial, which is why we also rely on scientific validation.

### Decarbonization strategy: Continually reduce CO<sub>2</sub>

To achieve its climate targets, BENTELER has defined a clear decarbonization strategy. This includes an action plan for climate change that keeps us on our 1.5°C climate path. For the reduction of Scope 1 and Scope 2 emissions in our production, we have defined three main levers (energy efficiency, green electricity, fossil fuel substitution) to reduce our carbon footprint.

The first lever is to continuously improve our energy efficiency to reduce our energy consumption. To take additional energy efficiency measures, we have introduced a special ecological investment budget to finance investments in energy efficiency measures. ([→ see Environment chapter, page 43](#))

With the second lever, we are reducing our carbon footprint by continuously expanding the share of renewable electricity in our production. We achieve this through self-generation and the purchase of electricity from renewable energy sources at some of our sites.

Our third major lever is the substitution of fossil fuels such as natural gas in our production. We are therefore looking into alternative renewable energies such as green hydrogen or green electricity in order to use them for energy-intensive heating processes in our production.

When reducing scope 3 emissions in our supply chain, we focus on the goods and services purchased upstream. In addition, we consider the downstream

emissions from the use phase of our products, as these account for a significant proportion of the carbon footprint of our products. Upstream in the supply chain, we require our suppliers to meet our net zero and Scope 3 emissions targets. In addition, we are entering into strategic partnerships with our steel and aluminum suppliers to ensure environmentally friendly materials for anticipated future demand and to build a low-carbon product portfolio. To reduce downstream emissions in the use phase, we are focusing our product portfolio on innovative solutions for electric vehicles. This will enable us to increase the share of products for electric vehicles and gradually reduce downstream emissions.

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## Effectively organized: Division into work packages and governance by the Sustainability Office

For the practical implementation of the decarbonization strategy in the respective departments, we have defined responsibilities and formulated measures and road-maps in the form of work packages. Our six work packages cover environment, energy, manufacturing, supplier involvement, Green Tubes, and governance & reporting (→ see Fig. 9). Management of the measures defined in the work packages is the joint responsibility of executives from both divisions (Automotive and Steel/Tube). We check the target status and implementation with regular analyses during the year and use the evaluations to determine the required optimization potential. Questions of resource allocation or possible implementation conflicts are also among the topics that are regularly addressed as part of the goal monitoring process. Sustainability performance is reported directly to the Executive Board on a quarterly basis in steering committee meetings.

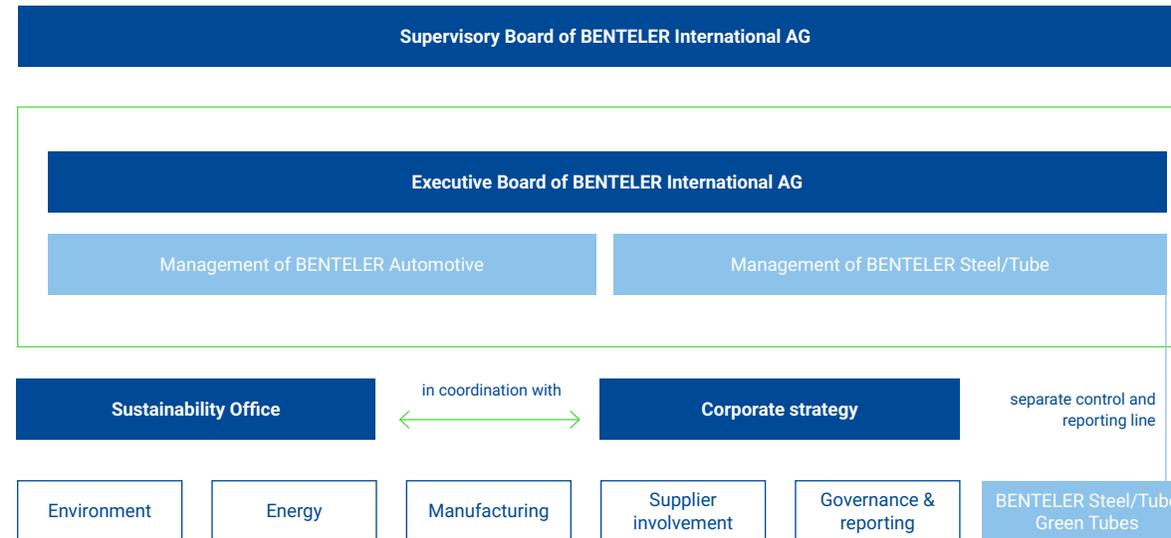
In 2022, the BENTELER Group set up a Sustainability Office with several sustainability experts to support the measures required to implement the sustainability targets, to communicate regularly with the departments, and to ensure that all those responsible receive the support they need to implement the measures. The Sustainability Office reports directly to the Executive Board (→ see Fig. 10).

### SUSTAINABILITY OFFICE WORK PACKAGES

<p><b>Environment</b></p>  <ul style="list-style-type: none"> <li>– Creating transparency in terms of CO<sub>2</sub> emissions and energy consumption</li> <li>– Measures to improve performance in the areas of water, waste and biodiversity</li> <li>– Further development of group-wide reporting of environmental indicators (energy, CO<sub>2</sub>, water, waste)</li> </ul>	<p><b>Manufacturing</b></p>  <ul style="list-style-type: none"> <li>– Reduction of Scope 1 emissions based on defined road-map for fossil fuel substitution</li> <li>– 2 elements: Electrification of processes and use of alternative fuels (e.g. green hydrogen).</li> <li>– Increasing the transparency of energy consumption in production through the expansion of the measurement infrastructure at BENTELER</li> </ul>
<p><b>Energy</b></p>  <ul style="list-style-type: none"> <li>– Reduction of Scope 2 emissions based on defined road-map for green electricity</li> <li>– 3 elements: Power Purchase Agreements, own generation and certificates of origin</li> </ul>	<p><b>Supplier involvement</b></p>  <ul style="list-style-type: none"> <li>– Reduction of Scope 3 emissions (procurement of green materials)</li> <li>– Responsible procurement: Upholding human rights and due diligence in the supply chain</li> </ul>
<p><b>Governance &amp; reporting</b></p>  <ul style="list-style-type: none"> <li>– Provide a governance model and processes for implementing and communicating sustainability activities.</li> <li>– Analysis and implementation of new reporting obligations</li> <li>– Compliance with human rights</li> <li>– Promoting diversity</li> <li>– Creation of good working conditions</li> </ul>	<p><b>Green Tubes</b></p>  <ul style="list-style-type: none"> <li>– Reduction of the carbon footprint in tube manufacturing through measures in production and procurement</li> <li>– Certified calculation of the carbon footprint at product level and marketing of the green product portfolio</li> </ul>

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SUSTAINABILITY ORGANIZATION



**Stakeholders and dialog**

To understand the needs of our stakeholders and continuously improve our performance, we maintain an ongoing dialog. Our goal is to shape the future of the BENTELER Group together with all stakeholders. The group-wide communication strategy is updated annually. It defines target groups, topics and dialog formats.

The following stakeholder groups are of particular importance to BENTELER:

- Customers
- Employees
- Trade unions/works councils
- Potential new employees
- Suppliers
- Press/media
- Local communities at our sites
- Financing partners
- Capital investors

With regard to our employees, our goal is to provide transparent information, to provide orientation in a rapidly changing market environment and to strengthen the bond with the company. For example, the Executive Board addresses all employees directly in a quarterly video message with a "Business Update" to talk about the current market and company situation, among other things. This format was continued in 2022, with the message broadcast on the intranet, shown on screens in the plants, and shared by managers.

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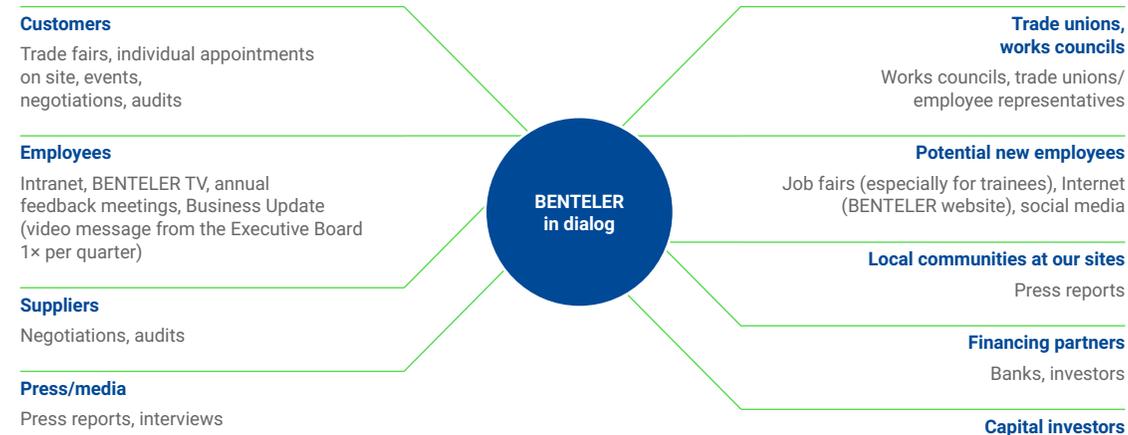
Roadshows by the Management Board of BENTELER Automotive (one visit to one plant per region) were resumed except in Asia in 2022. Every employee is actively encouraged to provide feedback to supervisors, the corporate communications team or directly to the Executive Board.

At our sites, we seek to engage with local communities on regional economic development or other current issues relevant to the local community or to BENTELER. In addition to publishing press releases, the departments communicate with stakeholders through various committees, associations, and expert groups.

The Sustainability Office also reports on the targets, measures and current status of sustainability efforts. A separate section has been created for this purpose on the BENTELER intranet and on the BENTELER website.



STAKEHOLDER GROUPS AND FORMS OF DIALOG



We focus on transparency in the area of sustainability. That is why we maintain a close dialog with our stakeholders and actively inform them about our goals, measures and achievements.

Birgit Held, Vice President Corporate Communications/Marketing, BENTELER Group

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In addition to direct dialog with various stakeholders, BENTELER supports initiatives such as the International Labor Organization (ILO) and the Ethical Trading Initiative. BENTELER is also involved in associations and interest groups.

#### Germany

- Bundesvereinigung für Logistik
- Deutsche Gesellschaft für Personalführung
- Deutsches Institut für Compliance
- It's OWL Clustermanagement GmbH
- Nachhaltigkeitsabkommen Thüringen
- Verband der Automobilindustrie
- Verband deutscher Maschinen und Anlagenbau
- Zentrum für Arbeitsmedizin und Arbeitssicherheit
- Wirtschaftsvereinigung Stahl (WVS)
- FEhS Institut für Baustoffforschung

#### USA

- American Society of Metals
- American Society for Quality
- Automotive Industry Action Group
- German American Chamber of Commerce
- National Association of Foreign Trade Zones
- Society for Human Resource Management
- Society of Automotive Engineers

#### Brazil

- American Chamber of Commerce for Brazil

#### China

- German Chamber of Commerce in China

#### South Africa

- Automotive Industry Development Centre

## Materiality

### Material topics

Our last materiality analysis was conducted in 2021 to assess which topics are relevant for our sustainability reporting. The basis for the list of potentially relevant topics included an industry analysis, the application of the SDGs, the GRI standards, and regulatory developments such as the EU taxonomy. In a second step, the topics were evaluated by a panel of experts representing different stakeholder perspectives and the key expectations for BENTELER were discussed and documented. The panel included representatives from politics and regulation, the media, trade unions and works councils, and customers. Using an online survey, internal stakeholders assessed the impact of BENTELER's business activities on the environment, the economy and society. The results of the discussion round and the online survey were then presented to the Sustainability Steering Committee in a workshop and finally confirmed by the Executive Board.

This resulted in 13 material topics that will serve as the basis for external reporting until the next materiality analysis. A re-examination of the topics in 2022 in preparation for the upcoming 2023 analysis revealed a minor need to adjust terminology for greater understanding in the field.

### Material topics 2022:

- Responsible corporate governance
- Compliance
- Product quality and safety
- Sustainable products
- Supply chain
- Energy
- Emissions
- Environmentally friendly manufacturing
- Employee relations
- Occupational safety and health protection
- Education and training
- Diversity and equal opportunities
- Social responsibility

### Outlook: Materiality analysis 2023

In the year under review, we made initial preparations for the next materiality analysis in 2023. The central consideration for the new analysis is the implementation of dual materiality. We will therefore analyze how much influence BENTELER has on its environment and the opportunities and risks that result from this. To this end, we have redefined both the selection of our stakeholders and the process for the analysis. The first stakeholder survey is planned for the second quarter of 2023. We will report on details of this and the results found in the Sustainability Report 2023.

# GOVERNANCE

Those who act entrepreneurially take risks within an appropriate and controllable framework in order to take advantage of opportunities. As a global company, we are exposed to numerous risks, both existing and new. To achieve sustainable economic success and reach our strategic goals, we have to manage these risks successfully.

## Basics of risk management

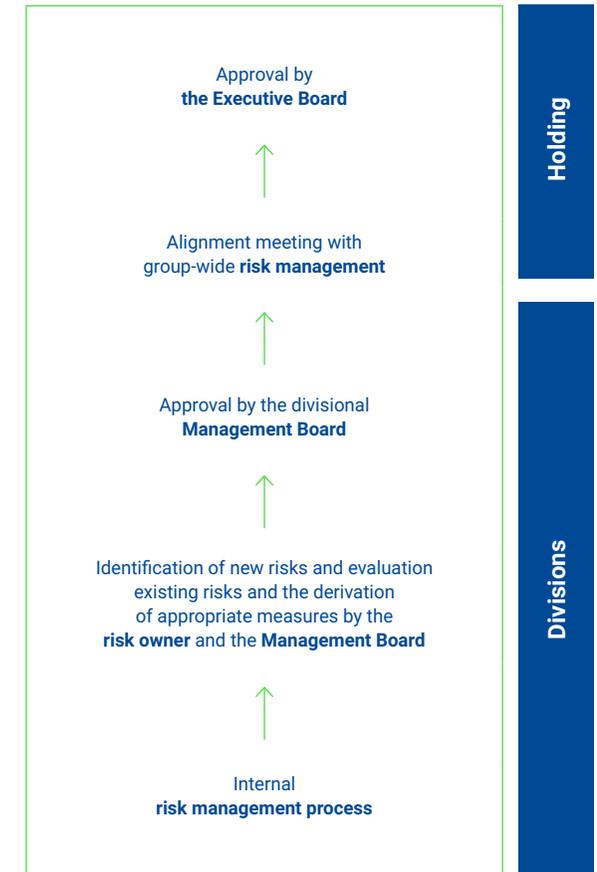
The Executive Board is responsible for risk management as an essential component of responsible corporate governance. It reports regularly to the Audit Committee and the Supervisory Board on the group's overall risk situation.

BENTELER International AG controls the divisions based on targets. For this purpose, a comprehensive management information system maps all relevant key figures according to "actual", "forecast" and "plan". The divisions report to the holding company on a monthly basis on negative and positive deviations and on related measures. Divisional reporting shows opportunities and risks with regard to the planned sales and results.

In addition, the Executive Board receives an aggregated risk status report every six months. It's based on the analysis of risks potentially jeopardizing the company's existence. Their status is presented in a cascading reporting system using defined indicators for probability of occurrence and financial loss potential. Manager are appointed to take specific responsibility for each risk and the associated measures.

This systematic risk management process helps the Executive Board identify existential risks at an early stage and to initiate suitable measures to reduce risks and avert or avoid dangers. To the extent necessary and proportionate having regard to current events, risks can also be reported outside this process to the Executive Board at any time.

## RISK MANAGEMENT OF GOING-CONCERN RISKS —12



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**Internal control system and internal audit**

We also have a company-wide internal control system (ICS), which includes organizational security measures, procedural rules and system audits. In addition, internal auditing regularly examines all areas of the company and checks compliance with guidelines, the functionality of risk management and the correctness and efficiency of business processes and reporting.

**Externalization of risk**

We transfer certain risks to insurance companies through an internal service provider. In particular, claims resulting from any recalls or liability issues are covered, as are property damage and losses caused by disruption to operations. In turn, risks that are only covered to a limited extent are reinsured for third-party insurance companies by BENTELER Reinsurance.

**Consideration of the consequences of climate change**

Climate change can affect our group in a number of ways. On the one hand there are direct influences, for example in the form of extreme weather events or other location-related changes. In addition, climate change also affects aspects such as energy costs and changes the demand behavior of end customers. The Executive Board bears overall responsibility for climate-related issues. The departments regularly inform it about this. They take into account physical and transitory risks as a result of advancing climate change in addition to other risk categories customary in the industry.

Extreme weather events can affect delivery reliability. We are therefore working with our suppliers to increase their resilience to such events. We have established technical and organizational countermeasures and emergency procedures at our sites. In addition, we have trained our employees on how to protect people inside a BENTELER plant if necessary and to avoid damage to systems and equipment as far as possible.

With regard to our portfolio, we are working on solutions that reduce the CO<sub>2</sub> footprint. To this end, we analyze, among other things, how the CO<sub>2</sub> footprint of our products develops in different transitory scenarios and which measures need to be taken.

In 2022, a new process was established to identify ESG-related opportunities and risks. In order to identify these, several workshops were held according to the top-down principle, in which various ESG topics were analyzed. In addition, risks are recorded by the individual plants according to the bottom-up principle. This is followed by an assessment of the opportunities and risks. This is dependent on the topics being included in risk management. For the first time, this process was carried out in the first half of 2023.

**Cybersecurity**

Cyber attacks on companies are becoming more frequent and more professional. The BENTELER Group is therefore exposed to significant risks with regard to the availability of data and systems as well as confidentiality and integrity. We have already implemented numerous measures to reduce these risks, including a global and holistic state-of-the-art

IT security platform, an effective IT security organization, a redundant design of critical systems and the targeted use of professional cloud solutions.

In the year under review, we pushed ahead with additional measures to meet the increasing cyber risk situation. These include the further development of the Security Incident Event Management (SIEM) technology in conjunction with a Security Operation Center (SOC). Other key measures include mandatory vulnerability scans of the networks at all plants.

Other measures introduced ensure data security and integrity. For example, we have further developed our awareness campaign. It includes training for employees, mandatory e-learning and phishing simulations. We have also introduced identity management systems and an information security management system based on the ISO 27001 standard. In 2023, we will replace the certification of our information security management system compliant with ISO-27001 with a certification compliant with the de-facto information security industry standard VDA-ISA/TISAX. To implement our customers' information security requirements globally, all sites will be certified in accordance with VDA-ISA/TISAX over the next few years. Currently, 31 sites are audited according to TISAX. To coordinate all these technical and organizational measures and to ensure the upcoming TISAX certifications, the Executive Board launched the BeSecure4all information security program and equipped it with the necessary resources and competencies. The overriding goal is to continuously increase the maturity of the cybersecurity management system at BENTELER.

In addition to our measures to enhance IT security, we have taken out cybersecurity insurance to reduce the financial impact of the remaining residual risks.

**Compliance: The central component of our business**

We conduct our business responsibly and in compliance with the laws of the countries in which we operate. We set our own ethical standards that go beyond legal requirements. These are set out primarily in our corporate values and in the Code of Conduct. Anyone who violates these principles must, in addition to possible legal sanctions, expect disciplinary consequences. We pursue a zero-tolerance approach with regard to corruption (bribery and graft).

Our Code of Conduct covers the following topics:

- Social responsibility and legal compliance
- Interaction with employees
- Competition and antitrust law
- Corruption, gifts and benefits
- International trade
- Environmental protection
- Data protection
- Relationships with business partners

All employees are responsible for acting in accordance with these principles. Our managers have a role model function. Responsibility for the Compliance department is assigned to the CEO. The holding function of Compliance is responsible for the

strategic orientation and operational development of the compliance organization in the BENTELER Group. It is headed by the Chief Compliance Officer (CCO). Corresponding officers have been appointed at country and regional level who report to the Divisional Compliance Officers (DCOs) on a monthly basis. Management at divisional level is regularly informed by the DCOs about compliance issues. Written reports are sent to the CCO and the division CEOs every six months. In addition, there is monthly coordination between the CCO and the global compliance team. Plus, the CCO reports monthly to the CEO and bi-monthly to the full Board of Directors.

The compliance organization deals primarily with compliance with antitrust and competition law, anti-corruption law and export control regulations. To this end, it provides information, develops regulations, and conducts consultations, training, inspections, and internal investigations. As part of the group-wide compliance program, it sets internationally binding minimum standards for compliant behavior. Details are set out in compliance guidelines, instructions for action and other requirements. In addition, the dual control principle applies throughout the group.

**BENTELER COMPLIANCE PROGRAM**

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**1. Prevention**

Prevention of compliance violations by means of guidelines, trainings (classroom training, e-learning) and communication (leaflets, checklists, newsletters, compliance newsletter) and implementation of risk surveys.



**2. Detection**

Compliance checks (global standard and special checks by internal auditors in collaboration with the compliance organization), compliance risk assessments and investigations (monitoring of cases worldwide)



**3. Reaction**

Pursuit of infringements, global case tracking and, where applicable, optimization of existing systems

The contents of the Compliance Management System are continuously reviewed and updated. The group Anti-Corruption and Whistleblower policies were updated regularly and the revised versions came into effect in 2022. In 2022, risk assessments on antitrust and competition law, and export controls were also carried out.

**Reporting of violations**

Anyone who becomes aware of possible compliance violations can communicate this in various ways. As a supplement to direct contact with the compliance officer (in person, by telephone, email or post), the B-AWARE digital whistleblower system offers employees and third parties an additional method of submitting reports to the established email address [compliance@benteler.com](mailto:compliance@benteler.com). In addition to the compliance officers, contact persons were nominated in all European legal entities with more than 50 employees to receive and investigate tips in person.

The whistleblower system is used exclusively to receive and process information about actual or alleged violations. It is not available for general complaints or for product and warranty inquiries. We track leads in the categories:

- Data protection
- Discrimination, harassment, bullying and other labor law issues
- Export control, embargoes, sanctions and customs regulations
- Health and safety at work
- Antitrust and competition law
- Corruption and bribery, conflicts of interest, gifts and invitations

- Suppliers, Supplier Code of Conduct, human rights violations in the supply chain
- Quality and production safety
- Accounting, bookkeeping, financial reporting and other financial and tax topics
- Environmental protection
- Other (e.g. theft, misuse of company property, sabotage, etc.)

In internal newsletters and on plant notices, we address how to avoid or deal with critical concerns in advance. In addition, a whistleblower policy has been published internally and externally. It describes how we process tips:

- Confirmation of receipt is sent within seven days
- A plausibility check is performed
- The result of the plausibility check is documented in B-AWARE
- If the complaint seems plausible, an investigation follows
- The result of the examination is also documented in B-AWARE
- Feedback is given to the person reporting the incident – if necessary in the form of a progress report – no later than three months after the submission

Misconduct that has been detected is sometimes communicated internally for training purposes as “compliance case information.” We regularly conduct employee surveys to continuously improve the whistleblower process.

**E-learning and classroom training on compliance focus topics**

E-learning courses are offered on a rolling basis and compliance with the training deadlines is monitored by the Learning Management System. New employees must have completed assigned training within six months of being hired. Refresher training is provided at regular intervals. Regular and repeated mandatory training for all employees is essential for compliance. That’s why we record the fulfillment rate, among other things.

In 2022, 8,280 training courses on export control, anti-corruption, and antitrust and competition law were successfully completed via e-learning. The overall completion rate for these trainings in 2022 was 96.5%.

In addition, training courses on various topics were held in the form of classroom training or web meetings:

- General training on the three compliance focal points of anti-corruption, antitrust and competition law, export control: 314
- Antitrust and competition law: 25
- Export control: 253
- Anti-corruption: 23
- Conflicts of interest: 43
- Accesses to the “Change to Anti-Corruption Policy, Version 2.0” learning nugget: 1,130
- Accesses to the “Conflicts of Interest” learning nugget: 1,269



**Integrity and responsibility are the basis of innovation and success.**

— Constanze Leidenfrost, Chief Compliance Officer, BENTELER Group

**Preventing conflicts of interest**

Our rules on avoiding conflicts of interest are set out in the group's Anti-Corruption Policy. On-boarding sessions for new employees and training sessions on the Code of Conduct discuss how conflicts of interest can be avoided or disclosed. When employees disclose such situations, they are managed by the Compliance department. The subject of conflicts of interest is also a regular component of internal training and training materials.

When preparing the annual financial statements, potential conflicts of interest are identified by the Executive Board and the Supervisory Board and checked by the auditor. In its procedural rules, the Supervisory Board has adopted its own rules for resolving conflicts of interest and informs the Annual General Meeting of any cases that arise and how they have been dealt with.

**Tax**

The department responsible for taxes reports directly to the Executive Board. A specialized tax organization is assigned to the Chief Financial Officer. The Head of Corporate Taxes for the BENTELER Group manages and monitors the implementation of tax principles, tax risk management and the internal control system for tax. National and global responsibilities exist for certain tax issues such as transfer prices or sales taxes. Internal contacts for local tax issues have been defined in all national companies, and tax departments have been set up in countries with more complex economic activities. When local employees identify tax risks, they must be discussed with the group tax department if they exceed a certain threshold.

Our principles of responsible corporate governance also apply to taxes. We reject artificial tax arrangements and profit shifting. We are committed to a careful mapping of economic reality for taxation purposes and to tax allocation across jurisdictions according to actual value added.

Processes for ensuring correct taxation are defined in guidelines and training courses. These processes are regularly communicated, monitored and improved within the Group.



**WE SUPPORT OUR CUSTOMERS  
IN ACHIEVING THEIR CLIMATE GOALS**

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PRODUCTS

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# PRODUCTS

The BENTELER Group supports its customers in reconciling climate and resource protection with exacting quality requirements. To achieve sustainable value creation, we consider the entire life cycle of the products that are most important to our customers – from the purchase and use of raw materials, through development, production and use, to disposal and recycling. Our goal is to promote environmentally conscious thinking and behavior along the entire value chain.



## Future-oriented portfolio

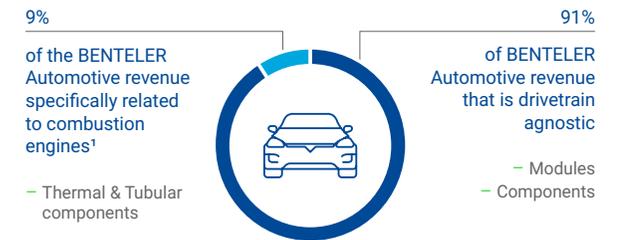
As an innovative partner, the BENTELER Group develops, produces and distributes solutions worldwide for the automotive, energy, and mechanical engineering sectors. The portfolio encompasses products, systems, and services that are offered worldwide.

Our core technical competencies include tube production, forming, joining, extrusion, and assembly of materials such as steel and aluminum, as well as logistics. The portfolio extends from tubes, for example for airbags and axles, to components and modules for chassis, body, engine and exhaust applications through to future-oriented modular technologies such as system solutions for electromobility.

## Automotive Division

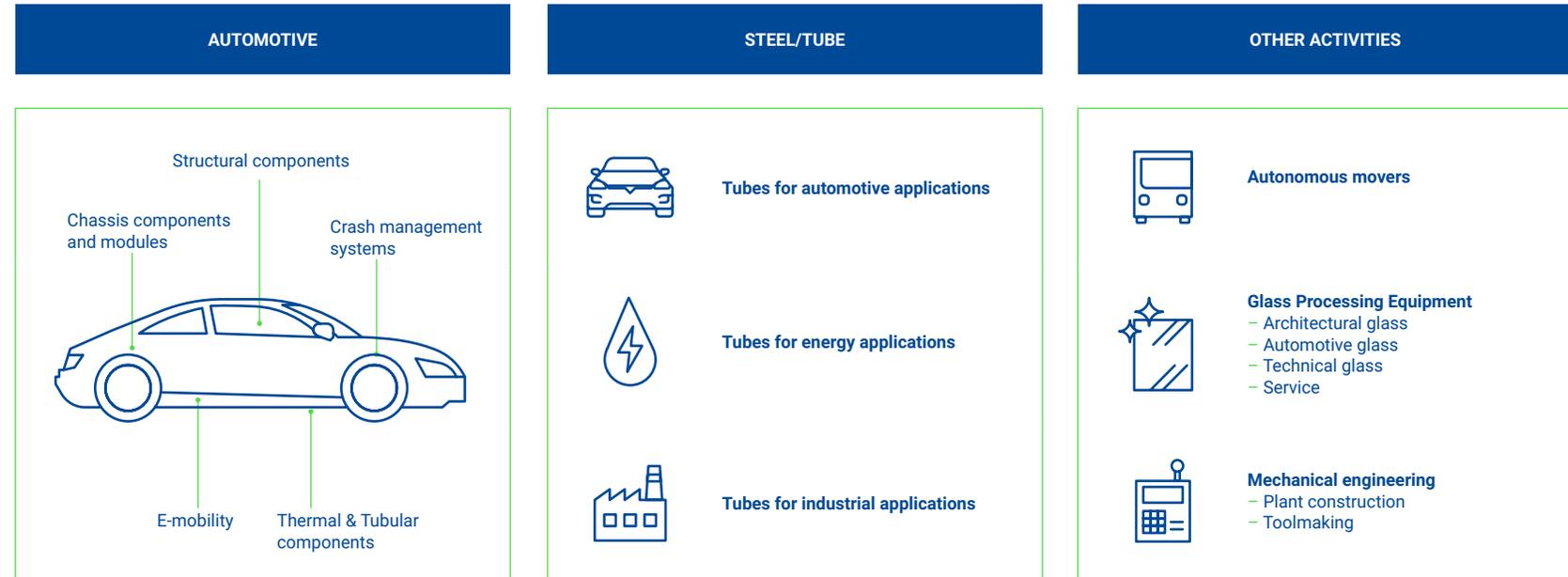
BENTELER is moving at the same fast pace as the ongoing transformation taking place in the automotive industry. For climate protection, we look for solutions to reduce emissions along the entire value chain. Megatrends that will have a long-term impact on the industry and thus also on BENTELER include digitalization, electromobility and, in general, changes in mobility-related behavior in society. In addition to these trends, BENTELER takes into account customer requirements for the supply chain, developments related to the circular economy, and electrification when designing its product portfolio.

## BENTELER AUTOMOTIVE PRODUCT PORTFOLIO — 14



<sup>1</sup> Excluding directed buy materials

PORTFOLIO AT A GLANCE



With the ongoing electrification of the portfolio, BENTELER is ready for a fully electric future and the upcoming ban in the EU on new vehicle registrations with combustion engines. 91% of automotive sales are already generated with drivetrain-agnostic products. The remaining share of products for internal combustion engines is being continuously reduced. Since 2014, our portfolio has included a comprehensive range of products specifically for electric vehicles. These include battery trays and e-rotor shafts in the components area and e-axles in

the modules area. This is also reflected in the newly named "Thermal & Tubular" business unit, which is focusing increasingly on components for electric vehicles.

**Steel/Tube Division**

The Steel/Tube division specializes in developing individual solutions where the requirements are technologically demanding in terms of tolerances and material properties. With a relatively small proportion of standard products, Steel/Tube offers over 85%

customized and tailor-made products. Sustainability and electric mobility are also of crucial importance here.

**Excellent: CO<sub>2</sub> balance of rotor shafts**

Welding, brazing, tube forming, machining:  
 Thanks to our process know-how and environmentally friendly steel tube production at our own plant, we offer rotor shaft solutions with low material usage and an exemplary CO<sub>2</sub> balance.

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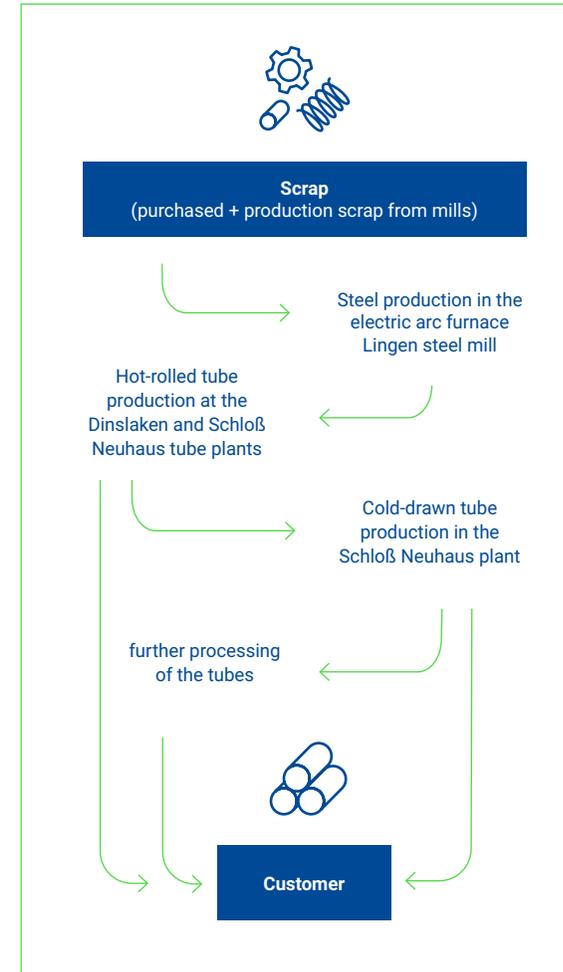
In 2022, e-rotor shafts, among other things, found success in meeting the increasing demand for electric vehicles. Material and weight savings can be achieved by manufacturing with tubes. Rotor shafts based on BENTELER precision steel tubes help extend the range of electric vehicles. They are also safe and robust.

Our customers are increasingly concerned about the carbon footprint of materials in order to achieve their own sustainability goals. As part of the Product Carbon Footprint calculations (PCFs), the phases from material procurement to when a product leaves the BENTELER premises are analyzed (“From Cradle to Gate”). In the summer of 2022, the first product carbon footprints for BENTELER were certified according to ISO 14067. These were for a specific grade of steel manufactured in the Lingen steel mill and for two specific seamless tubes manufactured in the Schloß Neuhaus tube plant. A PCF for a first welded tube (based on purchased strip steel) will be carried out in 2023. We are also looking into the production of welded tubes based on our own reduced-carbon-footprint steel.

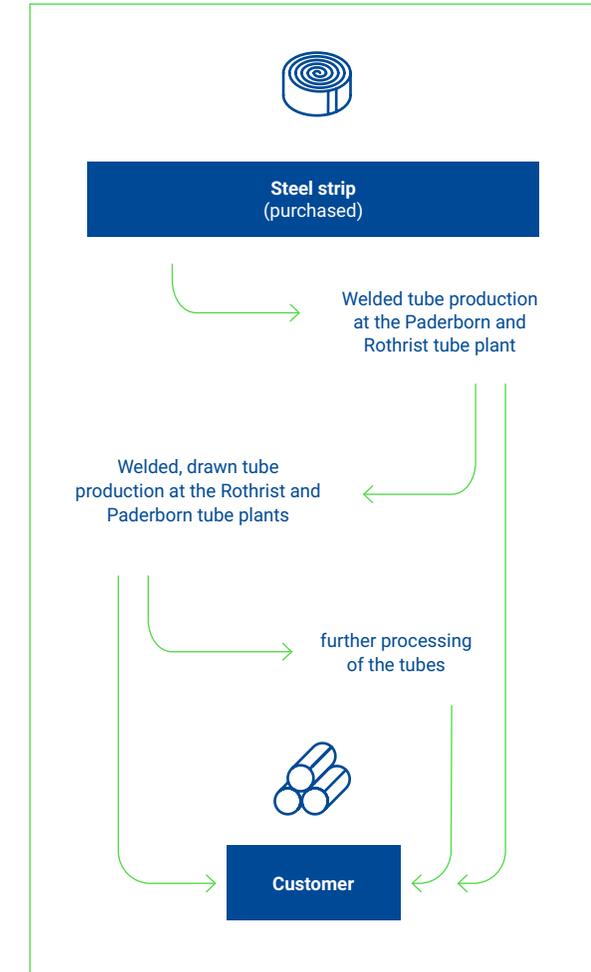
Overall, decarbonization is becoming increasingly important across the entire value chain. As a result, the entire product life cycle and thus also the downstream use phase of products are increasingly coming into focus. In future, BENTELER will therefore also increasingly include emissions forecasted for this phase in its considerations and expand its reporting accordingly (→ see [Environment chapter, page 47](#)).

STEEL/TUBE EUROPE VALUE CHAIN

Seamless tubes



Welded tubes



### Product quality and safety

The highest quality standards apply to all products and components from BENTELER because they are directly relevant to human safety. Safety, highest quality and durability are central characteristics that all BENTELER products have in common. Our quality management ensures that product quality is not compromised and additionally, in the automotive sector, by special product safety officers.

#### Ensuring highest quality

All locations of the Automotive Division and all plants of the Steel/Tube Division that manufacture automotive products are certified in accordance with IATF 16949 and obliged to implement and comply with the process-oriented management system defined in the process governance requirements.

At the start of a customer project, a comprehensive evaluation of potential failures and an analysis of factors influencing failure for the product and the processes are carried out during advance quality planning. As a result, errors and risks are basically detected and avoided at a very early stage of the product's development and creation.

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#### **BENTELER Automotive: Quality is in our hands**

We aspire to produce products of the highest quality. This requires an awareness of and acceptance of responsibility by all employees. That is why there are ten defined quality principles in the Automotive Division. The central motto: Quality is in our hands. Everyone in the company is responsible for this.

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Furthermore, we also carry out quality controls during manufacturing and check production quality constantly. In the event of safety-relevant faults in the product, the responsible product safety officers in the plant are informed in accordance with the process descriptions and included in the definition of measures for fault rectification and future fault prevention. This allows early detection and correction of defects and prevents defective products from reaching the customer.

#### Products for safe mobility

The production of ever larger vehicles also brings with it increasing safety requirements. The Automotive Division addresses this development both indirectly with its hot-forming solutions and expertise with various materials and directly, for example with the production of crash management systems made of steel and aluminum, which ensure compliance with the highest safety standards.

In the Steel/Tube Division, increased safety requirements are met, for example, by BENTELER sleeves for airbag generators. They are extremely resilient and can withstand pressures of several thousand bar. A final part inspection directly integrated into the process sequence ensures that the generator sleeves reliably meet the high safety requirements.

### Reducing vehicle weight

BENTELER has over 44 hot-forming lines worldwide. With this technology, high-strength products can be manufactured using the minimum of material, thereby ensuring high safety with minimal weight. In addition, we can offer design solutions made of high-strength aluminum or steel that reduce weight by up to 30%.

High-strength steel enables a thinner-walled design of tubes. Substituting solid material solutions with tube solutions or designing tube wall thicknesses according to load factors also contributes to a significant reduction in weight – a topic that is on the long-term agenda at BENTELER Steel/Tube where investigations are carried out on an ongoing basis.

#### Life Cycle Assessments (LCA) and certifications

We have analyzed the product life cycle of selected products in the Automotive Division since 2017. These analyses, which are carried out on our main product families, are based on ISO 14040 and ISO 14044. These include products from all business units in the Automotive Division. In the case of LCAs, upstream processes such as the manufacture of materials and the influence of production at BENTELER are considered. They focus on the analysis of the impact category Global Warming Potential. Other impact categories, such as water consumption, have also been analyzed in individual studies. Gradually, we will include other products in the consideration.

## Sustainable products

### Innovations for climate protection

With our products and solutions, we are helping to make the mobility of the future lighter, safer and more sustainable, regardless of the type of drivetrain. In 2022, we invested €67 million in research and development. In this way, we provide the market with innovative solutions for products and systems, materials and processes. To reduce the impact of mobility on the climate, the focus in 2022 was once again on e-mobility, lightweight construction and environmentally friendly solutions for combustion engines.

### Outstanding materials expertise

Sustainable products are also characterized by the selection of the material used. The choice of materials has a decisive influence on weight, costs and the carbon footprint. These features are not only important for vehicles and thus in the Automotive Division. Innovative materials and processes and their successful implementation on the market are also a focus of the Steel/Tube Division. Here, innovation management is working on innovative steel and tube solutions. Relevant trends and developments are anticipated as early as possible and translated into new products for customers.

### Innovation process and further developments

#### Automotive Division Research 2022

- Alternative materials and processes for manufacturing battery trays to reduce costs
- Innovative process for cost-efficient and CO<sub>2</sub>-saving production of cooling plates for battery trays

- Alternative tooling concepts and process integrations for cost reduction
- Substitution of welded joints in structural components by alternative joining methods
- Optimization of welding process when using cast aluminum components
- More complex material cards for simulation to reduce prototyping costs
- Thermally assisted aluminum forming
- Alternative process-integrated heating methods of semi-finished aluminum products to save CO<sub>2</sub>
- Product portfolio analysis for systematic reduction of the carbon footprint
- Research projects in collaboration with customers and suppliers, primarily for pre-competitive know-how on fundamental topics
- Technology screening with regard to selected topics such as mega casting or people movers



Eye-catching and optimally functional: The HOLON mover impresses not only with its asymmetrical design, it is also built to the automotive standards for safety and load capacity applicable to passenger cars.

## Autonomous mobility: New HOLON brand established for the future-oriented autonomous mover segment

### Automotive standards

HOLON manufactures the first autonomous mover built to automotive standards. Autonomous, inclusive, sustainable and safe, the mover is designed for the demanding everyday life of local public transport. With a high level of comfort, the mover can be used in a variety of ways, for example to connect rural and urban areas. Reliable and sustainable, the fully electric HOLON mover travels at a maximum speed of 60 km/h and has a range of around 290 kilometers.

### Inclusive mobility

HOLON wants to make mobility available to everyone. Accordingly, the vehicle offers barrier-free transport for people and goods. The vehicle can be entered and used independently by people with strollers as well as by people with disabilities. With an integrated fully automatic ramp, a dedicated wheelchair position and automatic restraint, the mover sets new standards for barrier-free driving. Infotainment provides an intuitive and easily understood display of information with audiovisual signals and additional markings in Braille.

### Sustainable, of course

The mover is electric, zero emission driving comes as standard. And it offers even more advantages: Over-the-air updates significantly simplify vehicle maintenance and reduce trips to the depot. Fifteen people can fit in the vehicle, ten seated and five standing. The mover could replace 14 out of 15 passenger cars, significantly reducing traffic in cities and saving CO<sub>2</sub> emissions. Thanks to the flexible production concept, different variants of mover can simply be built on the same production line in the future.

Sustainability is taken into account in research and pre-development projects, for example, through lightweight construction and resource conservation. An innovation process exists in the Automotive Division for this that includes the phases of idea management, concept, laboratory and series maturity. For each project phase, firmly defined services have to be provided – based on the system of “readiness levels” (technological, economic, production-related). A “sustainability checklist” is taken into account as early as the ideation phase. This includes topics such as:

- Materials, resources, procurement (purchased parts)
- Production (energy and logistics)
- Product or process utilization
- Recycling

In the last two project phases of the innovation process, complete life cycle assessments are prepared to enable a detailed analysis of specific solutions. These are then optimized and possible negative effects are further reduced.

#### **HYRESIST® tubes for decarbonization**

Hydrogen is an important energy carrier as part of the energy transition. In the long term, the focus is on the use of green hydrogen based on green electricity. Green hydrogen is an opportunity for decarbonization of the industrial sector, especially for energy-intensive sectors such as steel and cement. In this context, the Steel/Tube Division has already created specifications for hot-rolled hydrogen-carrying tubes. We are thus supporting industry in setting up a hydrogen infrastructure. In 2022 we worked on further specifications for cold drawn and welded hydrogen-carrying tubes for industrial applications.

#### **Steel/Tube Division: Focus on lightweight construction**

Lightweight construction is also an important topic for the future for the Steel/Tube Division, in which a great deal of time and effort is invested in research and advance development. In 2022, for example, tubes made from free cutting steels were launched on the market. Tubes made of free cutting steel combine the advantages of free cutting steel in machining with the advantages of a tube. In addition to excellent machinability, they enable higher material utilization. By using a tube instead of steel bars, material savings of up to 50% can be achieved in some cases.

Another example is the development of high-strength steels. High-strength steels contribute to lightweight construction, since comparable loads can be realized with less material, thereby saving weight. In addition, in 2022 we continued to work on increasingly replacing solid material solutions with tube solutions in order to achieve weight reduction. Designing tube wall thicknesses according to load requirements also contributes to weight reduction and was also a focus in the reporting year.

#### **Outlook**

We aim to increase our innovative strength through intensive cooperation with external partners, including universities. The plan is to extend the integrated sustainability assessment of research projects to investment decisions and development projects in the future.

#### **BENTELER SMARTCUT®: seamless free cutting steel tubes**

It's what the machining industry needs: Tubes made from free cutting steel. Free cutting steel has long been used as a solid material, usually in the form of steel bar. What's new is that BENTELER SMARTCUT® combines the advantages of highly machinable free cutting steels with the geometrical advantages of a tube. This optimizes the machining process.

The product line of seamless steel tubes in both hot-rolled and cold-drawn versions offers optimized solutions for various applications. In this way, economical machining can be realized both for smaller quantities and for large-scale series production.

#### **Innovative aluminum and steel products**

Range is a decisive criterion when buying electric vehicles. This often results in the installation of many battery cells in electric vehicles. These batteries add a significant amount of cost and, more importantly, weight. Both proportions are significantly higher compared to vehicles with combustion engines. In addition, the higher weight leads to additional requirements for passive vehicle safety in order to ensure adequate accident protection. In addition to additional electronic components, some of which are now mandatory for new vehicles, this leads to a further increase in costs and weight.

Emphasis is therefore placed on cost-efficient lightweight construction in order to reduce energy consumption, not only in electric vehicles but also in combustion vehicles. At the same time, however, material recyclability is also becoming increasingly important to conserve resources. Aluminum is

suitable here not only because of the lightweight construction possibilities, but also because of its good reusability. The reliable virtual design of the components is important, which is why BENTELER has continued its collaboration with universities to optimize existing material cards. In addition to improvements already achieved, we work closely with our customers to continue to apply the knowledge gained in a targeted manner.

For vehicles in the lower price segment, it makes sense to use less expensive base materials, such as cold-formable, high-strength steels – especially since steel can also be recycled very easily. Since 2020, a research project has been investigating the material properties of the latest generation of high-strength steels, as well as analyzing the predictive accuracy of simulation using extended material cards and looking at potential component groups. The research work related in particular to “Advanced High Strength Steel”, the latest generation of materials in cold forming. New materials from our material suppliers were analyzed and tested. A special challenge is very accurate predictability in the virtual component development, especially in the area of forming, including springback in the case of structural components when predicting crash performance.

In the Joining Technology competence area, we completed work on process-integrated punching of joining elements during hot forming, followed by potential analyses for series inquiries in order to achieve series implementation as quickly as possible and thus save a separate process step. Significant progress has also been made in the manufacture of aluminum crash management systems with the substitution of the welding process when inserting towing nuts. Following successful simplified joining tests on component sections, including the necessary load tests, it was possible to introduce all eight mechanical joining operations simultaneously into the complete crash management system in a near-series tool design and thus prepare them for intensive near-series tests. Here, too, the aim is to substitute the separate joining step so that the joining operation required for the towing nut can also be integrated at the same time as the press forming process.

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### ALUGREEN

BENTELER has been involved in the Norwegian research project AluGreen since 2021. We are looking for circular solutions for aluminum in the publicly funded project together with various partners. One of the main goals of this project is to identify robust alloys that allow the addition of increased scrap. Another topic is the optimization of aluminum scrap sorting in order to improve the grade purity of the scrap to be melted down. In 2022, we focused on evaluating the effects of elevated alloy concentrations in 6,000 and 7,000 aluminum alloys. This is an important contribution to the identification of robust new aluminum alloys with a higher scrap content. The project is expected to last until 2024.

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### International research and development

In our research and development work, we rely primarily on international cooperation between our development departments and selected suppliers and customers to solve global issues. In this way, we ensure that existing resources and know-how will lead to the development of optimal solutions. 700 research and development employees worldwide work together intensively to achieve this. 30 patents were filed in 2022. Expenditure on research and development amounted to €67 million (previous year: €75 million). Through market and customer proximity, we ensure that we incorporate regional customer requirements and market conditions into our research and development activities in the best possible way.

For example, the development and production site at Raufoss in Norway is of central importance for the aluminum sector. Significant research projects are regularly carried out there, often in cooperation with partners. Another important BENTELER development site is Shanghai/China because of the special growth opportunities and the fulfillment of regional requirements.

Our research activities focus on reducing and ultimately eliminating CO<sub>2</sub> emissions within the supply chain and across the entire product life cycle, as well as applications for electric vehicles. Previously used materials are also being tested: Materials with a higher recycled content to reduce the carbon footprint are favored. In the context of the circular economy, we are increasingly focusing on the issue of "Design for Recycling," which is an integral part of BENTELER's research roadmap for the coming years.

**Lightweight construction and safety for mobility**

The trend toward battery-powered vehicles with higher vehicle weights continues. A number of electric vehicles platforms from European vehicle manufacturers will in future be equipped with tube solutions from the Steel/Tube Division. To this end, we provide an extensive range of materials that allow both lightweight construction approaches and cost-efficient, resource-saving solutions to be implemented.

In 2022, a series project was booked together with the Steel/Tube Division. Compared with the initial customer requirement, we were able to reduce space requirements by 23%, weight by 39% and CO<sub>2</sub> emissions by 80%. This was achieved by changing from a rectangular to a circular profile tube. In addition, we use green steel from Lingen for the tube.

A new application area is the use of high-strength quenched and tempered tubes in the battery frame structure. The tubes take the weight of the battery, which weighs several hundred kilograms, and protect it from damage in the event of an accident.

Following the successful start of production of a forming line with integrated component testing for airbag gas generator sleeves, we are also investing in expanding the tube production capacity. The result is a complete production chain from steel to ready-to-install components. It also enables the further development of forming technology for high-strength, low-temperature-tolerant airbag tube components and independent production technologies for seatbelt pretensioner tubes.

**Ultralightweight battery trays**

In the joint project funded by the Federal Ministry of Economics and Climate Protection <sup>1</sup> **ULAS E-VAN**<sup>1</sup> BENTELER is working together with Ford and eight other partners from the supply chain on a next-generation electric "Last Mile Delivery" vehicle. BENTELER's task is to develop solutions for the battery tray.

own will also be possible. The ULAS E-VAN exploits this possibility. Small and modular cooling plates allow greater flexibility with the installation. At the same time, a new forming and joining technology is being used, which enables more cost-efficient production.

thus enabling increased range and payload. The project has a total budget of €5.8 million.

The number of electric vehicles is set to increase, particularly in the area of light commercial delivery vehicles. Success factors are, above all, platform structures that also enable higher unit numbers through scalability. At the same time, modular structures and cost-efficient lightweight construction are particularly important for optimal payload transport.

Increasing power densities and reducing battery fire risk will also allow greater integration of batteries into the vehicle structure, so that modular battery trays with no or little crash protection of their

In 2022, the first essential steps were taken in the design of a modular and scalable battery tray for electrically powered vans. The technologies used are expected to achieve a weight saving of up to 150 kg of the entire vehicle,

<sup>1</sup> Ultralightweight body structure of an e-van



**Electromobility: Flexible solutions for a growing market**

The growing market for electromobility is changing the demands on the production chain. Varying quantities, a wide range of series models and the increasing demand for electric vehicles require the greatest possible flexibility in the production of the necessary components. The developed principle of constructed rotor shafts offers such flexibility. Seamless drawn precision steel tubes from the Steel/ Tube Division are used. Our expertise in various joining processes and the innovative mechanical machining of the Automotive Division's Thermal & Tubular unit enable lightweight and safe e-mobility solutions.

To meet strength requirements, various high-strength steels have been successfully tested. For the development of component solutions specifically optimized for electric vehicles, we analyze relevant

influencing factors, in particular using state-of-the-art simulation methods. Initial prototype orders have been booked in preparation for series orders.

**Optimizing development processes**

In the "LCA optimized products" innovation project, the Automotive Division's R&D department has examined the LCAs of various BENTELER products in detail over the past years. Component parameters and potential for optimization from the Chassis/Modules and Structures business units were analyzed. The results were compiled in a compendium for structural and chassis components to facilitate employee decisions that affect the carbon footprint of our products. Among other things, these include the consequences of material selection, production location, production technologies, energies used and the topic of lightweight construction for the CO<sub>2</sub> footprint of our products.

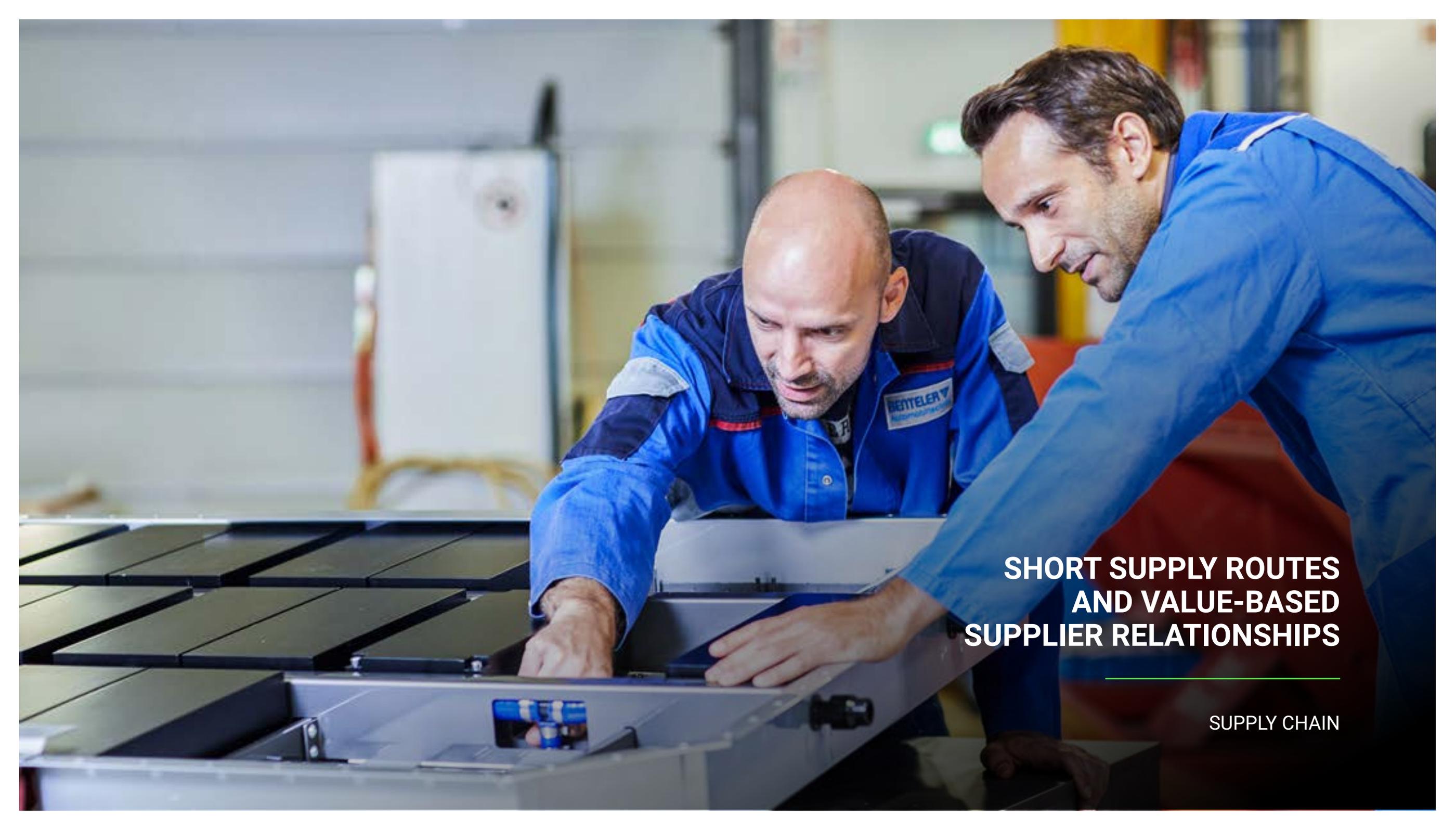


We accurately record greenhouse gas emissions produced during the manufacture of our products. This enables us to identify the relevant levers for further reduction. Our customers benefit too: Our transparency enables them to significantly improve their own data quality.

Karoline Käsewieter, Development Engineer Research and Development, BENTELER Automotive

**Smart Factory in Spain: Mos plant as prototype**

At our plant in Mos, all processes, from material receipt to delivery of the finished product, have been fully digitalized since 2022. This not only improves speed and efficiency but also maximises productivity and quality. Quality controls and integrated maintenance are also part of the digitalized processes. And last but not least, Big Data monitors energy consumption and potential energy losses, for example in hot-forming furnaces. One solution with many advantages, which we will gradually implement in other BENTELER Group plants.

The image shows two men in blue work uniforms working in a factory. They are leaning over a large, grey industrial component, possibly a mold or a large container, and appear to be inspecting or working on it. The man on the left has a name tag that says "BENTELER". The background is a blurred industrial environment with various pieces of equipment and a white wall.

**SHORT SUPPLY ROUTES  
AND VALUE-BASED  
SUPPLIER RELATIONSHIPS**

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SUPPLY CHAIN

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# SUPPLY CHAIN

We bear a great responsibility in our global supply chains. We are aware of this and act accordingly – we also expect this commitment from our business partners. Our goal is to develop a common understanding of human rights, environmental protection and the fight against child labor.



## Procurement and responsible supply chain management

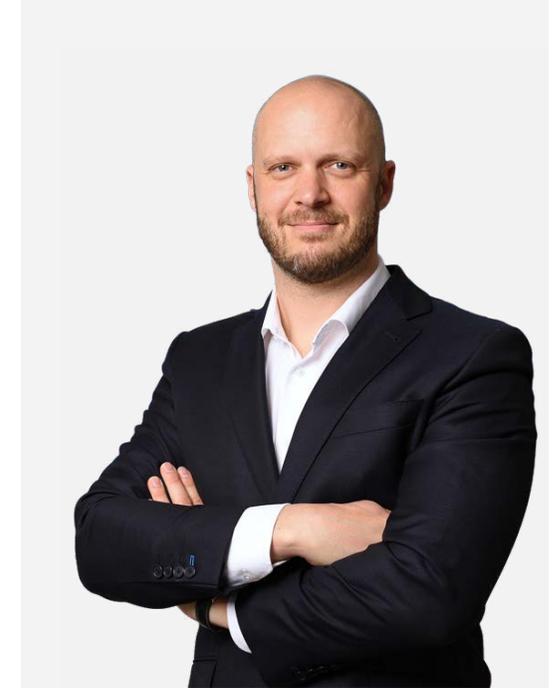
The Procurement department is responsible for global procurement and quality assurance of materials, raw materials, services and products as well as the management of the worldwide supplier network for both divisions of the BENTELER Group.

The department is primarily responsible for the following tasks:

- Procurement and quality assurance of materials, components and services
- Ensuring security of supply

- Management and screening of the supplier network
- Cost management within the supplier network
- Safeguarding social and environmental concerns within the supply chain
- Digitalization of processes within the supply chain
- Due diligence obligations within the framework of the Supply Chain Due Diligence Act
- Consideration of regulatory requirements within procurement processes and methodologies on a global basis.

Ongoing impairments in international supply chains, material bottlenecks and rising material costs characterized 2022, which is why intensive supply chain monitoring and cost efficiency were once again of key importance. In 2022, BENTELER also focused on a number of measures in connection with the Supply Chain Due Diligence Act and the associated risk management.



» We rely on strategic partnerships with our suppliers. Using their environmentally friendly raw materials, we are expanding our low-carbon product portfolio. This puts us in an excellent position to meet the anticipated high demand for sustainable products.

— Radek Jedlička, Executive Vice President  
Global Procurement, BENTELER Automotive

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With regard to risks associated with human rights violations and environmental concerns in the supply chain, we worked on comprehensive risk management and introduced a new management tool for risk analysis. Plus, the BENTELER Supplier Code of Conduct 2022 was fundamentally revised and employees were trained on these principles. The ↗code is available for download on the company website together with the ↗policy statement on the Supply Chain Due Diligence Act and the BENTELER ↗Quality Guidelines and Specifications.

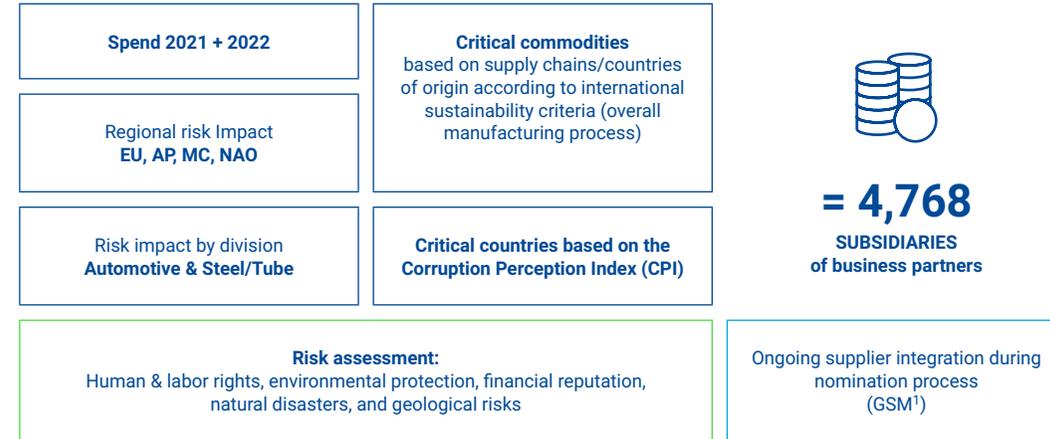
### Supplier network: Local for Local

To supply our customers as reliably as possible in times of uncertain supply chains, BENTELER continues to rely on long-term supplier relationships. In line with the strategic principle “Local for Local,” we source raw materials, goods and services predominantly from regions where the production takes place. To ensure this, we use a range of targeted measures to select new business partners and manage the risks of our supplier network.

In 2022, the approach of building local supplier relationships close to customers was further pursued. BENTELER locations close to customers to shorten transport routes have also proved advantageous in the past. Around 39 locations of the Automotive Division are located directly at or in close proximity to customers. We will continue to optimize the global location distribution of the BENTELER Group as part of the ongoing change processes in 2023.

### MULTI-LEVEL SELECTION FOR FOCUSED MONITORING OF BRANCHES OF OUR BUSINESS PARTNERS

17



1 GSM – Global Sourcing Meeting

In total, the supplier network for the Automotive and Steel/Tube divisions comprised 3,312 direct and 13,392 indirect suppliers in the reporting year 2022. In terms of purchasing volume, steel companies are among the largest suppliers to the BENTELER Group. In 2022, the purchasing volume amounted to €6.9 billion.

The global supply chain situation remained challenging in 2022, which once again resulted in longer supply distances in some cases. Nevertheless, BENTELER was able to maintain deliveries to customers. Within a continent, the localization share, i.e. the proportion of spending on local suppliers, was 82% in 2022 (previous year:

85.6%). In terms of localization within a country (i.e. the supplier is located in the same country as the BENTELER subsidiary), the rate was 52% (previous year: 54.1%).

### Risk management

A risk management tool was implemented at the end of 2022 for the targeted monitoring of corporate due diligence (for sustainability) in the supply chain. This will be rolled out globally in the BENTELER Group in 2023. As of January 2023, 4,768 business partner offices (28% of the total supplier base) were in focused monitoring (→ see Figure 17).

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Monitoring has been carried out since the beginning of 2023 using two different approaches to identify negative impacts and derive ad hoc or other measures in the long term. On the one hand, there is incident tracking that provides 24/7 real-time warnings for all focused branches of business partners. On the other hand, a risk assessment is carried out using international sustainability criteria via an annual score (country-based) (→ see Figure 18). To date, no incidents or recognizable violations have been recorded in this regard (as of May 2023).

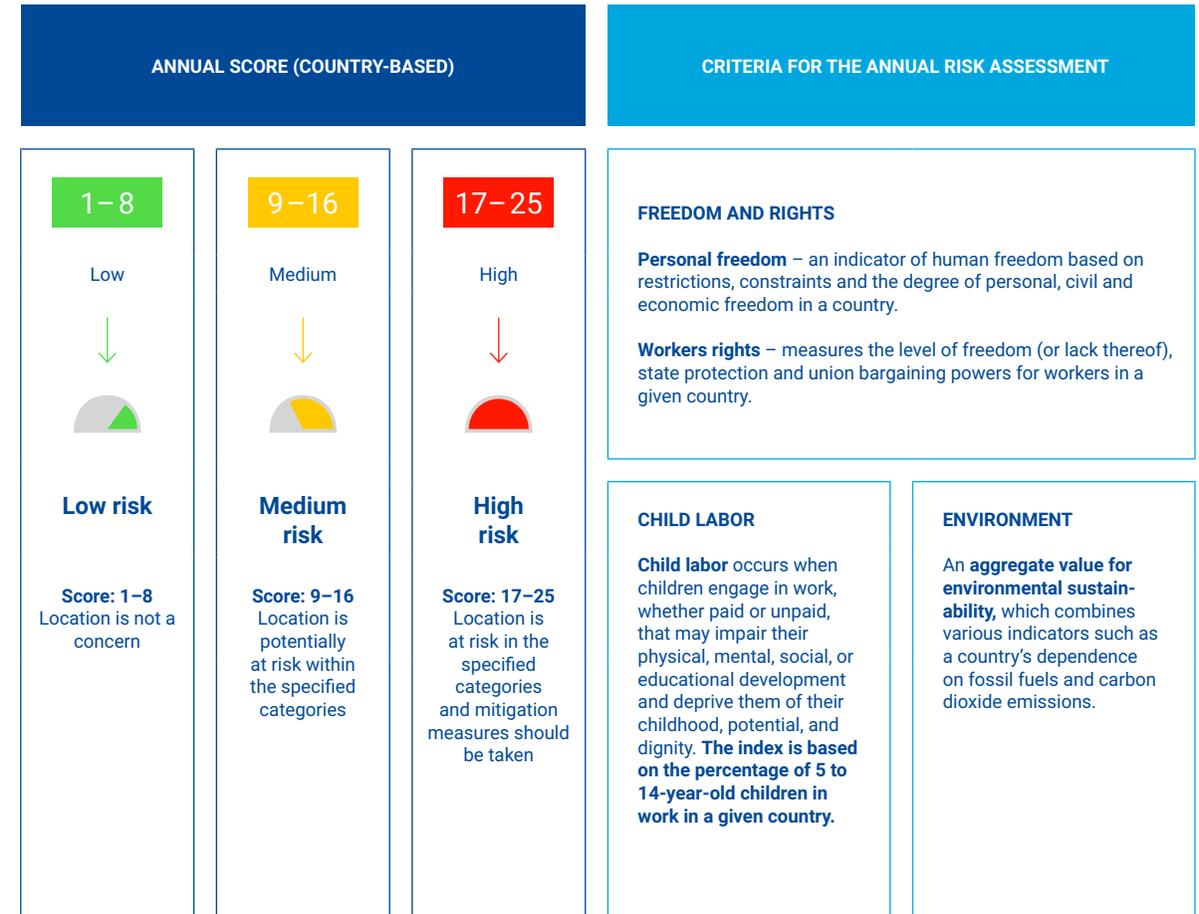
**Monitoring of social and environmental risks**  
Supplier selection

Since the introduction of risk management, new business partners not previously known to BENTELER have been evaluated by means of an ad hoc review. In future, this risk assessment will be carried out in the same way as the nomination process in the Global Sourcing Meeting (GSM)<sup>1</sup> and has been under development since the beginning of 2023.

**Incident tracking**

Incident tracking is 24-hour media monitoring on acute incidents and emergencies – including geopolitical crises, sustainability criteria violations and emergencies, geological events, and natural disasters. Additional queries about the duration and measures taken by the business partner for prevention and remedial purposes support this risk analysis in real time.

ANNUAL RISK ASSESSMENT ACCORDING TO INTERNATIONAL SUSTAINABILITY CRITERIA 18



<sup>1</sup> The Global Sourcing Meeting (GSM) is an integral part of our procurement process. This cross-divisional committee consisting of representatives from Program Purchasing, Group Commodity Procurement, Supplier Quality and Business Unit/Technology is the decision-making body for procurement at BENTELER. It ensures that quality, technology, price and sustainability criteria are taken into account when selecting suppliers.

### Risk assessment

Risk assessment is the annual assessment based on international sustainability criteria (categories: personal freedom, labor rights, child labor and environmental protection) and the issuance of an annual score at country level (→ see Figure 18).

### Preventive and remedial measures

Based on the risk assessments and incident tracking, BENTELER started defining appropriate measures for prevention and remediation in 2022. These will be translated into processes and further specified in the course of 2023. The goal is to develop concrete programs to prevent and remedy existing risks.

## Supplier management

### Selection of new suppliers

Potential new business partners not previously known to BENTELER undergo a multi-stage process for overall evaluation. As part of this assessment, they must answer a detailed questionnaire from BENTELER (self-assessment) and are approved for cooperation based on this assessment. Depending on the supplier class, we also check to see if a supplier is on a sanctions list. Since 2023, every new business partner has also been subject to an ad hoc review by the newly introduced risk management system (→ see page 35).

In 2023, the self-assessment will be revised by a team of experts from Procurement, Compliance, Strategy and Legal and aligned with the principles of the Code of Conduct, which includes the following topics:

- Protection of human rights
- Prohibition of child and forced labor
- Guaranteeing freedom of association
- Health protection and safety management
- Environmental protection and energy management
- Market behavior and ethics
- Ensuring fair competition
- Prevention of corruption and data protection
- Interaction within supply chains
- Reporting of potential violations

If a potential supplier does not pass the business partner check or does not accept the Supplier Code of Conduct, the supplier is not accepted for a business relationship.

### Ongoing business relations

The standard of the German Association of the Automotive Industry (VDA 6.3) applies to ongoing business relationships. In addition, monitoring takes place via the risk management system, which enables real-time monitoring against international sustainability criteria (→ see page 35).

## Fundamentally reworked: The BENTELER Supplier Code of Conduct

The BENTELER Supplier Code of Conduct specifies our standards of social, ethical and ecological responsibility. Our business partners must acknowledge these requirements and also commit to address them within their own business relationships. After the complete revision of the Supplier Code of Conduct in 2022, the core requirements on the topics of work (including the ban on child labour, respect for human rights and the ban on discrimination), health and safety, the environment, market behavior and ethics and responsibility within the supply chain will be formulated in six chapters.

### Employee qualification

On the basis of the revised code of conduct, e-learning was set up for all employees who have contact with suppliers. Annual completion of the training has been mandatory since the beginning of 2023. It was required to be completed by the end of the first quarter of 2023 and ended with a digital knowledge review. At the end of 2022, 71% (265 employees) of the 372 employees affected had completed the training.

### Engagement of business partners

The BENTELER Supplier Code of Conduct is mandatory for all business partners. Since 2023, this also applies to the procurement of indirect materials/ services, machines and spare parts. BENTELER's purchasing processes ensure that registration as a supplier and the placing of an order can only take place if the supplier's voluntary commitment to comply with the BENTELER Supplier Code of Conduct has been documented beforehand.

The Supplier Code of Conduct is reviewed annually to determine whether it needs to be updated. To this end, we take into account the findings from focused risk monitoring as well as global framework conditions and regulatory requirements. If necessary, the updates also affect the supplier self-assessment and e-learning for employees.

### Common goals in the supply chain

In September 2022, the BENTELER Group informed 5,000 suppliers about the CO<sub>2</sub> reduction targets that BENTELER has set for itself in the supply chain. (→ see **Environment chapter, page 48**). In parallel, the largest suppliers (80% of the purchasing volume) across all divisions were surveyed on their own CO<sub>2</sub> targets and asked for their opinion on the BENTELER targets. The survey was combined with a request to make a voluntary commitment to join the target. Following the evaluation of the results, further measures will be defined in 2023. As of May 2023, 60% of included suppliers had made a statement to that effect.

### Identify critical raw materials

To uphold human rights and ensure a conflict-free supply chain, BENTELER requires all relevant suppliers to disclose the origin of their raw materials in accordance with the provisions of the Dodd Frank Act, Sec. 1502. This relates to gold, tin, tantalum and tungsten from the Democratic Republic of Congo (DRC) and neighboring countries.

The regulation is intended to help curb the trade in these materials, which sometimes contribute to the financing of armed conflicts. The selection of relevant suppliers is based on the OECD guidelines. Relevant suppliers receive a written communication explaining the issue of conflict minerals and a statement that BENTELER is committed to eliminating critical smelters from its supply chain. All suppliers with potentially high-risk smelters in their supply chain will be asked to remove the critical smelters from their supply chain.

### B-AWARE: Whistleblower system

In 2022, the BENTELER Group introduced the B-AWARE electronic whistleblowing system worldwide. BENTELER employees, employees of business partners and external third parties can use the platform to report suspected violations of laws, regulations or guidelines. Anonymous reporting is not permitted in every country and therefore depends on the applicable local legal situation. All information is treated confidentially and reviewed by the relevant specialist department. The Supply Chain Due

Diligence Committee is responsible for suspected cases of human rights-related violations. We use the results of any investigations for risk management and preventive measures. Data on reported cases automatically flows into the annual risk analysis. The effectiveness of the grievance procedure will be reviewed annually and, where necessary, on an ad hoc basis. The digital whistleblower system including the rules of procedure is available on the BENTELER website: <https://www.benteler.com/en/contact/>

### Quality assurance: Guaranteeing high material specifications

Special BENTELER quality requirements apply to our direct material suppliers (→ **Global Procurement – BENTELER International AG**). In them, we refer, among other things, to the suppliers' voluntary commitment to environmental protection in the form of an environmental management system, as well as to applicable regulations such as REACH and Directive 2000/53/EC on end-of-life vehicles (and with it the use of IMDS<sup>1</sup>). Furthermore, we document certifications in the case of relevant suppliers. In 2022, 16.2% of series suppliers were certified to the ISO 14001 environmental management system.

Using risk-based planning, BENTELER also carries out quality audits at direct suppliers, in which questions of social responsibility are also taken into account. This is done in accordance with the standard for process audits of the German Association of the Automotive Industry (VDA 6.3).

<sup>1</sup> IMDS (International Material Data System) – This system summarises all environmentally relevant information in the supply chain.



**WE PAY ATTENTION TO  
THE CLIMATE AND RESOURCES**

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# ENVIRONMENT

Conserving resources – this is the focus of BENTELER’s environmental management. Because our processes are energy-intensive, we are increasingly focusing on energy-efficient operations and the reduction of emissions relevant to the environment and health, for example through climate-friendly production processes.



## Environmental commitment: Conserve resources, protect the climate

For the BENTELER Group, we have set ourselves the target of reducing the absolute Scope 1 and 2 GHG emissions by 50% by 2030 compared to the base year 2019. We aim to reduce absolute Scope-3-GHG emissions by 30% in the same period compared to 2019 (→ see page 47).

We use greenhouse gas accounting to participate in emissions trading. To conserve resources, we work on our active waste management and promote careful use of water (→ see page 49 and 51).

In all measures to protect the environment, we make use of our special expertise, which is especially important in metal processing, coating and high-temperature processes. In our day-to-day work, the goal is to reduce the negative impact of business activities on the environment and to continuously promote environmental protection measures as a permanent task for all teams and at all locations of the BENTELER Group.

A key control element for environmental protection and resource efficiency with regard to production processes is our integrated management system, which meets the requirements of ISO 14001 and ISO 50001. All production sites of the Automotive Division and all European sites of the Steel/Tube Division have a certified environmental management system.



**BENTELER Steel/Tube** focuses on environmentally friendly surface coatings

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<b>BENTELER GROUP ENERGY CONSUMPTION</b>				
IN MWH	2022	2021	2020	2019
Electricity	<b>1,133,954</b>	1,142,374	982,783	1,292,656
Natural gas and process-relevant propane	<b>1,236,872</b>	1,219,641	1,037,974	1,286,583
<b>Total</b>	<b>2,370,825</b>	<b>2,362,015</b>	<b>2,020,756</b>	<b>2,579,239</b>

We consistently ensure compliance with the large number of environmental laws and other relevant regulations. New specifications and requirements are identified on an ongoing basis and corrective actions are initiated as needed. We are not aware of any violations of applicable environmental regulations in 2022. In the event of a regulatory violation, we immediately initiate measures to minimize potential impacts, analyze the cause, consult local authorities and other experts if necessary, and communicate these events group-wide so that other sites can be reviewed based on the lessons learned.

### Efficient use of energy

Increasing energy efficiency and controlling energy consumption are focus areas in BENTELER's sustainability management. We use various energy sources for our production, such as electricity, natural gas, district heating and diesel. In order to control energy management efficiently, many sites work with a management system certified in accordance with ISO 50001. In 2022, the degree of coverage

for all BENTELER sites was around 29%, of which 15 Automotive Division sites and six of the seven Steel/Tube sites.<sup>1</sup>

A focus in energy procurement is also on the purchase of renewable energies. We currently cover 35.3% of our electricity requirements from renewable energy sources (Automotive: 37.9% and Steel/Tube: 33.3%). This share will be increased in the future by concluding PPAs, generating our own electricity and purchasing guarantees of origin.

Reducing energy consumption and hence the associated emissions, efficiency and resource conservation are key components of BENTELER's integrated transport logistics. This is based on standard processes applied worldwide, setting out conditions for collaboration with logistics service providers. The transparency of all logistics processes is guaranteed by a system-supported transport management solution. Combined transport – for example by rail and ship – can be tracked accordingly. In addition, emissions-intensive air freight is excluded as far as possible.



We have a clear roadmap to reduce the carbon footprint in our production. We are already making greater use of renewable electricity. In the future, we want to do even better – through a combination of self-generation and power purchase agreements.

Robert Snijder, Vice President Procurement, BENTELER Steel/Tube

<sup>1</sup> Five out of six sites following the closure of the Bottrop plant at the end of June 2022.



We are working intensively on our energy efficiency. We are optimizing our consumption, for example by improving capacity utilization and eliminating leaks. We have also already implemented numerous measures in the Southern Europe region thanks to the dedicated team.

— Emilio Adrian Arroyo, Maintenance, Facility and Energy Manager, BENTELER Automotive (Region South Europe)

**ENERGY INTENSITY AT BENTELER AUTOMOTIVE**

MWH/€ MILLION	2022	2021	2020	2019
Energy consumption per € million value add	529	594	621	611

**Automotive Division**

The Automotive Division's energy consumption was reduced by 9% in 2022 compared to the previous year to 887,875 MWh (gas: 403,934 MWh, electricity 483,941 MWh).

Numerous energy efficiency projects contributed to this:

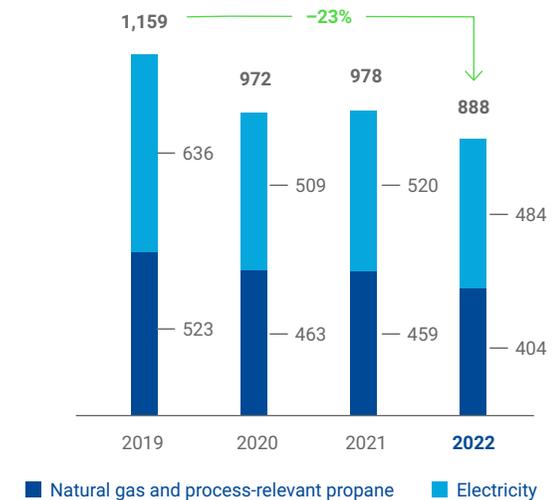
For example, at the Burgos site in Spain. There, production planning was optimized for the hot-forming and painting lines to increase the utilization of various systems and minimize standby consumption.

The Leaking Hunting project, which has been ongoing since 2019, also continued in 2022. With this project, compressed air consumption has been reduced considerably by checking for possible leaks at an early stage, for example with the help of a special leak camera that can be used during production. Compressed air is the most expensive form of energy used in production. Thanks to close cooperation with the maintenance departments, identified leaks were eliminated quickly and sustainably.

We also continued reviewing lighting systems for conversion to LED lighting in 2022. By the end of 2022, about 80% of sites were equipped with LED lighting; starting in 2023, the next lighting technologies to be replaced (T5 technology) will be tested.

**BENTELER AUTOMOTIVE ENERGY CONSUMPTION**

IN MWH (THOUSANDS)



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Project planning for a photovoltaic system for the Schwandorf plant has started. This will be capable of fully covering the plant's base load in the future. The system yield will be used directly as renewable energy throughout the year. Commissioning is planned for 2023. Other approved installations are planned. Solar energy plants are already in operation at the Vigo and Mos plants in Spain.

Fluctuations in production load often reduce the energy efficiency achieved to date because equipment is used less optimally. It's therefore particularly pleasing that the energy intensity in the Automotive Division was reduced to around 529 MWh per million euros of added value (previous year: €594 MWh/€million). A contributing factor was that all sites continued to apply lessons learned from last year, for example, by improving job scheduling to significantly extend shutdown periods.

**Green Capex**

In 2022, the decision was made to provide the BENTELER Automotive Division with a green capex budget for energy efficiency measures. This budget will be used in future to promote ideas from the regions/plants to optimize production and increase energy efficiency. Our experience shows that, in addition to ideas for production optimization projects, there were also many ideas for energy efficiency projects at many sites, some of which could not always be included in the budget planning. With the additional budget, this potential can be promoted in the future. At the beginning of 2023, more than 50 proposals had already been submitted.

**BENTELER STEEL/TUBE ENERGY CONSUMPTION**

IN MWH	2022	2021	2020	2019
Electricity	650,012	622,592	474,266	657,057
Natural gas and process-relevant propane	832,938	761,014	574,535	763,380
<b>Total</b>	<b>1,482,950</b>	<b>1,383,606</b>	<b>1,048,801</b>	<b>1,420,437</b>

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**Steel/Tube Division**

In the Steel/Tube Division, energy consumption in 2022 increased by 7% year-on-year to a level of 1,482,950 MWh. The reason for this increase was the high utilization of the plants and an energy-intensive increase in the vertical integration of some products. Based on the tonnage sold, the specific energy consumption remained at the level of the previous year.

The Steel/Tube Division also uses various measures to increase energy efficiency. One focus is on measures to optimize production processes. Various efficiency projects were implemented in the year under review.

Optimizing gas consumption in the production facilities and office buildings was also in focus during 2022. Particularly important: the adjustment of heating curves during plant shutdowns.

**Smart: Light management at the BENTELER Schloß Neuhaus site**

Optimized lighting at the Schloß Neuhaus site reduces power consumption by around 70%. In addition to the complete conversion to LED lighting, other measures such as programming the luminaires and controlling them according to the amount of daylight or presence of people leads to a significant reduction in energy consumption. Following the successful completion of the pilot project in 2022, further sites will be converted to the new system.

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## Emission reduction

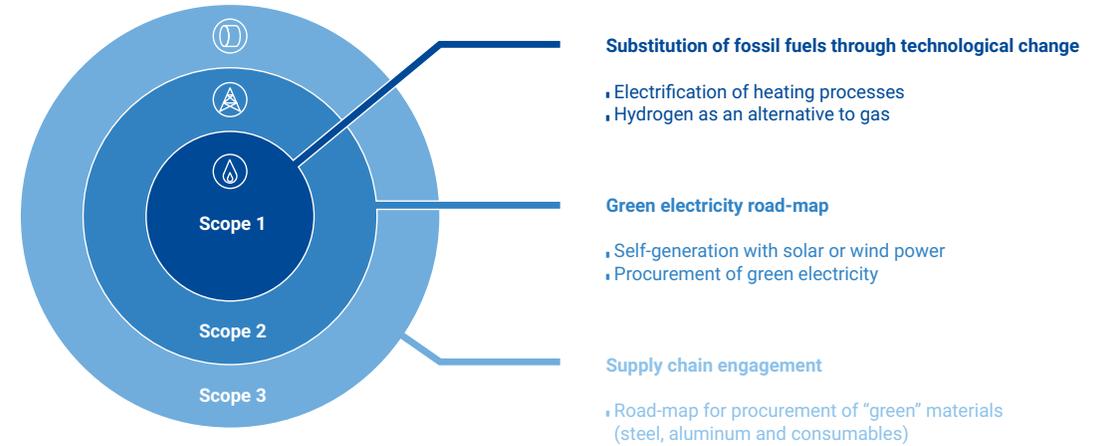
### Emissions in production

BENTELER aims to have net zero emissions by 2050. Along the way, our goal is to reduce production-related absolute Scope 1 and 2 GHG emissions by 50% by 2030 compared with the 2019 baseline. By 2040, we aim to avoid or offset 100% of the absolute GHG emissions in our production.

The use of electricity from renewable sources is critical to reducing Scope 2 emissions. BENTELER's strategic measures in this regard include Power Purchase Agreements (PPAs), self-generation and purchasing green power. Central to this is the conclusion of PPAs, which will secure the majority of our electricity supply by 2030. Where possible, we will also connect renewable energy sources directly to our plants through onsite PPAs. In addition, we will generate electricity ourselves on our plant premises. Through the PPAs and self-generation, we can secure our long-term power supply and, according to current expectations, achieve economic benefits. The electricity portfolio is supplemented by purchased green electricity in order to be able to cover fluctuating energy requirements flexibly.

In addition to reducing Scope 2 emissions, one focus is on substituting fossil fuels in internal production processes (Scope 1). In 2022, a new initiative was launched for the long-term substitution of natural

### THE BENTELER DECARBONIZATION STRATEGY



gas and other fossil fuels to drive the technological transformation to alternative energy sources in production. Based on a comprehensive collection of data, the first step is to work out which equipment will be completely replaced and when, or made more efficient through modernization. From a technical perspective, the focus is on electrification of the processes and the use of green hydrogen.

### Incentivization

To further minimize risk with regard to our emissions, ecologically beneficial investments are also incentivized by an internal CO<sub>2</sub> price.

By implementing an internal CO<sub>2</sub> price, the environmental impact of capital goods can be considered, thereby promoting investment in more climate-friendly systems and machines. Scope 1 and 2 emissions are assessed on the basis of the EU ETS system and taken into account in the investment decision.



We see the future in alternative energy sources. That's why we are working on the technological conversion of our plants. In 2022, we launched an initiative for the long-term substitution of fossil fuels in our production.

— Nick Borislavski, Vice President Global Manufacturing Engineering, BENTELER Automotive

<b>BENTELER GROUP SCOPE 1 AND 2 EMISSIONS<sup>1</sup></b>				
IN TONS OF CO <sub>2</sub> E	2022	2021	2020	2019
Scope 1 emissions <sup>2</sup>	263,414	269,790	221,113	265,346
Scope 2 emissions, location-based method	366,689	400,411	426,545	400,857
Scope 2 emissions, market-based method	423,789	407,516	366,007	556,435
<b>Total Scope 1 and 2 emissions<sup>3</sup></b>	<b>687,203</b>	<b>677,306</b>	<b>587,121</b>	<b>821,782</b>

<b>AUTOMOTIVE DIVISION SCOPE 1 AND 2 EMISSIONS<sup>1</sup></b>				
IN TONS OF CO <sub>2</sub> E	2022	2021	2020	2019
Scope 1 emissions <sup>2</sup>	77,837	87,652	88,227	96,821
Scope 2 emissions, location-based method	162,678	187,192	214,022	202,676
Scope 2 emissions, market-based method	159,254	164,831	176,774	191,816
<b>Total Scope 1 and 2 emissions<sup>3</sup></b>	<b>237,091</b>	<b>252,483</b>	<b>265,002</b>	<b>288,638</b>

<b>STEEL/TUBE DIVISION SCOPE 1 AND 2 EMISSIONS<sup>1</sup></b>				
IN TONS OF CO <sub>2</sub> E	2022	2021	2020	2019
Scope 1 emissions <sup>2</sup>	185,577	182,138	132,886	168,525
Scope 2 emissions, location-based method	204,011	213,219	212,523	198,180
Scope 2 emissions, market-based method	264,535	242,685	189,233	364,619
<b>Total Scope 1 and 2 emissions<sup>3</sup></b>	<b>450,111</b>	<b>424,823</b>	<b>322,119</b>	<b>533,144</b>

1 Calculation of key figures based on GHG Protocol.  
2 Scope 1 emissions based on DEFRA emission factors.  
3 Total calculated based on market-based emissions

**BENTELER Automotive**

Many of the measures will have their effect in the medium to long term. But even in the short term, the first successes can be reported. The Automotive

Division's Scope 1 and 2 emissions decreased to 237,091 tons of CO<sub>2</sub>e in 2022. This represents a 6% reduction from the prior year and an 18% reduction from 2019.



**BENTELER Steel/Tube**

In the Steel/Tube Division, Scope 1 and 2 emissions increased to 450,111 tons of CO<sub>2</sub>e in 2022. This represents a 6% increase over 2021 and a 16% reduction over 2019. The increase in emissions is attributable to higher energy consumption as a result of high plant utilization and increased vertical integration. Accordingly, specific emissions in relation to tonnage sold are virtually unchanged. Furthermore, the emission factor for electricity rose due to increased use of fossil fuels in the energy supplier's portfolio in Germany.

» The improved EcoVadis rating (silver) of the Steel/Tube Division shows that BENTELER takes responsibility in the area of sustainability. This award drives us to consistently pursue our extensive activities with regard to corporate governance, the environment and social issues.

— Thomas Begemann, Director Strategy/Communications & Project Management, BENTELER Steel/Tube



The success of our activities to optimize emission levels is also reflected in the CDP (Carbon Disclosure Project) rating. We have been participating in the CDP rating with the Automotive Division since 2012 and achieved our best result to date in 2022. We achieved a "B" rating in the Climate Change category and "B minus" in the Water Security category. Since the requirements of the TCFD are largely included in the CDP questionnaire, BENTELER Automotive is already reporting a lot of the information required by the TCFD.

With "Silver" in the EcoVadis rating, BENTELER Steel/Tube is among the top 25% of companies in the "Production of pig iron and steel" sector. EcoVadis is one of the world's largest providers of sustainability ratings. Sustainability management was validated and evaluated in relation to the areas of environment, social affairs and sustainable corporate governance.

**Steel/Tube Division: Green Tubes**

Direct Scope 1 emissions generated in production and direct Scope 2 emissions are to be systematically reduced, and the entire CO<sub>2</sub> emissions avoided or offset. Subject to sufficient availability of green hydrogen, green electricity at competitive prices and an existing hydrogen infrastructure, we have set a goal for BENTELER Steel/Tube to be CO<sub>2</sub> neutral in our own production by 2030.

We are also addressing the reduction of CO<sub>2</sub> emissions in procurement (Scope 3, excluding the use phase and end-of-life phase). By 2045, we intend to be CO<sub>2</sub>-neutral at Steel/Tube. For a comprehensive view, the program includes various individual projects. These include, for example, increasing the use of electric steel from our steel mill in Lingen for the production of welded tubes to reduce the need to purchase blast furnace steel.

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<b>BENTELER GROUP SCOPE 3 EMISSIONS BY CATEGORY<sup>1</sup></b>				
IN TONS OF CO <sub>2</sub> E	<b>2022</b>	<b>2021<sup>2</sup></b>	<b>2020<sup>2</sup></b>	<b>2019<sup>2</sup></b>
3.1 Purchased goods and services	<b>9,224,623</b>	9,057,621	7,803,066	9,714,950
3.2 Capital goods	<b>324,193</b>	363,045	389,579	525,270
3.3 Fuel and energy-related activities <sup>3</sup>	<b>150,611</b>	148,951	128,480	177,624
3.4 Upstream transport and distribution	<b>367,504</b>	318,632	223,061	280,340
3.5 Waste generated during operation	<b>12,749</b>	15,132	11,815	14,302
3.6 Business trips	<b>9,285</b>	10,629	10,513	28,594
3.7 Employee commuting	<b>40,330</b>	42,906	45,811	45,878
3.12 Dealing with sold products at their end of life	<b>87,409</b>	94,511	86,727	100,076
<b>Total</b>	<b>10,216,705</b>	<b>10,051,426</b>	<b>8,699,052</b>	<b>10,887,034</b>

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1 Scope 3 emissions were calculated using activity- and spend-based data from a recognized input-output model (Quantis). The model uses USD-based emission factors. Consequently, exchange rate fluctuations affect the CO<sub>2</sub> emissions shown here.  
 2 Recalculation of Scope 3 due to structural changes and methodological changes in the calculation.  
 3 Not included in Scope 1 and 2

**Calculation**

In 2021, Scope 3 emissions were determined for the first time based on a purely spend-based analysis. In 2022, this analysis was optimized using a hybrid approach: Mass-based emission factors (e.g. kg CO<sub>2</sub>e per kg steel purchased) are determined for particularly relevant areas, such as steel or aluminum purchasing, on the basis of industry averages (activity-based calculation). This enables detailed identification of potential actions and decouples Scope 3 emissions from material price increases. It's planned to extend this activity-based calculation to further purchasing areas in 2023. In addition, we aim to further increase the transparency of our upstream Scope 3 emissions by using supplier-specific emission factors. This will enable us to reduce upstream Scope 3 emissions in future by working with suppliers that have a particularly low carbon footprint.

**Emissions in the supply chain**

We are also continuing to drive forward the optimization of our carbon footprint in our supply chain. By the end of 2030, we aim to reduce our upstream absolute Scope 3 GHG emissions here by 30% (compared to 2019). To achieve this goal, it is first necessary to increase the transparency of emissions, especially from the supply chain upstream of BENTELER.

**Science Based Target initiative (SBTi)**

As part of the SBTi validation, BENTELER also assessed emissions in category 3.11, the use of sold products, for the first time. Category 3.11 accounts for a significant share of total Scope 3 emissions according to this initial estimate. BENTELER will therefore include the use of its products in the Scope 3 reduction target in the future. BENTELER is working on a calculation methodology for emissions in the use phase and will also report on these emissions in the future.

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At our steel mill in Lingen, Germany, we've been producing environmentally friendly steel using an electric arc furnace for almost 50 years

### United in climate protection with bluemint® Steel

BENTELER Automotive and thyssenkrupp Steel Europe are working together on climate protection: BENTELER has secured long-term climate-friendly bluemint® steel from thyssenkrupp for the production of vehicle components. Both companies signed a corresponding letter of intent in March 2023.

bluemint® steel already has a significantly reduced level of CO<sub>2</sub>. In the production of the certified, climate-friendly steels, pre-produced sponge iron or specially prepared scrap steel replaces a proportion of the coking coal in the blast furnace process. In addition, the cooperation between thyssenkrupp Steel and BENTELER is to be further intensified from 2026. As of that date, the steel will be sourced from direct reduction plants using special melting units, which will be powered using green hydrogen and green electricity.

### Measures and projects 2022

In addition to the optimized calculation of Scope 3 emissions, various other measures were also taken in 2022 to promote decarbonization in this area.

BENTELER had already contractually secured the required quantities for green aluminum for the next few years in 2022. The company is also preparing special partnerships for the procurement of green steel in order to be able to offer reduced-emission steel. At the same time, we are intensifying our long-term cooperation with important steel suppliers, such as thyssenkrupp Steel Europe. Green steel from BENTELER's own steel mill in Lingen is also playing an increasingly important role. During manufacture of this green steel, 75% fewer emissions are produced compared to steel from the conventional blast

furnace route. Approximately 600,000 tonnes of this steel are produced annually from recycled scrap, which is used primarily as a raw material in the company's own seamless pipe production. Further quantities are sold directly to steel customers. Test projects are underway and various approaches are being clarified regarding the technical feasibility, extent and way production can be increased.

To make our measures within the supply chain transparent, we communicated the BENTELER targets to 5,000 suppliers in 2022. The largest suppliers (80% of the direct purchasing volume), were additionally asked to make a voluntary commitment to the BENTELER sustainability goals. (→ See Supply Chain chapter, page 38).



Our newly established targets for reducing water withdrawals and waste volumes represent a significant contribution to resource conservation and the circular economy. In this way, we create added value for the environment and position ourselves for the future.

— Jan-Niklas Rütters, Manager Environment & SHE System, BENTELER Automotive

### Recyclable material

As in the previous year, steel and aluminum accounted for the largest share of the raw materials used in the Automotive Division at around 83% and 14%. Other purchased parts accounted for around 3% in total. In the Steel/Tube Division, flat and long steel as well as steel scrap accounted for the largest share by weight of raw materials used, at around 97% while alloys used were at around 1%. Other purchased parts accounted for a total of around 2%.

### Waste and recycling

Waste from BENTELER’s production activities is continuously recorded at site level, reported monthly and disposed of via certified companies in accordance with local legal requirements. At BENTELER sites, waste fractions are collected separately to allow for maximum (re)usability. In our search for solutions, waste that can’t be further recycled via disposal companies and ends up in landfill has a special relevance, as it’s no longer available in the resource loop. Hazardous waste is generated, for example, during painting operations in production.

In the Automotive Division, a contract partner for the disposal of landfill waste was found at the Klasterec site in the Czech Republic in 2022. Prior to disposal, this contractor sorts out recyclable and incinerable waste. As a result, we’ve reduced the amount of waste that has to be landfilled by around 50 tons.

In the BENTELER Group, there were different reduction targets in 2022 for the two divisions with regard to waste volumes; data was determined in different units:

- Automotive: Waste amount in tons per € million site revenue
- Steel/Tube: Waste amount per product unit

We formulated a group-wide target based on absolute quantities for the first time in 2023. Our goal is to reduce the amount of waste in the BENTELER Group by 20% by 2030 compared to the base year 2019. The formulation of a uniform target for both divisions together with the definition of absolute waste volumes was an important step towards more transparency within the group. The standardization of the data subsequently enables better comparability and the definition of targeted measures across the group.

BENTELER works primarily with steel and aluminum. In general, steel and aluminum components supplied by BENTELER are 100% recyclable. When it comes to recycling, BENTELER uses its own electric steel mill, which has been in operation in Lingen since 1974. Up to 95% of the steel processed there is scrap. Most of the steel scrap from our German plants is reprocessed there for the Steel/Tube Division. And we operate in a very similar way with aluminum in Raufoss/Norway: Here, we process aluminum waste and reuse it in our aluminum foundry.

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**BENTELER Automotive**

We consolidate the respective quantities at site level on a monthly basis for global recording in the reporting system based on data determined by the disposal company. Since 2020, the Automotive Division waste volumes have been calculated using a modified recording method, which makes it possible to record and report all scrap quantities separately. Since considerable quantities of scrap are recycled, the division can focus on reducing its waste with significant environmental relevance. The 2022 waste volumes were verified externally for both divisions.

In 2022, the Automotive Division's total waste volume was reduced to 25,561 tons. Compared to 2021, this corresponds to a reduction of 5%. In terms of revenue, the original 2022 target for reducing specific waste volumes for BENTELER Automotive of 6% by 2025 vs. 2019 was therefore achieved earlier than planned. For this reason, a new, more far-reaching target was adopted at group level in 2023. (→ see page 49).



Lingen electric steel mill:  
up to **95%** recycled  
scrap steel processed

**BENTELER Steel/Tube**

Data is recorded at the site level for both divisions and transmitted separately by the respective disposal companies. At the Steel/Tube Division, the total amount of waste also includes fractions that come not only from regular production operations, but also from rebuilding and dismantling measures.

To reduce our waste volumes, we installed a filter cake drying system at the Schloß Neuhaus site last year. This dries the residues from filtration processes, thereby reducing the moisture content by around 40%. By reducing the amount of waste, we protect the environment and save costs at the same time.

<b>BENTELER GROUP WASTE<sup>1</sup></b>				
IN TONS	2022	2021 <sup>2</sup>	2020 <sup>2</sup>	2019 <sup>2</sup>
Landfill (disposal)	7,014	7,067	5,935	8,364
Recycling and reuse	64,431	68,244	56,055	71,972
<b>Total (excluding scrap)</b>	<b>71,446</b>	<b>75,311</b>	<b>61,990</b>	<b>80,336</b>

<b>AUTOMOTIVE DIVISION WASTE<sup>1</sup></b>				
IN TONS	2022	2021 <sup>2</sup>	2020 <sup>2</sup>	2019 <sup>2</sup>
Landfill (disposal)	5,011	4,810	4,402	5,632
Recycling and reuse	20,551	22,094	24,313	27,376
<b>Total (excluding scrap)</b>	<b>25,561</b>	<b>26,904</b>	<b>28,716</b>	<b>33,008</b>

<b>STEEL/TUBE DIVISION WASTE<sup>1</sup></b>				
IN TONS	2022	2021	2020	2019
By type of waste				
Hazardous waste	15,169	12,150	11,042	11,514
Non-hazardous waste	30,716	36,257	22,232	35,814
By disposal method				
Landfill (disposal)	2,004	2,257	1,533	2,732
Recycling and reuse	43,880	46,150	31,742	44,596
<b>Total (excluding scrap)</b>	<b>45,885</b>	<b>48,407</b>	<b>33,274</b>	<b>47,328</b>

1 Calculation of key figures is based on GRI 306-3  
2 Recalculation of waste values due to structural changes

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## Responsible use of water

Water is indispensable for the production processes at BENTELER and also plays an important role in the safety of operations. We use it to cool equipment and, in the Automotive Division, to clean our products.

In terms of revenue, BENTELER pursued a goal of reducing water withdrawals by 10% from the 2019 baseline by 2030 in regions with high or extremely high water stress. We achieved this early on in 2022. BENTELER has therefore set itself a new target at group level in 2023: By 2030, we aim to reduce water withdrawals by 20% from the 2019 baseline.

The target refers to areas with high or extremely high water stress. According to the Aqueduct Water Risk Atlas, a total of 17<sup>1</sup> BENTELER plants are located in areas with high and extremely high water stress. BENTELER is working on suitable measures (work packages) for the production sites concerned, with which water withdrawal can be further reduced in the future. To implement the goal, measures are being implemented to recycle washing/rinsing water, to use water more efficiently, for example in painting processes, and to collect rainwater.

Water withdrawal in 2022 was 2,224,820 m<sup>3</sup> in the Automotive Division and 8,164,545 m<sup>3</sup> in the Steel/Tube Division. The reasons for the increased water withdrawal in the Automotive Division are changing weather and climate conditions and adjustments in production technology. At Steel/Tube, the increased withdrawal is due to high capacity utilization at the plants and increased vertical integration. In relation to tonnage sold, the specific water withdrawal of the Steel/Tube Division has therefore decreased compared with 2021.

<b>BENTELER GROUP WATER WITHDRAWAL<sup>1</sup></b>				
M <sup>3</sup>	2022	2021 <sup>2</sup>	2020 <sup>2</sup>	2019 <sup>2</sup>
Surface water	8,190,186			
Brackish water/sea water	0			
Groundwater – renewable	562,635			
Groundwater – non-renewable	0			
Produced water	0			
Third party water	1,656,544			
<b>Total water withdrawal</b>	<b>10,409,365</b>	<b>9,713,965</b>	<b>7,569,735</b>	<b>9,771,170</b>

<b>WATER WITHDRAWAL IN AREAS WITH HIGH AND VERY HIGH WATER STRESS<sup>3</sup></b>				
M <sup>3</sup>	2022	2021	2020	2019
<b>Total water withdrawal</b>	<b>358,285</b>	<b>339,432</b>	<b>354,077</b>	<b>431,902</b>

- 1 Calculation of key figures is based on GRI 303-3
- 2 Water withdrawal by source is only fully available since 2022; water withdrawals recalculated due to structural changes
- 3 In the plants with high/extremely high water stress, only third party water is withdrawn. The quantities are already included in table 31.

### Water withdrawal in numbers

The Automotive Division's manufacturing plants used 2,224,820 m<sup>3</sup> of water (drinking, process and cooling water) in the year under review (previous year: 1,891,387 m<sup>3</sup>). Withdrawals are made from third party water systems, surface water and groundwater, with permits from local agencies for the withdrawals so that no quantities are withdrawn in excess of the naturally occurring afterflow and drawdown of groundwater levels is avoided.

358,285 m<sup>3</sup> of water originated from production sites in regions with high or extremely high water stress.

In the Steel/Tube Division, some sites have targets for reducing water withdrawal depending on local conditions. We use water for cooling and rinsing processes and use the most modern circulation processes. Process and cooling water is reused several times and purified in the company's own wastewater treatment plants so that only the highest quality is released into the environment.

In the year under review, further water pipes were fitted with electronic meters to limit water losses earlier in the event of leaks.

<sup>1</sup> Until October 1st, 2022: 19 locations; reduction due to the sale of a plant and a plant consolidation

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### Treatment and recycling of waste water

At some sites, BENTELER recycles water into the production processes. Waste water is purified and then returned to the process water, reducing water extraction as well as costs. BENTELER monitors and analyzes water withdrawals at all its locations. Consumption through processes such as evaporation is not currently recorded for the entire group.

A large proportion of the waste water arises from contamination or mixing with other media such as hydraulic, greasing or lubricating oil as well as dirt. It is therefore treated in proprietary wastewater treatment plants such as vacuum evaporators, centrifuges and in chemical-physical wastewater treatment plants. On the one hand, this minimizes waste and, on the other, enables the treated water to be used in production or returned to the public system.

### Conserving biodiversity

The conservation and enhancement of biodiversity is essential for intact ecosystems. BENTELER takes biological diversity into account at its locations. We consider designated nature reserves or areas of high biodiversity value to be particularly worthy of conservation and pay particular attention to relevant impacts when implementing activities in these locations.

#### BENTELER AUTOMOTIVE WATER WITHDRAWAL<sup>1</sup>

M <sup>3</sup>	2022	2021 <sup>2</sup>	2020 <sup>2</sup>	2019 <sup>2</sup>
Surface water	1,271,847			
Brackish water/sea water	0			
Groundwater – renewable	11,857			
Groundwater – non-renewable	0			
Produced water	0			
Third party water	961,116			
<b>Total water withdrawal</b>	<b>2,244,820</b>	<b>1,891,387</b>	<b>1,646,440</b>	<b>2,049,237</b>

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#### BENTELER STEEL/TUBE WATER WITHDRAWAL<sup>1</sup>

M <sup>3</sup>	2022	2021	2020	2019
Surface water	6,918,339	6,815,963	5,085,952	6,753,577
Brackish water/sea water	0	0	0	0
Groundwater – renewable	550,778	541,549	425,385	483,207
Groundwater – non-renewable	0	0	0	0
Produced water	0	0	0	0
Third party water	695,428	465,066	411,958	485,149
<b>Total water withdrawal</b>	<b>8,164,545</b>	<b>7,822,578</b>	<b>5,923,295</b>	<b>7,721,933</b>

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<sup>1</sup> Calculation of key figures is based on GRI 303-3.

<sup>2</sup> Water withdrawal by source is only fully available since 2022; water withdrawals recalculated due to structural changes

In the year under review, we planted trees over an area of around 2,700 m<sup>2</sup> at our sites in Mor, Hungary, and Rumburk, Czech Republic. A wildflower area has been established at the site in Warburg, Germany, and is planned for expansion in 2023.

To better assess the impact of our actions and support biodiversity in a more targeted way, we are working to specifically improve the assessment of our production sites and those of our largest suppliers in terms of their impact on biodiversity. Building on this, we are already planning further initiatives and measures to help preserve the ecosystem.



**WE TAKE  
RESPONSIBILITY**

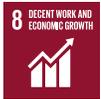
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# EMPLOYEES

In 2022, BENTELER continued to operate in a volatile market environment. Despite this, we made progress with our transformation. A high degree of flexibility, agility and tolerance of ambiguity were key competencies that our employees once again demonstrated in the year under review. Personal development and advancement of our employees are important to us. In our HR strategy, we therefore place great emphasis on our competency model and our continuous training opportunities. Promoting diversity of talent and strengthening our corporate culture in change processes will remain important in the coming years.



## Our employees

On average, the BENTELER Group employed 21,349 FTEs (Full Time Equivalents) worldwide in the reporting year 2022, 8.4% fewer than in the previous year. In the Automotive Division, the average number of employees decreased by 2,147 FTEs to 17,685 FTEs. The average number of employees in the Steel/Tube Division increased by 33 FTEs to 3,260 FTEs

compared to the previous year. The other companies, including the holding companies, employed 404 FTEs, 144 more than in the previous year. This increase is due to the organizational transfer of FTEs to the shared service centers in the Czech Republic from the Automotive Division.

Of the 23,024 employees worldwide in the reporting year, 21,946 were employed full-time, of whom 19,133 were men and 2,813 women. 1,079 employees (650 men and 429 women) had part-time contracts (as of Dec. 31, 2022).

Training is a high priority: BENTELER trains its apprentices at the company's own training center in Paderborn, Germany.

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**EMPLOYEES BY EMPLOYMENT CONTRACT AND EMPLOYMENT RELATIONSHIP<sup>1</sup>**

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AS OF DECEMBER 31	2022		2021		2022		2021	
	Temporary	Permanent	Temporary	Permanent	Part time	Full time	Part time	Full time
<b>Gender</b>								
Female	437	2,805	371	2,940	429	2,813	397	2,943
Male	2,141	17,642	1,851	18,544	650	19,133	527	20,009
<b>Regions</b>								
Automotive Division								
thereof Northern Europe	367	6,558	232	7,364	334	6,591	303	7,462
thereof Southern Europe	204	2,841	194	2,947	151	2,894	59	3,082
thereof NAO	1	2,898	3	3,062	1	2,898	2	3,063
thereof Mercosur	203	2,037	192	2,010	3	2,237	7	2,196
thereof Asia/Pacific	1,333	781	1,243	739	6	2,108	4	1,978
thereof other	36	1,536	39	1,590	189	1,383	191	1,438
Steel/Tube Division								
thereof Europe	386	2,928	311	3,133	272	3,042	273	3,171
thereof North America	1	393	1	315	–	394		316
<b>Holding</b>	47	474	7	324	122	399	85	246
<b>In total<sup>2</sup></b>	<b>2,578</b>	<b>20,446</b>	<b>2,222</b>	<b>21,484</b>	<b>1,078</b>	<b>21,946</b>	<b>924</b>	<b>22,952</b>

1 Headcount

2 Total number of employees may differ because relevant data characteristics are not consistently available.

**EMPLOYEES WHO ARE NOT SALARIED**

—36

AS OF DECEMBER 31	2022	2021	2020
Trainees <sup>1</sup>	500	565	537
Temporary workers <sup>2</sup>	2,566	2,018	2,400

1 Headcount

2 Full Time Equivalent

EMPLOYEE DEPLOYMENT <sup>1</sup> — 37						
AS OF DECEMBER 31	2022			2021		
	Direct	Indirect	Overhead	Direct	Indirect	Overhead
Female	1,092	686	1,464	1,159	758	1,423
Male	10,200	6,627	2,956	9,888	7,495	3,153
<b>Total</b>	<b>11,292</b>	<b>7,313</b>	<b>4,420</b>	<b>11,047</b>	<b>8,253</b>	<b>4,576</b>

<sup>1</sup> Headcount

### Organization and dialog

To remain successful in the long term in a rapidly changing market environment, we need employees who think entrepreneurially, act on their own initiative and respond flexibly to change. Our corporate values of courage, ambition and respect are also based on this aspiration. Every employee at BENTELER has both the freedom and the mandate to contribute in the spirit of our company's goals, values and culture.

Our corporate values should be understood as a trinity that promotes harmonious cooperation. In the process, values come to the fore individually on different occasions. In an international company like BENTELER, respect for others is especially important in keeping us together as a global team. We also understand this to mean caring for others who are in need. Our employees have demonstrated this when, for example, in the Czech Republic they organized

private initiatives to receive the first refugees from the Ukraine and we, as a company, initiated a worldwide internal appeal for donations.

The Human Resources function safeguards and supports the group's corporate development and strategy by means of a uniform HR strategy with which we aim to reach all employees equally. The fundamental objective of the department is to identify internal needs at an early stage so that vacant or newly created positions can be filled with qualified and motivated employees. In doing so, we focus on the social and professional qualification of our own employees and promote them while taking country and region-specific requirements into account. In addition, the department supports both divisions in the introduction and implementation of HR organizational measures and tools, whereby we are increasingly digitalizing HR processes.

### OUR VALUES — 38

<b>COURAGE</b>	<p><b>Breaking new ground with curiosity and taking the initiative in making decisions</b></p> <ul style="list-style-type: none"> <li>— We are curious and break new ground.</li> <li>— We pursue our goals with passion and determination and take responsibility for the result.</li> <li>— We are courageous and change what exists for better solutions.</li> <li>— We fight with perseverance and discipline for what we consider important. Not against each other, but together for the best result.</li> </ul>
	<p><b>Striving for top performance every day</b></p> <ul style="list-style-type: none"> <li>— We strive for top performance and focus on the requirements of the future.</li> <li>— We are committed to going the extra mile needed for great solutions, which sets us apart from the competition.</li> <li>— We think beyond divisional borders for the benefit of customers and for the group.</li> </ul>
	<p><b>Collaborating in an appreciative manner and communicating openly and honestly.</b></p> <ul style="list-style-type: none"> <li>— We treat each other with respect.</li> <li>— We keep our promises and stand up for each other.</li> <li>— We trust each other and give each other space to develop and implement ideas independently.</li> <li>— Mistakes can happen and we are open to learning from them.</li> </ul>



### Developing skilled workers

Our competence model, which forms the basis of the annual appraisal, plays a major role in career development: It provides orientation for the "how" and a framework for further development at BENTELER. We're measured against it and it helps us focus on the key issues in our daily work. Regular information events held by top management supplement the goal and result orientation of our employees in terms of the relevance and orientation of their actions.

A key objective is to fill as many key and management positions as possible internally. In 2022, around 72% of vacant positions were filled with internal talent. We see this as proof that the processes and procedures implemented to date were successful. Because our leaders play an important role in successful talent management, we have enhanced the materials and training to meet the needs of our teams.

Succession planning is a central part of personnel-related risk management. We have conducted a total of 1,869 appraisals amongst salaried managers and 99 LIFT conferences (LIFT = Leading in Future Times) to determine talent and potential. We have managed 2,542 internal trainings without the need for external providers. Overall, specialists and executives took advantage of further training offers (29,875 participations in live training, 36,858 "clicks" on training videos). Various internal academies (Leadership, Financial, Compass, etc.) provide structured support for the further development of all employees worldwide.

In preparation for 2022, we revised the existing employee review process and completed negotiations with the works councils in order to go into rollout in 2022 following a pilot phase. The main changes are focus meetings, which take place twice a year and give all teams the opportunity to get to know and understand the priorities of the business and to develop goals for their own area of responsibility in the team. The tool is supplemented by individual development plans.



We focus on the needs of our employees. As a traditional industrial company, we consistently take new paths to respond to the drivers in a changing working world and shape it to suit our needs: as a hybrid of the classic and the modern – a model that has endured for over 145 years thanks to its ability to change.

— Heike Weishaupt, Vice President Human Resources, BENTELER Automotive

We want to remunerate employees according to their performance and develop them further. These are independent processes. Both paths meet when employees have gained competence and are needed in the company. We have therefore separated performance, competence and pay in order to ensure that remuneration is in line with the market and to offer employees the most varied development possible in the BENTELER career landscape. With all the possibilities, horizontally and vertically, across national borders, full or part time, in person or virtually.

The appraisal interviews were also globally revised and adapted to changing needs by HR Development for Global Grades. In 2022, the new approach was piloted in China, Czech Republic, Spain, USA and Brazil and will be rolled out globally in 2023. The electronic employee review documents in the existing GPS system that have been used to date will be supplemented by Excel formats for individual goals and development plans. These can then optionally be uploaded to the existing system. Due to the dynamic nature of the business, it's necessary to revise and adjust annual reviews and targets in shorter and more flexible cycles.

This also applies to the annual salary adjustment process, which, in the past, was based on performance ratings from the annual reviews and succession planning rounds. The salary review process is no longer based on this requirement and, starting in 2023, won't be based on individual criteria but on uniform factors for all global level employees,

such as the inflation rate, salary trends in the market, and the economic situation at BENTELER.

To be able to adequately support our employees, HR worked on further developing the "HR Target Operating Model" introduced in 2019: Our HR business partners provide direct support to the specialist departments. They support superiors and ensure that the same procedures are followed across departments. They are the point of contact for our employees in all HR matters. The Centers of Expertise (CoE) bundle expertise on topics such as HR-IT & Controlling, Compensation & Benefits, People & Organizational Development and HR Marketing.

We have bundled additional transactional services in central service units and are thus systematically expanding our goal of a globally uniform and lean, yet powerful and professional HR organization. This is supported by an internal organization that, among other things, bundles and optimizes HR service processes. In this way, we pursue the implementation and focus on centrally provided services that are as digitalized and automated as possible.

### Employee benefits

Our corporate value respect guides us through the process of hiring new employees, avoiding any form of discrimination. Our employees receive remuneration in keeping with the market. Depending on their classification, this also includes

a market-typical bonus and a wide range of fringe benefits in addition to their basic salary. Our global Compensation & Benefit Team ensures a globally uniform approach to the assessment and classification of core professional tasks, compensation, and contractual fringe benefits. Dependent on location and country, fringe benefits may include company pensions, entitlement to the use of company cars as well as health and other insurance benefits.

The jobs we create around the world are filled locally and compensated appropriately. An analysis of the Automotive Division and the regional headquarters in Germany, the Czech Republic, Spain, the USA, China and Brazil showed that starting salaries significantly exceed the applicable local minimum wage. In China and the US, where there is no collective bargaining, BENTELER applies salary bands that take account of minimum pay and local market factors. Here too, the lowest pay is significantly above the applicable minimum wage.

After a strict austerity course, we were able to invest more in benefits for our workforce again in 2022. In Brazil, we supported an initiative against breast cancer. Numerous family days and open days were held in Europe, and gifts were given out to employees' children in Germany at Christmas. There were numerous initiatives for better health, such as the launch of Wellpass, a discounted fitness offer, workshops on healthy leadership and other training events.

## Flexible working models

The places where we work in future will become more diverse. That's why we rolled out a global Mobile Working Policy in 2021. It gives employees and managers orientation on the topic and defines the framework for local managers. To successfully implement mobile working, local working conditions such as legal requirements must be taken into account. In addition, we offer our employees modern working conditions. In this way, we pursue the goal of ensuring that they can always be successful in a changing world of work as well as reconcile their professional and private interests. In doing so, we go beyond legal requirements in some cases. Our offers include, for example, flexible working hours, part-time work and mobile working as far as they are compatible with operational processes.

Promoting personal responsibility enables the implementation of individual solutions for shaping the reality of our employees' own lives. COVID-19 lifted us overnight to the state of the art in mobile and distributed working that allows family and work, hobby and job, personal preferences and career,

etc. to be combined in a way that suits everyone. It's all about balance and promoting the health of all employees.

In addition to flexible working hours and local flexibility, parental leave is an important element in promoting the compatibility of career and family. In the year under review, a total of 417 employees took parental leave within the BENTELER Group, of which 29% were male and 71% female.

## Engaging employees

Employee representation has always had a high priority at BENTELER. The management has worked with employee representatives and unions respectfully and constructively for years. The cooperation results in regular, trust-based exchanges that contribute to the future viability of the company. It's based on the legal requirements that apply around the world. Furthermore, BENTELER is also guided by the Convention on the Application of the Principles of the Right to Organize and the Right to Collective Bargaining (ILO Convention No. 98). The

employee representative bodies are comprehensively informed about important operational changes in good time. All statutory information requirements are complied with. The entire workforce is informed about important developments in works meetings or so-called town hall meetings. To participate in all significant corporate events and to be informed about the current status of business activities and business planning, employees organize themselves in regular conferences and staff meetings.

In order to maintain balance in the organization, it's important to us that we preserve the participation rights of employees in the form of representative bodies. These include works council bodies on all levels: the local works council, the Gesamt- and Konzernbetriebsrat as well as the European Works Council, the Supervisory Board bodies for the employee side and various committees, such as the "New Media" or "Economic Committee". We respect trade union associations, any employer-related obligations for information or approval that result from them, and the right of employees to strike.

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## Promoting the next generation

The global market is characterized by increasing competitive pressure and a changing economic environment. We are convinced that we will only be able to successfully meet these and future challenges with excellently trained employees. The continued development of performance and talent management was the central element for developing and retaining our internal talent for the future in the reporting year.

This is why we offer a variety of commercial and technical apprenticeships and combined degree programs worldwide. We now have more than 30 years of training experience and more than 20 years of experience as a partner for combined courses. Our goal is to increase the number of women in skilled trades that historically tended to be practiced by men in the industrial sector.

We know how important it is to train young people in order to empower young employees at an early stage and develop skilled workers. That's why we provide training in a variety of apprenticeships. Even in the year under review, which was characterized by critical developments, 500 young people were in training worldwide (previous year: 565), of whom 36 were students with a combined program to obtain a state education and a university degree, 9 female and 27 male.

Another program that our training and further education center in Paderborn has been pursuing for many years, called "Schule und Betrieb am Samstag" ("School and Work on Saturday"), offered around 70 school students the opportunity to receive practical career guidance on 20 Saturdays in the year under review.

### TRAINEES<sup>1</sup>

AS OF DECEMBER 31, 2022	Female	Male	Total
BENTELER Group	100	400	500
Automotive Division	78	234	312
thereof Northern Europe	2	109	111
thereof NAO	3	12	15
thereof Mercosur	70	97	167
thereof Asia/Pacific	0	1	1
thereof other	3	15	18
Steel/Tube Division	18	166	184
Holding	4	0	4

<sup>1</sup> Headcount

## Personal development

With regard to the further qualification of our employees, we pay particular attention to recognizing and promoting individual strengths. For this reason, the BENTELER Group offers customized courses that enable employees at all levels to fully realize their professional potential. Every year, all employees worldwide receive individual feedback and take part in development meetings, which are supported by a global tool for non-tariff employees. Annual qualification discussions adapted to country-specific conditions are also held with employees covered by collective bargaining agreements. In doing so, we motivate our employees to engage in lifelong learning.

We have developed a digital toolbox that enables them to learn on the job and support their development. It's available to all employees with a BENTELER IT account. The toolbox contains around

130 offers to promote continuous learning and further development. The most popular formats are learning videos on topics such as giving feedback, preparing development meetings and dealing with change. This enables our employees to use learning content in an agile and demand-oriented manner and to actively integrate it into their everyday work.

In order to spread knowledge quickly internationally, we rely on digital learning formats, such as the training course "Working and Leading Virtually". These supplement classic seminars and trainings. The focus is on blended learning. Training and exchange sessions as well as learning nuggets in the form of videos and e-learning serve the different needs and types of learners. This allows our employees to learn when and where they want. The program is already available to many employees worldwide. Our goal is to increase the use of high-quality and effective e-learning to provide access to learning content for all.

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## Continuous learning

The BENTELER Academy is another global initiative to continuously develop employees worldwide both professionally and methodically. With carefully selected learning concepts, we aim to pass on tailored knowledge to our employees so that we are always in a position to provide value-oriented solutions for our customers. A global network of experts and internal trainers offers various training courses and workshops on finance, logistics, project management, quality and information technology. In addition, our employees take on multiplier roles as internal lecturers, thus further developing their own competencies and skills at the same time.

The focus of our training and development measures in 2023 will continue to be on teaching managers methods that support successful leadership in the VUCA<sup>1</sup> world. This includes topics such as flexibility, agility, cooperation in teams as well as appreciative development dialogs and health. These are addressed in our new training/workshops for managers, “Leading Organizations in Volatile Times” and “Leading Healthily.” In addition, we offer small virtual learning units in which we introduce managers as well as interested employees to the topic of coaching and provide them with practical tools for daily use. To strengthen collaboration in teams, our portfolio also includes various workshop formats for different topics.

The goal of our global exchange platform is to create an internal and worldwide network. Here, colleagues have the opportunity to exchange ideas and share best practice experiences. In 2022, for example, dealing with the COVID-19 situation, resilience, dealing with emotions, mobile working, and systemic questioning techniques were addressed. In Germany, so-called “Lunch & Talks” are held monthly on specific topics. In this way, we promote continuous, agile, and demand-driven learning in our organization while providing a platform for exchange between top management and executives at all levels.

### AVERAGE HOURS OF TUITION<sup>1</sup>

	Automotive Division		Steel/Tube Division		Holding		Group	
	2022	2021	2022	2021	2022	2021	2022	2021
TOTALS								
<b>By gender</b>								
Female	<b>12.3</b>	8.5	<b>3.6</b>	2.1	<b>8.8</b>	7.2	<b>11.1</b>	7.8
Male	<b>11.5</b>	8.6	<b>5.7</b>	2.4	<b>13.9</b>	12.8	<b>10.4</b>	7.4
<b>By employee category</b>								
Employees	<b>10.9</b>	7.9	<b>5.5</b>	2.3	<b>11.4</b>	10.6	<b>9.8</b>	6.9
Management	<b>19.8</b>	17.1	<b>6.8</b>	3.3	<b>12.0</b>	9.3	<b>17.1</b>	14.2

<sup>1</sup> Based on hours recorded in the Learning Management System. This is currently being further implemented in the group. Employee coverage was 74% in 2020, 80% in 2021, and 82% in 2022. The actual average value may be higher than these values.

<sup>1</sup> VUCA = Volatility, Uncertainty, Complexity and Ambiguity

### Customized development concepts

The employees and teams at BENTELER are the basis of our success. We make cooperation more effective and successful with tailor-made team development concepts. In doing so, we rely on various systematic and agile tools and methods.

We therefore specifically promote exchange among managers, employees and those responsible for further training. The Center of Expertise for Personnel and Organizational Development sets the strategic framework, defines the global standard processes and designs the training programs. This is done in close coordination with those responsible for human resources development in the regions, who review the offerings with regard to cultural requirements and adapt them as necessary. Our experts also act as trainers, moderators and coaches and in this way support managers and employees.

### HR marketing, recruiting and employer branding on social media

BENTELER relies increasingly on targeted online campaigns to attract and recruit new applicants. Among other things, we are present on Instagram and Google with target group-specific campaigns for BENTELER education and training. We use a Facebook campaign to address specialists for our multilingual shared service center in the Czech Republic, and we also recruit employees for various locations in Germany, the Czech Republic, Hungary or the USA via social media.

Click rates, dwell time and the number of applications increased significantly with the use of digital marketing of job offers. We also use our own channels on LinkedIn, Facebook, Instagram and Xing to promote career-related content and provide insights into working life at BENTELER, which is regularly awarded as a TOP employer. In addition, we participate in face-to-face events as well as digital career and training fairs and offer virtual workshops to schools and universities for career orientation or career entry.

### Attractive employer

The BENTELER Group is not only an attractive employer for new employees, but can also count

on the experience and expertise of long-standing employees. 22% of our workforce has been with the BENTELER Group for more than 20 years, another 23% have been with us between 10 and 20 years, 18% have been with the company between 5 and 10 years, and 38% have been with BENTELER for 5 years or less.

The turnover rate is an important indicator of employee satisfaction for us. It indicates the percentage of employees and trainees who voluntarily left the company. In 2022, the rate for the BENTELER Group was 7.3% (previous year: 6.1%), while in the Automotive Division it was 8.1% (previous year: 6.8%) and in the Steel/Tube Division it was 3.6% (previous year: 3.1%). The key figure does not take temporary workers into account.

TURNOVER RATE		—41
IN % BY REGION	2022	2021
Automotive Division	8.1	6.8
thereof Northern Europe	5	3.1
thereof Southern Europe	3.5	2.8
thereof NAO	16.7	15.2
thereof Mercosur	9.2	8.1
thereof Asia/Pacific	14.8	14.4
thereof other	4.8	3.6
Steel/Tube Division	3.6	3.1
Holding	5.8	2.2
Group	7.3	6.1

## Occupational safety and health protection

The well-being and health of all employees are important to us. We therefore work continuously to maintain and, where possible, improve the health and safety of our employees. That is why, among other things, the principle “everyone must ensure that the health and safety of all employees are guaranteed” is anchored in the Code of Conduct.

The typical work processes at automotive suppliers differ significantly from those in steel production and hot forming. The BENTELER Group has therefore implemented numerous technical and organizational measures to protect its employees.

To this end, the Automotive Division uses a global health and safety management system that is regularly reviewed by internal and external audits. 42 production sites are certified to the ISO 45001 standard. A management system based on ISO 45001 has also been introduced at the Steel/Tube Division, but has not yet been certified. It covers all employees, activities and workplaces.

Both divisions have relevant management goals for various accident indicators, ergonomic improvements or safe machines, especially at plant level. We are convinced that all accidents are fundamentally preventable and therefore pursue the vision of “zero accidents”. To further improve safety via preventive measures, first aid cases as well as near misses will

be systematically evaluated in the future. The results will then be used to identify potential for improvement and employees will be further trained on the basis of the findings.

## Promoting health in a targeted way

With regard to the sickness rate in the Automotive Division, the global project consisting of an interdisciplinary project team from the departments of personnel development, HR controlling and HR processes as well as safety, health & environment continued. A major advantage is the exchange of best practices among plants throughout Germany. The regular exchange of experience between HR managers across plants and divisions has resulted in a toolbox that contains an overview of the measures that have been implemented locally in the plants and divisions. Each plant or area can decide whether the measures are also relevant for the respective plant or area. For example, the CIP Cycle (Continuous Improvement Cycle), a measure for the systematic and structured analysis of sick leave, has already been adopted in 2022.

To better protect the mental health of our employees and increase the compatibility of work and family, we are working on various offers for psychosocial counseling services, seminars and joint sports activities.

## Coronavirus task force

2022 continued to be characterized by the COVID-19 pandemic with, in some cases, increased protective measures, sickness rates, delays and disruptions in the logistics chain and associated short-time working in Germany as well as similar measures in other countries.

The zero Covid policy in China led to a plant lockdown where production continued and workers had to work and also be housed on site at the plant. We worked intensively on provisioning the plant as well as the social life there, in order to make the conditions as suitable as possible for everyone’s needs.

## Making work safe

Work-related hazards and risks are regularly assessed as part of the established management systems and appropriate control measures are implemented to eliminate or minimize them. These are therefore subject to, among other things, the usual management reviews, committee meetings, and departmental improvement measures.

Before starting work, employees receive initial general instruction and job-related safety instruction from their respective managers. Depending on the location or regional requirements, they receive further instruction or training – for example, before taking



up new activities or using new machines. As part of the “lessons learned” framework, employees are also informed about accidents at other plants in order to prevent such accidents in their own plant.

### Suggest improvements

Near miss reporting systems are in place at all plants. In addition, the Automotive Division’s Health & Safety Guideline, for example, describes how employees can remove themselves from work situations that they believe could cause injury or illness. For instance, our employees are encouraged to report observed situations or safety-critical concerns to their managers or known safety professionals.

At the same time, it is also anchored in our corporate values that our employees are to be treated with respect and that they should not suffer any disadvantage in the event of critical reports. Rather, constructive reports help to constantly supplement improvement measures within the framework of the management system and to further reduce the accident rate. In the Steel/Tube Division, employees can participate in making work safer. This is done through the “EVA process” (Attitude and Behavior Change for Occupational Safety). Risk assessments, in which supervisors and colleagues take a fresh look at situations, reveal unsafe conditions and actions, which are then discussed together with the respective employee and, if necessary, measures are defined. These are continuously processed.



Employers have a social and environmental responsibility. This is demanded by the UN Charter for Sustainability and is a benchmark for the attractiveness of companies. For decades, we have ensured that we are involved locally, live the value of “respect” and face up to our responsibility to society and the environment.

— Dr. Christine Tölle, Managing Director, BENTELER Business Services GmbH

To protect the health of our employees beyond accident prevention, the plants have appropriate occupational health services with the aim of meeting all legal requirements. Preventive medical checkups are documented via BENTELER's human resources department and initiated by managers. Regular dates for occupational safety committee meetings or workplace inspections are regularly planned and communicated.

In addition to occupational health care, the BENTELER Group offers its employees the opportunity to promote their own health in cooperation with health insurance companies, pension insurance companies, employers' liability insurance associations, occupational physicians and other various external

contacts. In addition to online programs, regional offerings, screenings, and on-site consultations, social counseling provides support for issues outside the context of the workplace.

In the Automotive Division, the accident frequency rate in the reporting year was 1.2 accidents per million hours worked (recordable accident rate). The positive trend of recent years was thus continued. Detailed accident analyses based on the experience of our employees and regular assessments of accident occurrences at all relevant management levels have contributed to this. In addition to individual improvement programs at various plants, the Walk-Observe-Communicate (WOC) system that was introduced contributes to the appreciation

of safety-compliant behavior and thus to this significant improvement. This raises the awareness of safe behavior through positive reinforcement of safe working methods by supervisors and drawing attention to unsafe behavior. To this end, we try to allow employees to identify unsafe behaviors through their own observations.

In the Steel/Tube division, bruises and cuts to fingers and hands are the most common injuries. We consider appreciative communication and attentive behavior to be important levers to improve this rate. That's why we have introduced a feedback process on work behavior that increases employee awareness of workplace hazards.

**ACCIDENT FIGURES AUTOMOTIVE DIVISION – RECORDABLE ACCIDENT RATE<sup>1</sup>**

—42

	2022	2021	2020
Accident rate	1.2	1.9	2.4
Absolute number of accidents	48	56	93
(First aid cases)	1,189	1,143	1,380
Deaths	0	0	0

**ACCIDENT FIGURES STEEL/TUBE DIVISION – LOST TIME INJURY FREQUENCY RATE (LTIR)<sup>1</sup>**

—43

	2022	2021	2020
Accident rate	10.9	9.0	7.7
Absolute number of accidents	56	54	37
(First aid cases)	295	287	260
Deaths	0	0	0

<sup>1</sup> Per million working hours.

## Diversity and equal opportunities

Interaction between BENTELER Group employees is based on mutual respect. No one may be personally discriminated against – whether because of their country of origin, skin color, gender, age, religion, or because of disabilities, sexual orientation or political and trade union activity. We have implemented appropriate guidelines as well as organizational precautions to ensure respectful interaction within the organization and with business partners. Among other things, there is a representative for the General Equal Treatment Act (AGG, Allgemeines Gleichbehandlungsgesetz).

The global average age of our workforce is 42. There are 4,107 employees in the <30 age group, 12,951 employees in the 30–50 age group, and 5,966 in the >50 age group.

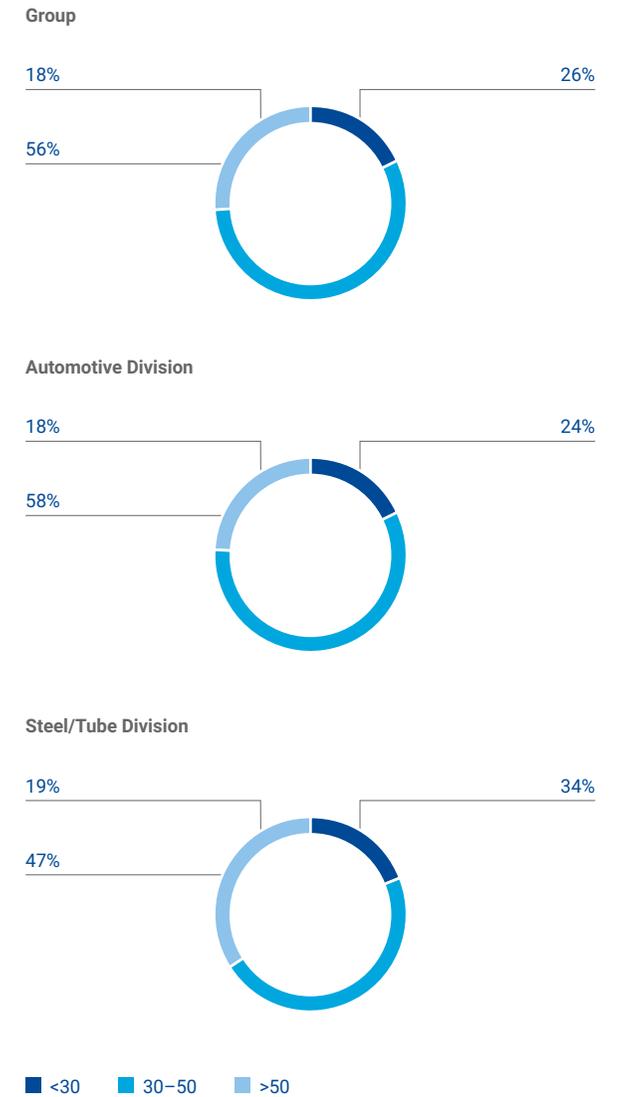
In 2022, our global workforce consisted of 99 nationalities.

We promote work-life balance so that all employees have the opportunity to take advantage of their professional opportunities. To this end, at the BENTELER Group we supports flexible working hours, the opportunity to work part time, and child care in our own day care center in Paderborn. Numerous additional fringe benefits are based on the needs of the employees as well as the respective location and employment relationship. In Spain, for example, the costs for childcare are subsidized as part of a “Flexible Benefit System”. As part of deferred compensation, employees can choose between various tax-exempt or tax-privileged fringe benefits. BENTELER ensures equal rights and advancement of women through a gender-neutral evaluation system and fair compensation.

We continue to strive to increase the proportion of our female employees and pay particular attention to equal opportunities for all applicants when filling vacancies. In 2022, we employed 3,242 women and 19,784 men worldwide. Of 2,753 management positions, 512 were held by women. The proportion of female executives was thus 18.6%. We aim to increase the proportion of women in management positions to 25% by 2030.

### AGE DISTRIBUTION<sup>1</sup> 44

AS OF DECEMBER 31, 2022



<sup>1</sup> Headcount

<b>AVERAGE AGE BY GENDER</b>				<b>—45</b>
AS OF DECEMBER 31, 2022	Female	Male	Total	
Belgium	42.0	40.0	40.1	
Brazil	29.8	35.6	35.0	
China	36.3	36.1	36.1	
Germany	43.2	45.5	45.3	
France	46.0	44.3	44.7	
Great Britain	51.8	47.0	47.5	
India	30.0	35.0	34.8	
Japan	48.2	52.2	51.0	
Mexico	38.6	41.9	41.5	
Norway	46.2	42.9	43.3	
Austria	36.6	41.9	38.4	
Poland	36.6	32.6	33.4	
Portugal	40.7	39.8	40.0	
Russia	40.3	38.3	38.8	
Switzerland	46.7	43.9	44.1	
Sweden	46.1	41.3	42.0	
Slovakia	39.1	41.3	41.0	
Spain	41.3	43.3	43.1	
South Africa	37.8	39.4	39.0	
South Korea	47.0	49.0	48.0	
Thailand	45.0	44.5	44.7	
Czech Republic	39.8	41.1	40.8	
Turkey	34.4	34.7	34.6	
Hungary	42.9	43.1	43.0	
USA	44.1	41.8	42.4	
<b>Total</b>	<b>40.7</b>	<b>42.1</b>	<b>41.9</b>	



Goal by 2030: Increase the proportion of women in management positions to 25%.

The integration of people with special disabilities is also a given for the BENTELER Group. In 2022 alone, 525 people employed at German sites had reported disabilities (regardless of the degree of disability). Due to legal requirements, systemic recording and evaluation of employees with disabilities is not possible in many countries.

In the future, we intend to further intensify measures relating to diversity and equal opportunities in our workforce. In addition to coaching and mentoring programs for women, we plan to hold diversity mindset workshops and exchange experiences with other female company representatives.

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PROPORTION OF WOMEN	Automotive Division		Steel/Tube Division		Holding		Group	
	2022	2021	2022	2021	2022	2021	2022	2021
IN % (AS OF DECEMBER 31)								
Employees	<b>14</b>	14.6	<b>8</b>	8.3	<b>50</b>	41.7	<b>14</b>	14
Management functions <sup>1</sup>	<b>18.2</b>	17.2	<b>10.8</b>	8.7	<b>35.2</b>	33.5	<b>18.6</b>	17.2

<sup>1</sup> Management und Executive Functions

### Digitalization makes everyday work easier

As a global company, digitalization enables BENTELER to allocate services around the globe. The idea of virtual shared service teams for HR was born in 2022 and will be designed and implemented in 2023.

By using a ticket system that already exists in IT via an electronic tool, employees can be assigned tasks regardless of their location. This enables the promotion of expert knowledge and careers across regions, know-how sharing and clearly defined, standardized services. The prerequisite for this is that all employees in commercial roles have access to the IT systems with their own IT devices.

As of January 01, 2022, the two “worlds of figures” – Finance and HR – were mapped in a single SAP BI system. The consolidation has significantly improved data reconciliation and the quality of the figures. The standardized reporting system provides a transparent basis for all evaluations required for internal and external stakeholders.

# SOCIAL RESPONSIBILITY



01

### Solidarity with war victims

Great willingness to help was shown at BENTELER in the course of the Ukraine war. Within a few days, for example, the company set up a group-wide donation initiative in cooperation with UN refugee aid. In addition, many colleagues got involved privately: through collection campaigns, the reception of refugees and private donations.



02

### Help where it's needed – BENTELER tents for earthquake victims

During the earthquake in Turkey and Syria at the beginning of February 2023, many people lost their homes and many things that were dear and important to them. In one of the worst hit areas, the Hatay region, BENTELER launched a special initiative. Thanks to numerous donations from our colleagues in Turkey and Spain and support from the company, a tent city was set up in Hatay-Samandağ. Each tent is 24 m² in size and can accommodate up to eight people.



03

### Improving biodiversity

In the reporting year, we planted trees to improve biodiversity at our sites in Mór, Hungary, and Rumburk, Czech Republic. At our site in Warburg, Germany, a wildflower area was created, which will be expanded in the course of 2023.



04

### Committed

In September 2022, employees from all BENTELER regions participated in World Clean-Up Day to work together to rid the environment of waste.



05

### Health in focus

We sensitize our employees to think more about self-care. This is done in workshops with our managers and, among other things, in the form of a subsidized sports program in Germany and Austria.



06

### Diversity is a central pillar of our work culture

In 2022, people from 99 nations worked at BENTELER sites in 26 countries. We believe that diversity enriches and different perspectives enable the best solutions.



07

### BENTELER's Volunteers: Help on site

We provide support in the communities in which we operate through various volunteer activities: In the North and South America regions, for example, our colleagues volunteer as part of the "BENTELER's Volunteers" program or regularly collect blankets, clothing and toys. These are donated to local institutions to support people in need.

# GRI CONTENT INDEX

## GRI 1: GRI STANDARDS 2021

Statement of use: The BENTELER Group reports with reference to the GRI Standards for the reporting year 2022 (January 1, 2022 to December 31, 2022).

GRI 1 applied: GRI 1: Foundation 2021

Applicable GRI Sector Standard(s): None

GRI Standards	BENTELER Sustainability Report 2022	Comments
<b>GRI 2: GENERAL DISCLOSURES 2021</b>		
<b>Organization and Reporting</b>		
GRI 2-1	Organizational details	pp. 6 – 8
GRI 2-2	Entities included in the organization's sustainability reporting	p. 8
GRI 2-3	Reporting period, frequency and contact point	Imprint
GRI 2-4	Restatements of information	None.
GRI 2-5	External assurance	All tables of key figures in the chapter Environment (pp. 40 – 52) have been audited by an external auditor.
<b>Activities and Employment</b>		
GRI 2-6	Activities, value chain and other business relationships	pp. 4 – 5, 13, 15 – 16, 24 – 26, 34 – 38
GRI 2-7	Employees	p. 55
GRI 2-8	Workers who are not employees	p. 55
<b>Governance</b>		
GRI 2-9	Governance structure and composition	pp. 7 – 8
GRI 2-10	Nomination and selection of the highest governance body	pp. 6 – 8
GRI 2-11	Chair of the highest governance body	p. 7
GRI 2-12	Role of the highest governance body in overseeing the management of impacts	p. 7

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<b>GRI Standards</b>		<b>BENTELER Sustainability Report 2022</b>	<b>Comments</b>
GRI 2-13	Delegation of responsibility for managing impacts	<a href="#">p. 7</a>	
GRI 2-14	Role of the highest governance body in sustainability reporting	<a href="#">p. 7</a>	
GRI 2-15	Conflicts of interest	<a href="#">p. 22</a>	
GRI 2-16	Communication of critical concerns	<a href="#">pp. 21, 22</a>	
GRI 2-17	Collective knowledge of the highest governance body		The Supervisory Board is informed about the implementation status of sustainability issues at Audit Committee meetings.
GRI 2-18	Evaluation of the performance of the highest governance body		The members of the Supervisory Board of BENTELER International AG receive annual fixed compensation, which is renewed each year by the Annual General Meeting.
GRI 2-19	Remuneration policies		For confidentiality reasons, the data is not reported.
GRI 2-20	Process to determine remuneration		For confidentiality reasons, the data is not reported.
GRI 2-21	Annual total compensation ratio		For confidentiality reasons, the data is not reported.
<b>Strategy, guidelines, policies</b>			
GRI 2-22	Statement on sustainable development strategy	<a href="#">pp. 4–5</a>	
GRI 2-23	Policy commitments	<a href="#">pp. 17, 59, 34–37, 66</a>	<a href="#">➤ BENTELER Guidelines and Code of Conduct</a> <a href="#">➤ BENTELER Policy Statement</a> <a href="#">➤ BENTELER Supplier Code of Conduct</a> <a href="#">➤ Modern Slavery Statement</a> <a href="#">➤ Compliance at BENTELER</a>
GRI 2-24	Embedding policy commitments	<a href="#">pp. 4–5, 10, 13, 18–22, 34–38, 69</a>	
GRI 2-25	Processes to remediate negative impacts	<a href="#">pp. 20–22, 38, 66–67</a>	
GRI 2-26	Mechanisms for seeking advice and raising concerns	<a href="#">pp. 21, 38</a>	
GRI 2-27	Compliance with laws and regulations		There were no legal proceedings against BENTELER for corruption, export control violations, anti-competitive behavior or cartel and monopoly formation in the reporting year.
GRI 2-28	Membership associations	<a href="#">p. 17</a>	
<b>Stakeholder engagement</b>			
GRI 2-29	Approach to stakeholder engagement	<a href="#">pp. 15, 16</a>	
GRI 2-30	Collective bargaining agreements	<a href="#">p. 58</a>	

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GRI Standards		BENTELER Sustainability Report 2022	Comments
<b>GRI 3: MATERIAL TOPICS 2021</b>			
GRI 3-1	Process to determine material topics	p. 17	
GRI 3-2	List of material topics	p. 17	
<b>MATERIAL TOPICS</b>			
<b>GRI 204</b>	<b>Procurement Practices 2016</b>		
GRI 3-3	Management of material topics	p. 34	
GRI 204-1	Proportion of spending on local suppliers	p. 35	
<b>GRI 205</b>	<b>Anti-corruption 2016</b>		
GRI 3-3	Management of material topics	pp. 18 – 19	
GRI 205-2	Communication and training about anti-corruption policies and procedures	p. 21	
<b>GRI 206</b>	<b>Anti-competitive Behavior 2016</b>		
GRI 3-3	Management of material topics	pp. 18 – 22	
GRI 206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices		There were no legal proceedings against BENTELER for corruption, export control violations, anti-competitive behavior or cartel and monopoly formation in the reporting year.
<b>GRI 301</b>	<b>Materials 2016</b>		
GRI 3-3	Management of material topics	p. 49	
GRI 301-1	Materials used by weight or volume	p. 49	
<b>GRI 302</b>	<b>Energy 2016</b>		
GRI 3-3	Management of material topics	pp. 12 – 14, 40 – 43	
GRI 302-1	Energy consumption within the organization	pp. 41 – 43	
GRI 302-3	Energy intensity	p. 42	
GRI 302-4	Reduction of energy consumption	pp. 41 – 43	
<b>GRI 303</b>	<b>Water and Effluents 2018</b>		
GRI 3-3	Management of material topics	pp. 12, 51 – 52	
GRI 303-1	Interactions with water as a shared resource	p. 51	
GRI 303-2	Management of water discharge-related impacts	p. 52	
GRI 303-3	Water withdrawal	pp. 51 – 52	

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<b>GRI Standards</b>		<b>BENTELER Sustainability Report 2022</b>	<b>Comments</b>
<b>GRI 304</b>	<b>Biodiversity 2016</b>		
GRI 3-3	Management of material topics	<b>p. 52</b>	
<b>GRI 305</b>	<b>Emissions 2016</b>		
GRI 3-3	Management of material topics	<b>pp. 5, 12 – 13, 40 – 47</b>	
GRI 305-1	Direct (Scope 1) GHG emissions	<b>pp. 45 – 46</b>	
GRI 305-2	Energy indirect (Scope 2) GHG emissions	<b>pp. 45 – 46</b>	
GRI 305-3	Other indirect (Scope 3) GHG emissions	<b>p. 47</b>	
GRI 305-5	Reduction of GHG emissions	<b>pp. 12 – 13, 44 – 47</b>	
<b>GRI 306</b>	<b>Waste 2020</b>		
GRI 3-3	Management of material topics	<b>pp. 12, 49 – 50</b>	
GRI 306-1	Waste generation and significant waste-related impacts	<b>pp. 49 – 50</b>	
GRI 306-2	Management of significant waste-related impacts	<b>pp. 49 – 50</b>	
GRI 306-3	Waste generated	<b>p. 50</b>	
GRI 306-4	Waste diverted from disposal	<b>p. 50</b>	
GRI 306-5	Waste directed to disposal	<b>p. 50</b>	
<b>GRI 308</b>	<b>Supplier Environmental Assessment 2016</b>		
GRI 3-3	Management of material topics	<b>p. 34</b>	
GRI 308-1	New suppliers that were screened using environmental criteria	<b>p. 37</b>	
GRI 308-2	Negative environmental impacts in the supply chain and actions taken	<b>pp. 35 – 37</b>	
<b>GRI 401</b>	<b>Employment 2016</b>		
GRI 3-3	Management of material topics	<b>pp. 12, 54 – 58</b>	
GRI 401-1	New employee hires and employee turnover	<b>p. 62</b>	
GRI 401-3	Parental leave	<b>p. 59</b>	
<b>GRI 402</b>	<b>Labor/Management Relations 2016</b>		
GRI 3-3	Management of material topics	<b>pp. 12, 54 – 58</b>	

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GRI Standards		BENTELER Sustainability Report 2022	Comments
<b>GRI 403</b>	<b>Occupational Health and Safety 2018</b>		
GRI 3-3	Management of material topics	pp. 63–65	
GRI 403-1	Occupational health and safety management system	p. 63	
GRI 403-2	Hazard identification, risk assessment, and incident investigation	pp. 63–65	
GRI 403-3	Occupational health services	p. 65	
GRI 403-4	Worker participation, consultation, and communication on occupational health and safety	p. 65	
GRI 403-5	Worker training on occupational health and safety	pp. 63–65	
GRI 403-6	Promotion of worker health	p. 63	
GRI 403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	pp. 63–65	
GRI 403-9	Work-related injuries	pp. 63–65	
GRI 403-10	Work-related ill health	pp. 63–65	
<b>GRI 404</b>	<b>Training and Education 2016</b>		
GRI 3-3	Management of material topics	pp. 57, 60–61	
GRI 404-1	Average hours of training per year per employee	p. 61	
GRI 404-2	Programs for upgrading employee skills and transition assistance programs	pp. 60-62	
<b>GRI 405</b>	<b>Diversity and Equal Opportunity 2016</b>		
GRI 3-3	Management of material topics	pp. 12, 66–68	
GRI 405-2	Ratio of basic salary and remuneration of women to men	p. 66	
<b>GRI 406</b>	<b>Non-discrimination 2016</b>		
GRI 3-3	Management of material topics	p. 66	
<b>GRI 407</b>	<b>Freedom of Association and Collective Bargaining 2016</b>		
GRI 3-3	Management of material topics	pp. 15, 16, 59	
<b>GRI 408</b>	<b>Child Labor 2016</b>		
GRI 3-3	Management of material topics	pp. 34–37	

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<b>GRI 409</b>	<b>Forced or Compulsory Labor 2016</b>		
GRI 3-3	Management of material topics	p. 37	
<b>GRI 413</b>	<b>Local Communities 2016</b>		
GRI 3-3	Management of material topics	pp. 15, 16	
<b>GRI 414</b>	<b>Supplier Social Assessment 2016</b>		
GRI 3-3	Management of material topics	p. 34	
GRI 414-1	New suppliers that were screened using social criteria	pp. 34–37	
GRI 414-2	Negative social impacts in the supply chain and actions taken	pp. 34–37	
<b>GRI 416</b>	<b>Customer Health and Safety 2016</b>		
GRI 3-3	Management of material topics	p. 27	
GRI 416-1	Assessment of the health and safety impacts of product and service categories	p. 27	

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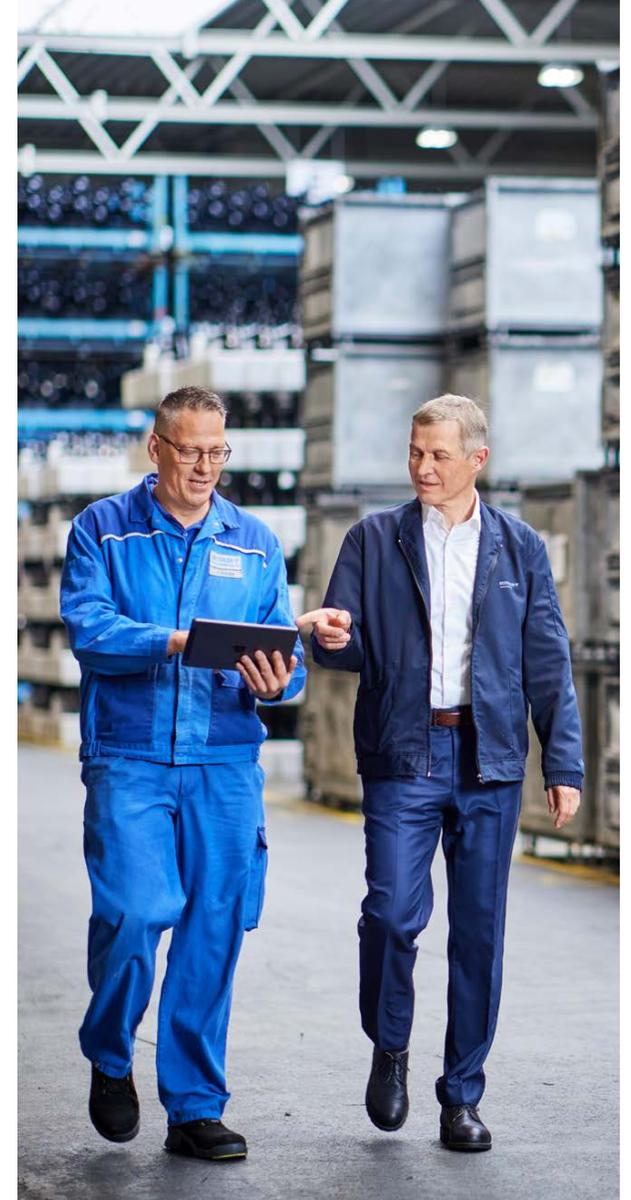
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