

SUSTAINABILITY REPORT

2022



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Foreword

Dear Readers,

The European gas and energy crisis, which is being exacerbated by the sharp rise in inflation, is affecting us all and also having a significant impact on the business activities of MAN Truck & Bus¹. Energy prices for businesses and consumers have multiplied over the past year, causing great uncertainty and instability in the economic markets. At the same time, the crisis has shown us that the shift toward an environmentally conscious and resource-conserving energy and power supply is non-negotiable. MAN wants to help shape this change with its “NewMAN” strategy. We believe that we can make our greatest contribution to change through the further development of our product portfolio, since the majority of greenhouse gas emissions are caused in the use phase. MAN is therefore expanding its fleet of battery-electric vehicles and is committed to swiftly expanding the necessary charging infrastructure for these as well. The aim is to prepare our vehicles for the future of automated, low-emission, digitalized driving.

Nevertheless, we naturally depend on multiple external factors in order to achieve our goals. The war in Ukraine and its consequences continue to affect MAN’s operations: We don’t know how long the conflict will last, how it will evolve, and what impact it will have going forward. Our supply chains have continued to be impacted by the war. For example, our cable harness suppliers from Ukraine were affected by outages; production and deliveries are now running again, albeit at a low level. The semiconductor supply bottlenecks resulting from the COVID-19 pandemic continue to be a matter of concern for us. On the whole, we expect the supply situation to remain complex into the near future – and for this reason, we are continuing to focus on securing our supply chains.

Particularly in times of crisis, MAN believes it has a duty to act responsibly, and embraces this action as an opportunity to secure its own business success and to meet the expectations of its stakeholders in politics, business, and society. This especially applies with regard to the

topic of sustainability. For this year under review, we have therefore reviewed our sustainability strategy – which was newly developed in 2021 – to ensure that we are on the right track with regard to our strategically relevant topics and continue to remain on this path over the long term. Going forward, we will focus on six action fields, into each of which we will pool our goals and measures to implement our transformation. For this process, we were guided by the Global Compact guidelines and the Sustainable Development Goals (SDGs) of the United Nations.

As a result of a product portfolio that is still heavily based on internal combustion engines, MAN is a significant contributor to global greenhouse gas emissions. We are, however, fully aware of this fact and our responsibility in this regard, and have therefore enshrined decarbonization as one of the key topics in our sustainability strategy. We want to become greenhouse-gas-neutral in terms of our carbon footprint by 2050 at the latest – we committed to this in 2021 as part of the Science Based Targets initiative (SBTi) for climate protection. By 2030, we intend for half of our vehicles sold in the EU to have zero-emission powertrains. Ultimately, our aim is that all new commercial vehicles sold by MAN will be powered by fossil-fuel-free means from 2040 onward. In order to achieve these ambitious goals, the electrification of our fleet is our primary focus. For instance, we will be mass-producing high-voltage batteries for e-trucks and buses at our site in Nuremberg from 2025 onward and will be investing around 100 million euros in this activity over the next five years. We are also continuing to expand our charging infrastructure in a joint venture with Scania, Volvo and Daimler, and intend to set up more than 1700 electric charging stations throughout Europe over the coming years.

To ensure a successful and sustainable transformation, MAN relies on its employees and regards the principles of sustainable corporate governance as the basis for its business success. We provide an attractive

¹ In this report, the terms MAN Truck & Bus and MAN are used synonymously. Both refer to the company MAN Truck & Bus SE.

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working environment for our employees and conduct our business with integrity towards customers and suppliers, based on legal and ethical standards. With the systematic implementation of the German Supply Chain Due Diligence Act (LkSG), which came into force on January 1, 2023, we are also committed to our corporate duty of care within our supply chains.

This report includes all relevant performance indicators and facts concerning our six action fields in order to transparently present our business activities with regard to sustainability criteria. It has been prepared in accordance with the standards of the Global Reporting Initiative (GRI) and selected information was audited by an auditing firm.

I hope that you find it informative!

Sincerely,



Alexander Vlaskamp
Chief Executive Officer of MAN Truck & Bus SE



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OUR COMPANY

MAN Truck & Bus is a member of the TRATON GROUP and one of Europe's leading commercial vehicle manufacturers. MAN is in the midst of transforming into a provider of environmentally friendly and more sustainable transportation and mobility solutions. The company has manufacturing operations in Germany and Poland as well as in South Africa and Turkey. All our activities in Russia (production and sales) were stopped in the

course of the war in Ukraine that started in 2022. In addition to vans, MAN produces lightweight to heavy-duty trucks for distribution and long-distance transport, construction site vehicles, and city, rural, and touring buses. The product portfolio is complemented by extensive sales and service activities.

2022

35,230 Employees worldwide

109,700 Incoming orders

11,331 Sales revenue in € million

139 Operating result in € million

2022

84,500 Units sold

58,100 Of which trucks

4,800 Of which buses

21,600 Of which MAN TGE

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The commercial vehicle industry is facing major challenges: In the future, vehicles will be increasingly autonomous and connected, and produce fewer emissions. We see this as an opportunity to systematically realign our company. The foundation for this is our “NewMAN” strategy. Its key elements are “Robust Company”, “Smart Innovator” and “Strong Team”, and it sets the strategic focus for the coming years. We are aiming to develop further our customer business by leading the way with sustainable solutions – and, as part of this transformation, we intend to present a fully autonomous, zero-emission vehicle by the end of this decade.

Economic development

In spite of global challenges such as the COVID-19 pandemic and the war in Ukraine, we have managed to successfully steer MAN as a company through these crises. Our order situation is positive, production output has recently stabilized significantly and our service business continues to develop in the right direction.

The war in Ukraine resulted in massive supply shortfalls for truck cable harnesses at MAN, leading to a shutdown at the producing plants in Munich and Krakow in mid-March 2022 and significant outages at the components plants in Nuremberg and Salzgitter. Together with our suppliers, we have managed to absorb the downtime in component production very well. Nevertheless, the situation remains particularly volatile and the supply chains are not yet fully intact again.

Despite a six-week production downtime at the truck plants in Munich and Krakow, as well as production halts at other MAN sites, MAN Truck & Bus recorded only a 10% decline in total unit sales to 84,500 (2021: 93,700) vehicles. Although truck sales fell by 13% to 58,100 (2021: 66,800) vehicles, the sales volume of buses rose to 4,800 (2021: 4,600) vehicles, marking a 4% increase over the previous year. Sales of MAN TGE transporters fell to 21,600 (2021: 22,200) vehicles, a 3% decrease in comparison to the previous year. Order intake at MAN Truck & Bus was, at 109,700 (2021: 143,500) vehicles, 24% below the figure for the previous year, since the acceptance of additional orders had also been handled restrictively.

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STRATEGY AND MANAGEMENT

Sustainability and corporate strategy

MAN's vision is to make our customers' business easier – through leading, sustainable solutions. We focus on smart and innovative products and services for digitalization, zero emissions, and autonomous driving.

Sustainability at the core of the NewMAN strategy



We want to live up to our social responsibility and see sustainability as a core element in order to survive in global competition. This is why we consider this issue to be an integral part of our corporate strategy. In implementing this, we oriented our approach as per the Global Compact guidelines and the Sustainable Development Goals (SDGs) of the United Nations, among other such standards.

Perspectives on the issue have changed significantly over the past decade, particularly as a result of the ever-evolving scientific evidence base on man-made climate change. Action at all political and societal levels is urgently needed, and business also has a key role to play in this fun-

damental transformation. The issues of climate and environmental protection, the assumption of social responsibility and sustainable corporate governance have become significantly more relevant, even among our customers in the traditionally very cost-conscious B2B sector. Last but not least, the EU is setting a clear direction for companies through increased regulation in the field of environmental and sustainability controlling and reporting.

A key challenge for MAN is the rapidly growing electrification of the vehicle industry, which is accompanied by other trends such as automation and digitalization. At the same time, we see these developments as an essential opportunity to make our contribution to mitigating climate change. This is why MAN is preparing to transform its business model. By enshrining sustainable transport and mobility as guiding principles in all areas of the company, we are aligning all our actions with these future requirements.

Decarbonization plays a central role in our sustainability strategy. The global transportation industry is responsible for around 8.2 Gt of CO₂ emissions (2019¹) – and MAN makes a significant contribution to this with its product portfolio. However, MAN also has the power to change this. We therefore intend to become greenhouse-gas-neutral in terms of our carbon footprint by 2050 at the latest – a goal that we committed to in 2021 as part of the Science Based Targets initiative (SBTi) for climate protection (→ page 16). The mobility of the future should not only be clean, but also safe. In addition to the shift toward commercial vehicles powered by greenhouse-gas-free means, MAN is therefore focusing on the safety of its products for drivers and road users.

The topic of the circular economy is also important to MAN as a commercial vehicle manufacturer, since it has a significant influence on its business model. For example, MAN purchased 480,000 tons of steel in

¹ Based on data from the International Energy Agency (IEA)

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2022 and is therefore responsible for a high resource requirement. That is why we are focusing on new approaches in this area, such as the reuse of materials and components or life cycle analyses, to address challenges such as resource scarcity and supply chain dependencies.

The path to a fundamental transformation of our business model would not be possible without our employees. However, MAN also faces challenges in the area of human resources, such as demographic change and the associated recruitment of talented specialists. Our goal is to be an attractive employer for our employees and potential applicants. To this end, we have developed a variety of benefits for our staff, including flexible working time models and professional development measures. At the same time, we believe that equal opportunities and diversity are essential for the future success of the company, and actively promote these.

MAN strives to continually develop its standards – not just in the quality of its products, but also with regard to topics such as compliance, ethics and integrity, which characterize good corporate governance. For this reason, combating corruption, fraud and discrimination is a high priority for us, which we aim to ensure through a compliance management system and various guidelines such as our Code of Conduct.

MAN also intends to fulfill its corporate duty of care in its supply chains. For this reason, we ensure that our supply chains are continually reviewed and audited with regard to social and environmental standards, which additionally strengthens our own economic resilience. Together with Volkswagen, we carefully examine the risks arising from the procurement of conflict materials, among other issues. Through the interplay of material acquisition, transport and trade, supply chains are very complex and harbor potential dangers such as child labor, systematic human rights

violations or discrimination. This requires a sensitive approach to the topic, which we aim to meet in the Volkswagen Group with our Raw Material Due Diligence Management System, among other measures.

We view the ESG criteria (Environment, Social, Governance) as a single unit. In each of these three aspects, we focus on the action fields that are essential for us and our stakeholders and thus structure our entire sustainability strategy based on ESG (→ page 10).

Governance

The achievement of goals and the implementation of MAN's sustainability strategy are managed by the corporate strategy. We have therefore created a multi-level governance structure to enshrine the strategy in our operations and establish sustainability as a transformation process in all areas. Within the sales division, ESG-relevant topics are now regularly addressed in strategic divisional meetings with representatives from all sales regions, and both customer requirements and solutions are discussed in this context.

The central element of sustainability governance is an interdisciplinary team consisting of representatives from all Executive Board departments, which meets once a month. This is where the strategy is further developed in terms of content and all sustainability topics from all departments are brought together, discussed on a cross-divisional basis and harmonized.

The results of the strategy process, the sustainability roadmap, updates on progress, and KPIs are reported at the MAN Sustainability Board, which meets three to four times a year. It is chaired by the CEO of MAN Truck & Bus as Sustainability Board Sponsor, who also reports the

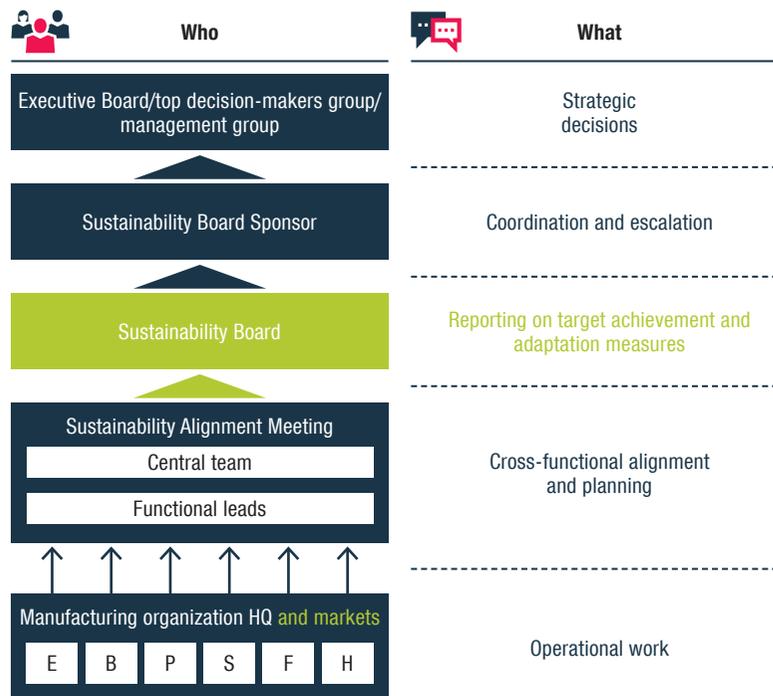
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relevant topics to the TRATON SE Executive Board. The necessary expertise for the board with regard to professional sustainability topics is ensured by the participation of representatives from all relevant areas of the company:

- Strategy via Head of Strategy & Sustainability
- Finance via Head of Group Controlling & Treasury

Governance structure for defining sustainability issues



E = Engineering, B = Procurement, P = Production, S = Sales, F = Finance, H = HR

- Communication via Head of Corporate Communications
- Sales via Head of Customer Service Strategy & Planning
- Development via Head of Homologation & Product Compliance
- Compliance via Head of Governance, Risk & Compliance
- Personnel via Head of Academy & Recruiting
- Production via Head of Environment & HSE Management
- Sustainability strategy via the MAN Sustainability Lead

Update of the sustainability strategy

The MAN sustainability strategy points the way forward for our short-, medium-, and long-term ambitions. The interdisciplinary team from all divisions of MAN's Executive Board developed and drafted this strategy in six steps in 2021. Our process includes an annual review of the strategy, our action fields and the strategic initiatives contained therein. In the year under review, we screened our strategy in a process based on the principle of so-called lean management. Through this, we scrutinized topics relevant to us in the area of sustainability and ensured that our strategy not only reflects topics that are currently relevant, but also those that are strategically important in the long term. Continuously changing environmental conditions and increasing social expectations were also taken into account.

1. Environment analysis and stakeholder expectations

Our first step was to align ourselves with VW and TRATON, with whom we are in regular contact through joint sustainability committees, among other channels. Discussions with our holding company and analyses of relevant competitors in the commercial vehicle sector and of renowned companies from other industries, as well as current scientific studies,

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helped us to reflect on our sustainability strategy developed in the previous year and to review it in light of the current framework conditions. In this process, we scrutinized and reassessed the challenges relevant to MAN along our value chain, taking into account the Sustainable Development Goals (SDGs) as well as current social developments. In order to appropriately take account of MAN's environmental and human-rights-related impacts, we have also integrated findings from our own systems and processes in this analysis step. To this end, we have made use of internal sources such as our "Speak up!" whistleblower system, our compliance helpdesk, customer and employee surveys, regular communication with our experts, and our various management systems (including for business human rights, compliance, environment and product compliance).

In addition, we again held an external stakeholder workshop to validate our sustainability strategy, at which our strategy and its action fields were placed under scrutiny. First, we discussed the 14 topic areas that also formed the basis for last year's workshop with the participants in order to identify changes in their perspective after one year. We then presented our current sustainability strategy. It became evident that our strategy and the associated action fields indeed fully reflect the sustainability issues relevant to MAN from the perspective of our most important external stakeholders. The strategy and its content were therefore substantially confirmed; nevertheless, additional focus was called for in individual sub-areas. Participants in the workshop included customers, suppliers, and representatives of major companies, academia, municipalities, consulting firms and prominent non-governmental organizations (NGOs).

2. Review of the materiality analysis

The following dimensions formed the basis of the assessment for prioritizing the 14 topic areas identified as relevant for MAN along our value chain last year:

- The relevance of the respective subject area for MAN's long-term business activities and success (outside-in perspective)
- The possibility of MAN exerting a positive influence on the respective subject area (inside-out perspective)
- The potential of the respective subject area to create purpose for the employees

Through the analyses and dialogs previously conducted with stakeholders, we were able to determine along the ESG criteria that our materiality analysis conducted in 2021 with the interdisciplinary team was largely valid.

3. Validation of MAN-specific action fields

The findings from the environment analyses and the suggestions from the external stakeholder workshop were discussed further in depth at an internal, cross-divisional workshop. From this dialog, we derived meaningful adjustments and additions for our sustainability strategy, with the aim of further focusing our strategy for 2022 on the most relevant topics.

This has primarily been achieved by reducing our action fields concerning the topic of "Responsible transportation and mobility solutions". Due to many internal and external stakeholders perceiving this action field to be more of an overarching goal of MAN's sustainability strategy, we have decided to no longer treat this topic as a separate action field. Nevertheless, we continue to consider the strategic initiatives and measures included therein to be relevant and have therefore integrated them to the

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greatest possible extent into the “Decarbonization” and “Responsibility along the Value Chain” action fields. This approach provides greater clarity on the measures and initiatives we are planning and implementing in these action fields.

In the “People and Culture” focus action field, we have a strong focus on continuous professional development and qualification of the workforce within the context of the sustainability strategy in the future. This will help us to achieve a clearer distinction from the overarching strategic measures of the HR department. This step was taken into consideration based on the current transformation in the automotive industry. Thereby, MAN intends to ensure that it is adequately positioned for the future and remains competitive.

The topic of “Stakeholder management” is a basic requirement for us and a success-critical factor in our entire strategy development process. Therefore, we do not view it as a separate action field. Due to its overarching role, stakeholder management is closely integrated into our sustainability management (→page 13).

The six remaining action fields thus continue to cover the key ESG requirements for MAN as a provider of future-oriented transportation and mobility solutions:

■ **Environment:**

Decarbonization
Circular Economy

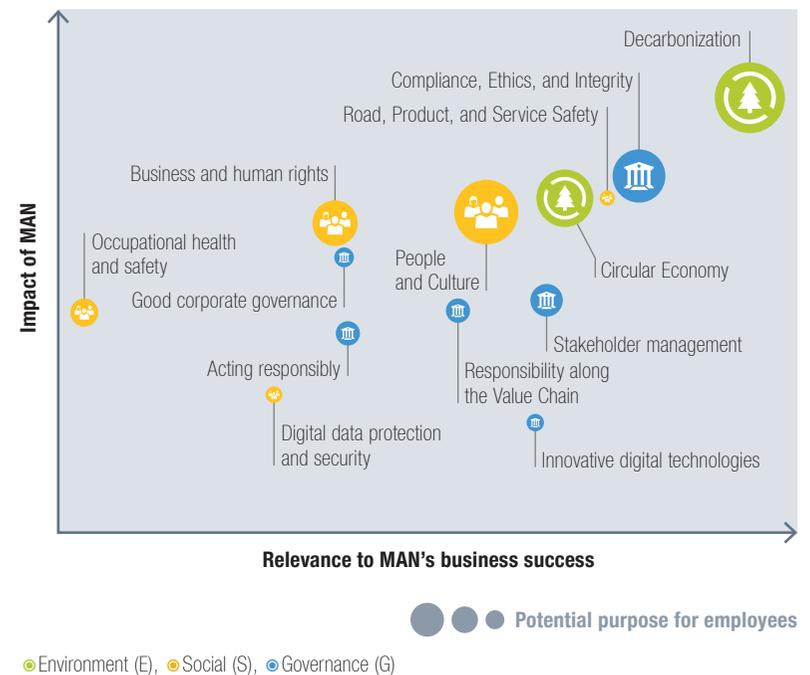
■ **Social:**

People and Culture
Road, Product, and Service Safety

■ **Governance:**

Compliance, Ethics, and Integrity
Responsibility along the Value Chain

Results of the materiality analysis



4. Confirmation of the focus action fields

Through close consultation between the strategy department and the interdisciplinary team, out of the six action fields previously identified, the three focus action fields of “Decarbonization”, “Circular Economy” and “People and Culture” were reconfirmed as being particularly significant within MAN’s sustainability strategy. This became evident from the analyses and interviews previously described.

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5. Update regarding specific initiatives per action field

We also reviewed strategic initiatives and measures within our action fields with regard to current trends and changes. For the “People and Culture” and “Road, Product, and Service Safety” action fields in particular, individual initiatives and measures as well as the associated KPIs were then further developed and established in a more targeted manner. For example, investment in measures to manage the transformation process via suitable training/education content – including appropriate tools – is stronger focused along with the further development of fundamental safety features of our products.

MAN sustainability compass with our six strategic action fields



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Sustainable Development Goals (SDGs) to guide our sustainability strategy

The SDGs adopted by the UN General Assembly in 2015 provide the framework for making an effective contribution to sustainable development. The 17 goals aimed at governments, but also at civil society, the private sector, and scientists, go hand in hand with the principles of the UN Global Compact – to which MAN is expressly committed as a long-standing member. MAN wants to make a substantial contribution to achieving the SDGs and has therefore oriented the development of its sustainability strategy according to these goals. Going into the future, MAN will continue to align its communications with these goals. As a first step, we conducted an analysis of the SDGs with their subgoals and indicators and selected relevant goals. We then merged the selected SDGs with our materiality analysis and assigned these to both the corresponding action fields and the respective GRI Standards, which form the basis for our sustainability report. The results have now been taken into account and refined both internally and in the external stakeholder analysis.

SDGs

Action field	SDG	GRI Standard
Decarbonization	 7 AFFORDABLE AND CLEAN ENERGY	7.3 Improving energy efficiency GRI 302: Energy
	 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE	9.1 Developing high-quality, reliable, sustainable, and resilient infrastructure GRI 302: Energy GRI 305: Emissions
	 11 SUSTAINABLE CITIES AND COMMUNITIES	9.4 Improving infrastructure and transforming industry to make it sustainable GRI 305: Emissions
	 13 CLIMATE ACTION	11.2 Access to safe, affordable, and sustainable transportation systems 13.2 Integrating climate protection measures into concepts and strategies

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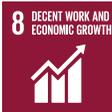
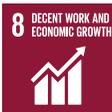
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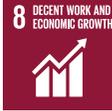
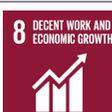
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SDGs

Action field	SDG	GRI Standard
Circular Economy	 8 DECENT WORK AND ECONOMIC GROWTH	8.4 Increasing efficiency in production and decoupling economic growth from resource consumption GRI 306: Waste GRI 307: Environmental Compliance
	 12 RESPONSIBLE CONSUMPTION AND PRODUCTION	12.2 Sustainable management and efficient use of natural resources
	 13 CLIMATE ACTION	13.2 Integrating climate protection measures into concepts and strategies GRI 305: Emissions
Responsibility along the Value Chain	 8 DECENT WORK AND ECONOMIC GROWTH	8.7 Eliminating forced labor, modern slavery, human trafficking, and child labor GRI 408: Child Labor GRI 409: Forced or Compulsory Labor
	 16 PEACE, JUSTICE AND STRONG INSTITUTIONS	16.5 Significantly reducing corruption and bribery in all its forms GRI 205: Anti-corruption
Road, Product, and Service Safety	 3 GOOD HEALTH AND WELL-BEING	3.6 Halving the number of deaths and injuries from road accidents worldwide GRI 416: Customer Health and Safety

SDGs

Action field	SDG	GRI Standard
People and Culture	 4 QUALITY EDUCATION	4.3 Ensuring equal access to education for all women and men GRI 405: Diversity and Equal Opportunity GRI 404: Training and Education
	 5 GENDER EQUALITY	5.5 Ensuring full participation and equal opportunities for leadership positions for women
	 8 DECENT WORK AND ECONOMIC GROWTH	8.5 Equal employment and decent work for all GRI 401: Employment GRI 405: Diversity and Equal Opportunity
	 8 DECENT WORK AND ECONOMIC GROWTH	8.8 Protecting workers' rights and promoting a safe working environment for all workers GRI 401: Employment GRI 403: Occupational Health and Safety
	 10 REDUCED INEQUALITIES	10.2 Integration and inclusion of all people GRI 405: Diversity and Equal Opportunity

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Strategy and management**Stakeholder dialog**

Regular dialog with our stakeholders is essential for us to be able to continually scrutinize our strategy and initiate changes as necessary. After all, the expectations of the business world, the political sphere, and society at large are of fundamental importance to our business success. Our focus here is on topics relevant to our core business, such as reducing global CO₂ emissions caused by the transportation of goods and people. The stakeholder groups most important to MAN have also been integrated into our materiality analysis, into the determination of the most important action fields, and into the updating of the sustainability strategy (→ page 07).

Dialog with policymakers and businesses

We are actively working to develop solutions to global challenges. This is why we also contribute our expertise to the political discussion, focusing on the aforementioned key topics. In order to do so, we maintain an ongoing

dialog with the responsible ministries at state, national, and EU level, as well as with elected representatives and opinion leaders from the government and the opposition. In 2022, topics such as the transformation of the commercial vehicle industry toward zero-emission technologies and the resulting compliance with political climate targets were at the forefront of the dialog with policymakers. A key aspect of this is the necessary development of an EU-wide charging infrastructure for heavy commercial vehicles. The MAN guidelines for political lobbying are defined in a Code of Conduct that applies throughout the Group. This Code explicitly outlines our commitment to nonpartisanship and to making our positions transparent. In accordance with the German Lobby Register Act (Lobbyregistergesetz), MAN has entered all expenses for political lobbying in the transparency registers (state, federal, EU) for public inspection. The MAN Group Policy on Handling Donations and Sponsoring Measures prohibits politically motivated donations, such as donations to political parties, party-affiliated institutions, or politicians.

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DECARBONIZATION

As a global company for transportation solutions, MAN believes it has a duty to fulfill its responsibility to protect the climate. We want to help drive the transformation toward powering commercial vehicles by greenhouse-gas-free means in order to remain competitive into the future and ensure the success of our business. To this end, we are focusing on areas where we can conserve resources along our entire value chain, as well as on the life cycle of our products. The focus of our decarbonization measures is on reducing emissions of greenhouse gases (GHG), which are substantially generated by our product portfolio as well as at our company's sites.



In focus:

By 2030

- Reduction of greenhouse gas emissions per vehicle kilometer of trucks, buses and vans sold by MAN by 28% (base year 2019)
- Reduction of greenhouse gas emissions at global company sites by 70% (base year 2019)
- Achievement of CO₂-neutral production in terms of our carbon footprint by reducing emissions by at least 95% and offsetting a max. 5% share of unavoidable CO₂ emissions (base year 2015)

By 2050

- Achievement of greenhouse gas neutrality in terms of our carbon footprint by 2050 at the latest, i.e. net zero emissions along MAN's entire value chain, including the life cycle of all new products sold

Key figures 2022:

- 6.6%**¹ GHG fleet emissions per vehicle kilometer (2020)
- 637** orders received for electric buses
- 263** electric buses sold

¹ GHG Protocol Scope 3 (Downstream) – Category 11: "Use of Sold Products"; Calculation compared to base year 2019

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DECARBONIZATION STRATEGY

Within the European Union, the transport sector is responsible for around 29% of CO₂ emissions – of which, in turn, just under a third are emitted by commercial vehicle applications. Our responsibility for climate protection is just as large, and we intend to fulfill this through our shift toward commercial vehicles with zero-greenhouse-gas propulsion and through reduction measures along our value chain and throughout the product life cycle:

■ Products

In our core business, we focus on the shift toward commercial vehicles with greenhouse-gas-free propulsion and are developing battery electric trucks, buses, and vans.

■ Production

We aim to achieve CO₂-neutral production in terms of our carbon footprint by reducing our CO₂ emissions by at least 95%.

■ Supply chain

Through specifications for our suppliers, the S-rating (definition → page 65), and within the framework of lighthouse projects, we motivate our suppliers to step up their efforts in the area of sustainability.

■ Transportation and logistics

To systematically reduce CO₂ emissions, we record these from inbound and outbound logistics and work on optimizing transport structures and processes.

■ Employee mobility

MAN has defined requirements for air travel, rental cars and train journeys to keep greenhouse gas emissions from business travel as low as possible.

We intend to become greenhouse-gas-neutral in terms of our carbon footprint by 2050 at the latest – a goal that we committed to in 2021 as part of the Science Based Targets initiative (SBTi)¹ for climate protection.



DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

¹ SBTi is a partnership between the CDP (Carbon Disclosure Project), the United Nations Global Compact, the World Resources Institute (WRI), and the World Wide Fund for Nature (WWF). The initiative assists companies with setting targets that are in line with the Paris Climate Agreement, which was adopted by the United Nations in 2015. According to this Agreement, global warming should be limited to 1.5 °C if possible, but at least well below 2 °C compared to pre-industrial levels.

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SCIENCE-BASED TARGETS



Sustainability is a central pillar of our strategy – decarbonizing the entire value chain as well as the life cycle of our products plays a key role in this. The use phase of our products sold accounted for more than 96% of our greenhouse gas emissions in 2020 – consequently, the greatest leverage for us lies in this area. We are therefore driving forward the electrification of our fleet in particular. The demand for electric buses or electrified solutions in urban delivery traffic is already picking up significantly. In 2024, we will start producing heavy-duty electric trucks. Above all, however, we are pursuing clear climate targets. MAN joined the Science Based Targets initiative (SBTi) for climate protection in 2021 in order to assume responsibility and make a contribution toward fulfilling the Paris Climate Agreement. By joining, we have set ourselves binding and science-based targets for the reduction of greenhouse gas emissions that are harmful to the climate – not just in the short term, i.e. by 2030, but also in the long term, in line with our ultimate goal of greenhouse gas neutrality in terms of our carbon footprint (net zero).

Our short-term goals were officially validated by SBTi in April 2022. As a first step, we aim to reduce 70% of greenhouse gas emissions at the company's sites around the world by 2030 compared to 2019 levels (GHG

Protocol Scopes 1 and 2). In contrast, greenhouse gas fleet emissions per vehicle kilometer of trucks, buses, and vans sold by MAN are expected to fall by 28% by 2030 compared to the base year of 2019 (GHG Protocol Scope 3 – Category 11). In the long term, we want to become greenhouse-gas-neutral in terms of our carbon footprint by 2050 at the latest – we have committed to this as part of the SBTi with the “Business Ambition for 1.5 °C”. In this context, we will submit our net zero target to the SBTi in a timely fashion, once submissions from the automotive industry are again accepted and validated in this regard. We will continually publish the progress made in achieving our climate targets in the course of our sustainability reporting.

The emissions data for Scope 3 – Category 11 for the base year 2019 was recalculated again at the beginning of 2022. The reason for the recalculation was an improvement in the quality of the secondary data and calculation factors used, which were not yet available to this extent in 2021. Our already validated SBTi objectives will not change as a result of the adjustment.

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Science-based targets

Emissions along the value chain or the life cycle of our products

Part of the value chain or the life cycle of our products	Scope 1, 2 or 3 ¹	Approx. proportion of GHG baseline inventory (2020) ²	Absolute emissions (2020) ³	Absolute emissions (2019)	Development (against base year 2019)
Scope 1 comprises the direct greenhouse gas emissions generated directly in MAN production processes, for example. MAN-owned vehicles also cause greenhouse gas emissions that are included in Scope 1. Scope 2 covers indirect greenhouse gas emissions. They are produced when MAN purchases electricity or heat.	Scope 1 Direct emissions	0.3%	132.3 kt CO ₂ e	161.3 kt CO ₂ e	-18%
	Scope 2 Indirect emissions from purchased energy		149.8 kt CO ₂ e	180.6 kt CO ₂ e	-17.1%
All other indirect greenhouse gas emissions that occur along our value chain and throughout the life cycle of our products (including from the use of our products by customers, from the purchase of products and services, and from business travel) are attributed to Scope 3.	Scope 3 Indirect emissions from the use of sold products (GHG Protocol – Category 11 "Use of Sold Products")	96.4%	88.1 Mt CO ₂ e	128.8 Mt CO ₂ e ⁴	-31.6%
	Other Scope 3 Other indirect emissions	3.3%	3.0 Mt CO ₂ e	3.9 Mt CO ₂ e	-23.1%

¹ CO₂ equivalents (CO₂e) based on GHG Protocol – mainly carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O); other greenhouse gases without significance.

² Reporting based on the n+2 logic is due to the method for collecting the real consumption data of our vehicles (Scope 3 – Category 11 "Use of Sold Products"). Real consumption data can only be collected with a time lag after the vehicle has been sold in year n and after maintenance from year n+1 for vehicles sold. This information is therefore only available in the appropriate quantity and quality for n+2 (e.g. the GHG emissions for 2022 are reported in the 2024 sustainability report). For this reason, no data for the year 2022 can be reported in the table. The consideration limits of the emissions correspond to the definition of the SBTi and deviate from those on → page 24.

³ The significant decrease in absolute emissions compared to 2019 results in particular from lower sales due to the difficult market environment caused by the COVID-19 pandemic in 2020.

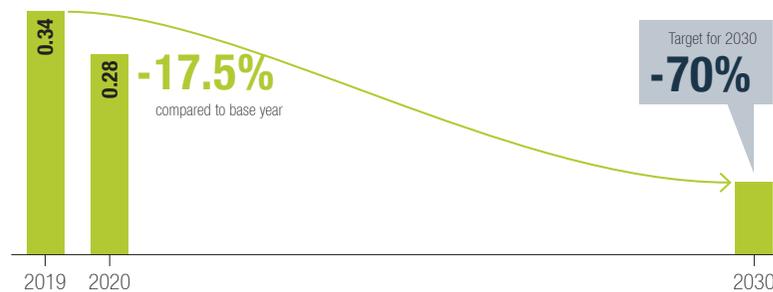
⁴ New values compared to 2021 Sustainability Report. Data quality was improved for key input variables:

- Vehicle lifetime performance updated according to latest findings (key driver)
- Average fuel consumption for greenhouse gas emissions based on WLTP (Worldwide Harmonised Light Vehicles Test Procedure) (previously: NEDC (New European Driving Cycle))
- Updates for additional factors (e.g. charging losses, AdBlue fluid consumption, emission factors)

A direct comparison with the original data from the 2021 Sustainability Report is therefore not possible.

Scope 1 and 2 emissions¹

in million t CO₂e



Base year

¹ The observation limits of the emissions correspond to the definition of the SBTi and differ from those on → page 24 ff.

Scope 3 emissions – Category 11

Indirect emissions from the use of vehicles sold in g CO₂e/vkm



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In its business, MAN combines various climate risks and opportunities that are significant for the company's further development:

- Increasing need for climate change prevention and adaptation measures on multiple levels
- Regulatory risks, particularly with regard to CO₂ limits for commercial vehicles, possible CO₂ taxes, or emissions trading in the logistics sector
- Climate-related extreme weather events, such as severe storms, flooding, hail or heavy snowfall, which could interrupt production or affect suppliers
- A risk analysis and climate change simulation focusing on the area of production using a production site as an example indicated risk potential for periods of extreme heat, which could have an impact on our employees
- Reputational risks, as the use of our products causes greenhouse gas emissions and MAN can therefore only be successful on the market in the long term if the company invests in energy-efficient technologies that emit less CO₂
- Increase in conflicts over dwindling resources
- Increasing requirements and complexity in the business environment

At the same time, the consistent continuation of the European climate protection policy and the gradual implementation of similar policies in the largest emerging economies (Brazil, Russia, India, China and South Africa, also known as BRICS countries) will yield new growth opportunities for MAN. This is also driven by the growing demands of our customers and other stakeholders, who increasingly expect transparent handling of greenhouse gases throughout the entire life cycle. Our goals include:

- Energy-efficient and low-greenhouse-gas product portfolio
- Strengthening ties to customers and suppliers through joint efforts to cut greenhouse gas emissions
- Increasing competitiveness through greater immunity to energy price fluctuations, resulting from increased reliance on internal energy generation and the use of renewables

Information on the general risk management system can be found in the [TRATON GROUP's 2022 Annual Report, page 82.](#)

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TRANSFORMATION OF THE PRODUCT RANGE

MAN is committed to its responsibility throughout the entire life cycle of its products. From the extraction of raw material through to the end of our products' service life, we are working on reducing our greenhouse gas emissions along every step of the chain. In shifting our product portfolio towards greenhouse-gas-free propulsion, our focus is on battery electric vehicles. They form the basis for our heavy-duty electric trucks, which we will launch from 2024 onwards. MAN unveiled its first series-produced electric commercial vehicle, the eTGE, back in 2018. Our all-electric city bus, the MAN Lion's City E, has been used in urban transport since 2019.

In addition to electric mobility, we are also ramping up our research into hydrogen mobility. As things stand, the energy consumption for a hydrogen-powered vehicle is at least three times higher than for a purely electric vehicle. However, hydrogen-powered vehicles can be a useful addition in cases where electric vehicles are unsuitable and the appropriate electricity mix is available. Provided that sufficient green hydrogen¹ and the corresponding infrastructure become available from 2030 onward, we expect to see the use of H₂ trucks in selected areas of application, which we are currently researching together with industrial partners.

Vehicle batteries are a key component on the road to greenhouse-gas-free propulsion. In spring 2021, MAN began building up its own expertise in the assembly of battery packs. The nucleus for this is the electric mobility technology center at the Nuremberg site, where the first battery packs for electric vehicle testing and internal tests are created in individual production. From 2025 onward, MAN will mass-produce high-voltage batteries for electric trucks and buses at this site. To this end, the company is investing around 100 million euros in the production site over the next five years. The production capacities will be expanded to manufacture over 100,000 batteries per year. The TRATON GROUP intends to have invested a total of 2.6 billion euros in research and development for electric mobility by 2026. The new paths that MAN is taking in battery cell production are also explained by means of a vehicle project in the "Circular Economy" chapter (→ page 31).

In addition, the development of a charging infrastructure is a prerequisite for the transformation of the transportation industry. The TRATON GROUP will also make a contribution to this by participating in the development of a high-performance charging network in Europe as part of a joint venture.

¹ Green hydrogen is produced by electrolysis of water using electricity from renewable sources.

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EFFICIENT AND ENVIRONMENTALLY FRIENDLY SOLUTIONS

We are continually working on making our products more efficient and ensuring this through intelligent service solutions. After all, in most cases our customers base their decision to buy a product on total cost of ownership (TCO). In the freight transportation sector, energy costs account for approximately one third of this sum. For this reason, the goals of greater efficiency and lower emissions are key drivers of innovation. In its efforts to become a technological leader, MAN is focusing its research and development activities not only on developing new product series and enhancing existing ones, but also on reducing consumption and emissions, new propulsion concepts, and alternative solutions, e.g. in the area of charging. We have also made a commitment to offering our customers an efficient and more climate-friendly product portfolio as part of our MAN decarbonization strategy (→Decarbonization strategy, page 15).

Climate-friendly electric propulsion

As we move into the future, CO₂ emissions will bear significantly higher costs and be subject to stricter regulation. In the medium term, this development will also lead to a change in demand from our customers. Through electric mobility, the transport sector can contribute to achieving the CO₂ reduction targets specified by the EU for heavy-duty vehicles. Battery-electric commercial vehicles are an important factor in accomplishing this. The turning point at which e-mobility will be at the same cost level as classic combustion engines is expected to be reached by the middle of the decade, and the demand for heavy-duty e-trucks is also expected to significantly increase as a result of this. We are already seeing trends toward this development based on the increasing order intake for electric buses

and e-trucks. Thanks to the combination of low operating costs and their very good energy balance, battery-electric vehicles offer the optimum technology for future commercial vehicle fleets with lower CO₂ emissions.

Electric vehicles

in units	2021	2022
Incoming orders for electric vehicles		
Truck	4	11
Bus	204	637
Van	1047	417
Sales of electric vehicles		
Truck	18	14
Bus	133	263
Van	826	686

eTGE

MAN unveiled its first series-produced electric vehicle, the eTGE, back in 2018. The all-electric van with a range of 115 kilometers (according to the Worldwide Harmonised Light-Duty Vehicles Test Procedure, or WLTP) and a payload of around one ton is designed for “last mile” logistics. MAN has developed further solutions based on the eTGE panel van: A nine-seater station wagon for integrated passenger and freight transport, a box body for large-volume goods, and a three-way tipper and flatbed for construc-

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tion site and gardening and landscaping applications. In 2022, MAN sold 686 eTGEs in Europe. A total of around 1600 eTGEs have already been sold in Europe from 2019 to early 2022.

Electric trucks

In the heavy-duty truck segment, the MAN TGM 26 360 E LL has already been on the road for customers across Europe since the end of 2018. The all-electric 26-ton truck thus covered well over 1.5 million kilometers under practical conditions by the end of 2022. This was made possible by a pilot project in Austria that was conducted over the course of several years. With the small series of the eTGM launched in 2019, MAN Truck & Bus is also one of the pioneers in the field of electrically powered trucks weighing over 12 tons in Europe. Through a combination of innovative technology, constantly expanding application expertise, and specially developed services for e-mobility customers, MAN is developing its mass-produced range of purely electric heavy-duty trucks for long-haul transport, among other applications. The first vehicles are to be delivered from the beginning of 2024.

Electric buses

The success of electric mobility in urban transport is due in part to vehicles such as the MAN Lion's City E, the international "Bus of the Year 2023". The all-electric city bus went into series production in 2020 and is now on the road across Europe. Whether in Barcelona, Hamburg, Copenhagen, Malmö or Zurich: The locally emission-free bus is already part of urban traffic in a number of major European cities. Total annual sales in 2022

amounted to 263 Lion's City E vehicles, making up around 5.5% of the city buses sold by MAN in Europe. Since the sales launch of the Lion's City E, MAN has signed contracts with customers for the delivery of more than 1000 electric buses. By 2025, every second MAN city bus sold is to have a zero-emission drive system.

Consultancy for fleet electrification

Transport companies and fleet operators face various challenges in electrifying their vehicle fleets that go beyond the vehicle itself, e.g. regarding the sufficient availability of energy at the deployment sites or the necessary infrastructure. In order to provide its customers with the best possible support in this regard, MAN Truck & Bus offers advice on individual, economical and future-oriented transportation solutions through its MAN Transport Solutions consultancy service. In addition to addressing technical questions with regard to vehicles, a specialized team advises customers primarily on topics relating to route electrification, energy requirements, optimal charging strategy, appropriate infrastructure, maintenance concepts, and optimal fleet design.

MAN Transport Solutions maintains close contact with interested customers to ensure that depots and workshops are prepared for the electrification of the transport sector. We expect the electrification of commercial vehicle fleets to make a significant contribution to achieving the climate targets that have been set. This will require the supply of electricity generated using renewable sources, and in sufficient quantity.

With our network of local e-mobility experts, we ensure that the necessary expertise is also available when providing direct on-site support to our customers. We provide consultancy services for a variety of custom-

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ers, ranging from clients who maintain small fleets through to internationally active operators with bus, van or truck fleets comprising several hundred vehicles at different locations, which also operate in different application areas within public transport and freight logistics.

Development cooperation with renowned software providers and providers of charging infrastructure also plays a key role in the consultancy process. In addition to its established consultancy services, MAN Transport Solutions now also offers charging solutions for customers. This marks an important milestone in electric solutions, and constitutes a further step toward the goal of making the switch to electric mobility as straightforward as possible.

Efficient diesel engines

The fuel consumption and therefore also the CO₂ emissions of MAN trucks were reduced by 31.5% between 1994 and 2016, which is equivalent to a decrease of approximately 1.45% (gCO₂ per vehicle kilometer) per year. Current consumption measurements suggest that this trend has more or less continued to the present day.

Various optimizations to the aerodynamics and driveline have made the new MAN truck generation additionally up to 3.7% more fuel-efficient; these optimizations came in 2021 with the introduction of the Euro 6e emissions standard. With the advent of the new expansion stage of the D26 engine and additional aerodynamic elements unveiled at the 2022 International Motor Show (IAA), it has been possible to reduce fuel consumption by up to a further four percent. Its completely new electronics architecture also makes the new MAN truck generation ideally prepared for the integration of alternative propulsion and future automation technologies.

Natural gas as an additional energy source

Natural gas (CNG) plays a complementary role in our product portfolio. As well as providing low-emission propulsion for buses or ships, natural gas is also suited for use in the power generation industry. MAN Truck & Bus is the market leader for stationary gas engines used for cogeneration systems in combined heat and power (CHP) plants. These plants generate electricity and heat, achieving an efficiency of over 90%. Compared to uncoupled gas-fired power plants without waste heat recovery, each heat-controlled CHP unit that is operated helps to save natural gas and also emits about 15% less CO₂ than a conventional diesel engine. The linking of electricity prices to gas prices also ensures the economic viability of CHP operations.

Intelligent mobility

The digital transformation is opening up new opportunities and business areas for MAN, as commercial vehicles are already the most connected vehicles today. Connectivity and data exchange are important prerequisites for effectively managing entire systems to improve efficiency and safety in the transportation sector, optimize utilization, and significantly reduce the number of workshop visits, as well as the quantity of CO₂ emissions.

The following table illustrates the described development (number of networked vehicles) in concrete figures:

Connected vehicles

in units	2020	2021	2022
Total connected vehicles	174,495	223,947	300,136

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The new MAN truck generation already unveiled in February 2020 illustrates how we are systematically aligning ourselves with the changing needs of the transportation industry and further developing the digital connectivity of our vehicles with modern assistance systems and driver orientation. As a result, the new generation of trucks bears testimony to how MAN Truck & Bus has evolved from a vehicle manufacturer to a provider of smart and sustainable transportation solutions. These include innovative technologies such as the newly developed turn assist, the MAN Traffic Jam Assist and the MAN Lane Change Support, which make the driver's life easier and ensure increased safety in road traffic. Since 2021,

the new MAN OptiView mirror replacement system has been providing drivers with optimum visibility without blind spots, thus enabling added safety for other road users as well. The newly available collision avoidance assist and the optional MAN CruiseAssist, which keeps the MAN TGX and TGS safely in the flow of traffic on highways, also relieve the burden on the driver and contribute to road safety (→ Driver assistance systems, page 51). Offering fuel savings of around eight percent, the new truck generation also achieves a significant reduction in CO₂ emissions compared to the previous generation of vehicles.

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PRODUCTION



Through the systematic conversion and modernization of our energy supply, the use of renewable energy sources and the implementation of energy efficiency measures, we are striving to reduce our Scope 1 and 2 GHG emissions ever further. By 2025, we aim to have cut our CO₂ emissions down by half, and intend for our products to be CO₂-neutral in their manufacture by 2030. This means that we will reduce CO₂ emissions by at least 95% and offset a maximum of 5% of the remaining emissions that cannot be avoided due to the process. The 2015 values serve as the point of reference.

While we concentrate our reduction measures on the efficiency of our plants and on investing in our own efficient energy generation, we additionally focus on continually improving the efficiency of our sites. To this end, we intend to introduce ISO 50001-certified energy management systems at all production sites by 2025. So far, all plants except Olifantsfontein (South Africa) have been certified accordingly. The remaining plant is scheduled to be certified in 2024.

In order to expand the procurement of renewable energies, we have focused our measures on three areas:

1. Generation of own renewable energy at the sites through investments or contracting
2. Expansion of Power Purchase Agreements (PPAs) – i.e. the direct purchase of renewable energy from plant operators
3. Purchase of renewable energies from energy suppliers

Plans exist for all sites containing specific measures to reduce CO₂ emissions step by step.

Energy consumption and CO₂ emissions

Energy consumption per vehicle produced decreased from 10.78 MWh in 2021 to 9.96 MWh per unit in 2022, as temporary plant closures due to the war in Ukraine and unstable supply chains resulted in proportionally less energy being used per vehicle produced. CO₂ emissions in 2022 were also lower due to an increased switch to renewable energies in production.

Energy consumption



in MWh	2020	2021	2022
Direct energy consumption (combustion fuels and gases)	337,754	333,018	278,547
Indirect energy consumption	353,544	366,238	385,256
Electrical energy	226,446	226,723	257,993
Of which bought in from renewable energy sources	67,282	128,643	232,329
Thermal energy	127,098	139,515	127,263
Of which generated in-house from renewable energy sources	0	0	0
Of which bought in from renewable energy sources	0	0	6,688
Total	691,298	699,256	663,803

In fall 2022, MAN has countered an impending shortage of gas by shifting the required resources from gas to heating oil. This initially unique measure is also reflected our the primary energy consumption. By that,

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we have fulfilled our responsibility to contribute to the reduction in gas consumption demanded by the government and could also secure our production.

Direct primary energy consumption

in MWh	2020	2021	2022
Heating oil	5,008	4,771	16,890
Natural gas	223,536	237,234	163,654
Diesel	108,343	90,057	97,259
Other ¹	867	956	744

¹ Gasoline used as fuel on site and fuel gases used in manufacturing processes.

Energy consumption per vehicle produced

in MWh per unit	2019	2020	2022
	10.9	10.78	9.96

Absolute direct and indirect CO₂ emissions¹

in tons of CO ₂	2020	2021	2022
Indirect emissions	115,552	77,341	63,203
Direct emissions	75,872	73,164	33,587
Total	191,424	150,505	96,790

¹ Direct emissions result from the combustion of primary energy sources, e.g. natural gas, heating oil, diesel; indirect emissions result from purchased electricity and district heating. Emissions are calculated on the basis of the emission factors of the German Association of the Automotive Industry (VDA) as a general rule. This includes all production sites, including the St. Petersburg location.

CO₂ emissions per vehicle produced

in tons per unit	2020	2021	2022
	3.0	2.2	1.5

Atmospheric pollutant emissions

Air pollutant emissions were down in proportion to decreased production at nearly all sites in 2022.

Atmospheric pollutants

in tons	2020	2021	2022
Sulfur dioxide (SO ₂)	0.45	0.42	0.37
Nitrogen oxides (NO _x)	169	143	145
Particulates	0.73	0.58	0.58
Volatile organic compounds (VOCs)	656	534	601

In the year under review, the sites reported investments of around €20.0 million in environmental protection measures (2021: €6.3 million). For example, our plant in Krakow was expanded and the gas heating system was replaced by a wood pellet heating system. A district heating station was commissioned at our site in Nuremberg and a safety container for the storage of lithium batteries was installed at our plant in Munich.

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DECARBONIZATION IN THE SUPPLY CHAIN



MAN's stated objective is to use life-cycle assessments to systematically identify the biggest sources of emissions along the supply chain and to involve suppliers at all stages in the value chain in taking responsibility for the environmental impact of the vehicles. The "Purchased Goods & Services" category in Scope 3 Upstream of the Greenhouse Gas Protocol accounted for more than 2% of all greenhouse gas emissions at MAN in 2020. However, the relative proportion of these emissions in the company's total emissions will increase as the switch to battery-electric drives progresses. This is mainly due to the high emission load in battery cell production, which means that e-vehicles still have a higher emission load than vehicles with combustion engines before they are used. In the long term, however, the higher proportion of battery-electric vehicles leads to a significant reduction in CO₂, as the potential savings in the use phase clearly outweigh the greater emissions in the supply chain compared to vehicles with internal combustion engines. This is just one of the reasons why MAN Truck & Bus is working with its suppliers to analyze options for reducing the greenhouse gas emissions generated in the supply chain.

An initial preliminary material analysis in the year under review – which will be covered in greater depth and expanded to include other materials in 2023 – identified the most important emission hotspots that account for the largest proportion of emissions in the supply chain for a

truck with an internal combustion engine and for a battery-electric drive. Components such as the battery and materials such as steel were then analyzed in more detail in various working groups.

A specification with emission-reducing measures was drawn up for the **battery hotspot**. We handed over this specification to potential suppliers during ongoing tenders in 2022. MAN is in contact with its suppliers regarding the use of recycled raw materials. Prior to awarding a tender, multiple options are evaluated in terms of their financing and emissions savings potential together with the supplier.

For the **steel hotspot**, MAN is working with steel manufacturers to jointly develop a roadmap of emissions-reducing activities and their significance for the supply chain. The aim is to significantly reduce greenhouse gas emissions from steel products. MAN is in contact with steel manufacturers regarding specific measures.

The inclusion of specific targets relating to the reduction of greenhouse gas emissions in contracts awarded by MAN Truck & Bus is planned for the future. Various approaches to this are being discussed within the Volkswagen Group. As a member of the internal Volkswagen Working Group for Decarbonization, MAN takes part in weekly consultations on strategy, targets, approaches and measures within the context of its procurement activities.

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TRANSPORTATION AND LOGISTICS

Emissions from transport and logistics

Reducing the environmental impact of our transportation and logistics activities is a key element of the integrated environmental management system at MAN Truck & Bus. To this end, targets have been defined, such as the optimization of transport structures and processes. A dedicated calculation tool has been implemented to determine the CO₂ emissions from transportation activities.

To reduce CO₂ emissions within our own transportation chain, our regional freight forwarders supply us via freight hubs, at which shipments are consolidated to optimize truck capacity utilization and prevent vehicles from having to make empty runs. As a commercial vehicle manufacturer, we also attach great importance to ensuring that our service providers use state-of-the-art trucks, comply with the latest emissions regulations, and operate in an environmentally friendly manner with low energy consumption and particularly low emissions.

Within MAN Truck & Bus Logistics, 74,527 metric tons of CO₂ were emitted in the year under review (2021: 70,737 metric tons of CO₂) within the scope of supply, and 80,705 metric tons of CO₂ (2021: 86,890 metric tons of CO₂) were emitted in the delivery of products. This represents a reduction of 1.5% compared to 2021 and a 2.9% increase in emissions per vehicle to 1.77 metric tons of CO₂ per vehicle from the previous year to the year under review.

The increase in CO₂ emissions in the inbound segment is due, among other factors, to the relocation of production from Munich to Krakow in the truck sector. This capacity shift resulted in increased CO₂ emissions, based on a high proportion of suppliers in southern and western Germany and consequently longer transport routes. Although the parallel reduction in production volume in Munich reduced CO₂ emissions from inbound transports, this did not compensate for the increased emissions caused by deliveries to the Krakow plant.

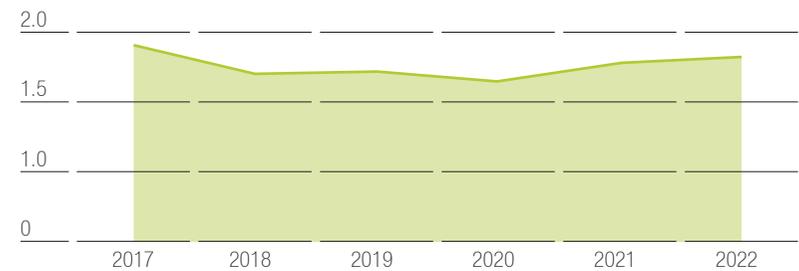
Supply chain disruptions have necessitated additional special transports as well as air freight and contributed to an increase in CO₂ emissions in the inbound segment.

This has resulted in an increase in emissions per vehicle throughout the inbound segment.

The logistics sector of MAN Truck & Bus took the following measures to continually improve its CO₂ emissions in 2022:

- Preparation for the future transfer of trucks up to 3.5 m in height from vehicle transporters to rail transport from Poland to Austria, with planned start in the first quarter of 2023.
- Implementation of a feasibility study for the development of a plastic large load carrier to replace a steel container including plastic linings. Further development will be monitored.
- Continuation of the analyses for the creation of a roadmap for decarbonization in the transportation and logistics sector.

Logistics-related CO₂ emissions per vehicle produced, in tons



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- Science-based targets
- Transformation of the product range
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EMPLOYEE MOBILITY

MAN has group-wide specifications for air travel, rental cars, and train journeys: Employees should only travel when it is unavoidable. Alternatives such as video or conference calls must be checked in advance. The most environmentally friendly means of transport should always be used as long as this is economically feasible. Employee mobility is a key concern for MAN, which is why we support our employees with various climate-

friendly offers such as discounted job tickets or shuttle buses to make it easier for them to get to work. In 2022, the year under review, business trips were responsible for around 2749 metric tons of CO₂ emissions. This figure relates to business travel booked through the central travel service in Germany, 78% of which was for flights.

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CIRCULAR ECONOMY

In times of raw material scarcity and unstable supply chains, it is clear that our linear economic model is depleting the planet's natural resources. The consequences are already visible on an ecological, economic and social level. MAN therefore sees the circular economy model as the basis for its own business success. This includes the efficient and responsible use of raw materials, the reuse of parts and components, and the avoidance of environmental pollution. Optimizing the service life of our products, improving product utilization and capacity utilization, and using an integrated environmental and energy management system are also important elements of resource-conserving management at MAN.



In focus:

- Closing the material cycle by reducing the consumption of primary raw materials, among other measures
- Optimizing the service life of products and components
- Improving product usage and utilization
- Promoting innovative business models

Key figures 2022:

- 3,202¹** reconditioned engines
- 100%** of production sites have an environmental management system certified to ISO 14001
- 91%** recovery rate of production waste

¹ MAN Genuine engines ecoline+

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CIRCULAR ECONOMY AS A PRINCIPLE OF ACTION

The prevailing linear economic model is a major contributor to the planet's natural capacities becoming overstrained, resulting in massive impacts of both an environmental and social nature. Particularly in times of raw material scarcity and vulnerable supply chains, it is evident that economic success and resource-conserving principles of action must be considered in tandem with one another. This is why MAN is committed to the principle of a circular economy and has defined the topic as a strategic focus action field through its materiality analysis. It must be taken into account that circular economy approaches do not necessarily lead to more ecologically, socially or economically compatible solutions, but should always be balanced with other sustainability requirements.

In addition to making a positive contribution to resource-conserving business practices, MAN also wishes to comply with current regulatory developments such as the European Green Deal. The increasing demand for more sustainable products and services and new business potential for MAN are also encouraging us to continue on our chosen path.

MAN is pursuing four key components in its transition to a circular economy:

- **Optimizing the service life:** Extend the service life of products and components (→page 33)
- **Improving product usage and utilization:** Make the best possible use of existing capacity and thus ensure the most efficient possible product utilization (→page 34)
- **Innovative business models as driving forces:** Promote new business models that accelerate change (→page 35)

The key to success lies in the development phase of a product: In order to keep products successfully in circulation, it is important that they are developed with a view to being recycled at a later stage.

We want to align all activities along the entire value chain under this aspect so that they are geared toward a circular economy (instead of a linear one). This requires establishing a new mindset within the company and introducing accompanying guiding principles and strategies. With its new strategic direction, MAN has set out to promote this transformation within its own company.

- **Closing the material loop:** Increase the proportion of recyclable materials, enable resource recovery, and thus reduce the impact on our environment (→page 32)

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Circular Economy as a principle of action

Considering the circular economy and decarbonization as interlinked concepts

For its next generation of vehicles, MAN is planning to launch a vehicle that is being developed with aspects of the circular economy and decarbonization in supply chains taken into account. The development of the project components is taking place across brands within the TRATON GROUP. This is the first vehicle project from MAN that is designed to meet specific requirements of the circular economy. Principles of the circular economy are therefore being implemented in the design process of parts and components (e.g. by facilitating disassembly).

The project is also particularly important from a decarbonization perspective, as the transformation to battery-electric vehicles means that greenhouse gas emissions generated in the supply chain are higher than for vehicles with internal combustion engines. The project is therefore looking at specific measures to reduce the greenhouse gas footprint in the supply chain:

- Use of new technologies
- Use of recycled materials
- Use of renewable energies in the supply chain

In terms of materials, the focus is primarily on steel, aluminum and plastic. MAN also wants to break new ground with regard to battery cells, and has therefore defined requirements that take into account the circular economy and decarbonization in a call for tenders for the sourcing of a special battery cell that will be part of the vehicle project. A contract award decision is expected to be made at the beginning of the new fiscal year.

MAN's long-term goal is to achieve a virtually closed cycle for battery raw materials – from cradle to cradle. The raw materials recovered by the recycling partners, such as nickel, manganese, cobalt or lithium, are to be used in the production of new batteries. Currently, the recycling rate of a battery is more than 70% by weight.

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Circular Economy as a principle of action**Closing the material loop**

MAN intends to increase the proportion of materials that can be recycled or to keep materials in circulation once they have been extracted from the earth. In doing so, we aim to promote the most efficient use of raw materials and reduce the pollution of our environment through waste or wastewater. The focus here is on the following guiding principles:

- Avoiding or reducing the use of new, sometimes rare or harmful raw materials
- Recycling installed components, parts, and materials to create reusable raw materials
- Avoiding or reducing environmental pollution from waste and wastewater that occurs despite a circular economy, coupled with responsible handling of the waste and wastewater that is nevertheless produced.

In the following, we will go into some aspects of how to implement this component.

Recycling and waste 

In waste management, we try to find ways to recycle materials if waste cannot be avoided. The Environmental Protection department at each MAN site is responsible for addressing the issue of waste as part of the environmental management system. For all sites, the aim is to reduce the Production Environmental Footprint (PEF) and thus also the amount of waste. The aim is to avoid producing waste and to better sort unavoidable waste so

that it can subsequently be recycled to a higher quality. The disposal and recycling of hazardous waste is subject to local waste management legislation.

Waste volumes remain closely correlated with production volumes. As production was scaled down due to plant closures and volatile supply chains caused by the war in Ukraine in 2022, waste volumes also fell by about five percent.

The majority of products manufactured by MAN are made from recyclable materials. To save raw materials, we implement various measures at our production sites to return materials to recycling processes. Due to the increasing electrification of its fleet, MAN is also increasingly addressing the issue of battery recycling (→ page 31).

Production waste 

in tons	2020	2021	2022
Total waste for disposal	7,216	7,947	7,497
Hazardous	3,353	3,355	6,074
Non-hazardous	3,863	4,592	1,423
Total waste for recycling	30,519	38,468	33,984
Hazardous	8,836	9,826	11,394
Non-hazardous	21,683	28,642	22,591
Metallic waste	36,225	40,601	41,376
Total waste	73,961	87,016	82,858
Recycling ratio (%)	90	91	91

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Circular Economy as a principle of action**Water and wastewater**

MAN has been awarded permits for the responsible handling and discharge of wastewater at its sites based on corresponding conditions, for example regarding wastewater volumes, temperature, and pollutant loads. Like waste and VOC (volatile organic components) emissions, water management is part of the Production Environmental Footprint. The Environmental Protection departments at the sites and the authorities responsible for granting the permits monitor compliance with these limits at regular intervals. The environmental management system also obliges all sites to appoint a water protection officer, thus going beyond the legal obligations. In principle, all sites have a water management system. Measures to save water relate to production processes, such as an improved service life of washing machine contents and bath maintenance for dip coating, or reduction of sanitary water consumption – for example, through new faucets and the use of aerators. In addition, areas with an increased water risk are also considered within the context of our risk assessment and sustainability strategy – as is the case for our Ankara site in Turkey and our Pinetown site in South Africa for example. Through various projects, such as awareness-raising measures, wastewater recycling or increased use of well water, it was possible to slightly reduce fresh water consumption from external sources compared to the previous year.

The wastewater volume for MAN Truck & Bus, as an indirect discharger, is fed into municipal sewage treatment plants. At some sites, such as Munich, Nuremberg, Ankara or Starachowice, there is an upstream wastewater treatment process in place to remove pollutant loads from the wastewater until the official limits are reached. Other commercial wastewater is pretreated as and when required using light liquid separator sys-

tems before being discharged into the sewer system. In some cases, the volume of wastewater is higher than the consumption of drinking water due to rainwater input.

Water consumption and wastewater volume¹

in m ³	2020	2021	2022
Total freshwater	3,462,721	3,197,779	3,510,850
From external sources (incl. drinking water)	455,052	459,406	458,230
Abstracted by the company for its own use (incl. well water)	3,007,669	2,738,373	3,052,621
Surface water from lakes, rivers, and the sea	0	0	0
Volume of reused water	184	192	169
Used rainwater	489	546	498
Wastewater	549,518	553,696	504,892

¹ Only production sites are included in the reporting framework.

Optimizing the service life

To achieve the goals of a circular economy, MAN is also focusing on optimizing the service life of products and components. The focus here is on the following guiding principles:

- Reuse of parts and components
- Reconditioning of parts, components, and vehicles
- Maintenance and repair of products and worn components/parts

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Circular Economy as a principle of action

In the following, we will go into some specific examples of how to implement this component:

Predictive maintenance management

Predictive maintenance management helps to maintain vehicles in line with requirements and replace wear parts in good time. The proactive digital maintenance and repair management system MAN ServiceCare evaluates all relevant vehicle data and forwards it to a MAN service center, which in turn provides active and early notification of upcoming maintenance requirements and intelligently coordinates workshop appointments.

Reconditioning of used components

Extending the service life of individual components cuts costs and, compared with manufacturing new parts, also reduces greenhouse gas emissions and resource consumption. With this in mind, MAN Truck & Bus professionally reconditions used engines and parts under the MAN Genuine Parts ecoline or Genuine Engines ecoline+ brand. These parts then go back into everyday use. In the year under review, around 12,000 ecoline components were reconditioned and sold. The portfolio comprises more than 4000 items, meaning that it makes a significant contribution to ensuring the sustainable supply of spare parts. Approximately 3200 ecoline engines were sold in 2022, representing an increase in sales of almost 50% compared to the previous year.

Reusing used vehicle batteries

Batteries that return to MAN after being used in a vehicle are analyzed intensively. If the battery packs can no longer be used as a traction battery,

they are subsequently used in another application. At present, there are various options available for this: One of these is the extension of product use through a second battery life ("2nd life"), for example as buffer storage for solar or wind power plants.

To this end, MAN is working with various partners on real projects to evaluate whether used truck batteries are suitable for stationary storage. For this purpose, around 120 truck battery packs with an energy content of 18.6 kWh per pack are being handed over to a storage manufacturer. The focus of this project is on energy storage systems for industrial companies (e.g. peak shaving, balancing of charging peaks). Through this initiative, the technical and business requirements for 2nd life storage systems will be evaluated. In particular, this should yield new knowledge in the areas of safety, battery performance and battery residual charge cycles. MAN also intends to define a possible pilot project for a 2nd life storage system using MAN batteries from the Lion's City E, the first fully electric city bus in series production.

Improving product usage and utilization

We want to make the best possible use of existing capacity in order to achieve better utilization of our products in the use phase. The focus here is on the following guiding principles:

- Reusing products
- Converting or retrofitting and activating new features
- Changing the purpose of use

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Circular Economy as a principle of action

In the following, we will go into some specific examples of how this component is being implemented:

Vehicle rental

As an alternative to buying a new truck, customers can rent commercial vehicles directly from MAN “on demand” via MAN Rental. This avoids inactive idle times of vehicles and makes already existing capacities usefully available.

Digital retrofitting of features

Digital services from MAN help bring vehicles up to date. For example, upgrades can be flexibly installed in the vehicle via the  MAN Now technology. This means that the software of vehicles already in use can also be equipped with new functions – without the need for a workshop visit or the installation of new hardware.

Innovative business models as driving forces

MAN considers new business models that speed up the shift away from a linear economic model toward a circular one as pivotal to the success of the circular economy. To be able to implement these business models, we are working on the following aspects, among others:

- Development of specific goals and enshrining and operationalizing them in the organization
- Creation of data transparency along the value chain and the use of this data
- Establishment of dedicated internal structures and external partnerships (holistic approach)
- Identification of existing and new potential

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ENVIRONMENTAL MANAGEMENT

Integrated environmental and energy management system

MAN implements its environmental and energy management system in accordance with the requirements of ISO 14001 and EMAS, and its energy management system in accordance with ISO 50001 (→energy consumption and CO₂ emissions, page 24).

Both systems are closely linked to form an integrated system with the occupational health and safety management system in accordance with ISO 45001.

Our site in Olifantsfontein, South Africa, became ISO 14001-certified in the current fiscal year 2022. This means that all sites have environmental and energy management certification in accordance with ISO 14001. The energy management system has already been certified in accordance with ISO 50001 at nine of ten sites.

The site in Bánovce, Slovakia, has already successfully passed the Stage 1 audit for initial certification according to ISO 14001 in 2022. Full initial certification is planned for the first quarter of 2023. The ISO 45001 occupational health and safety management system has already been certified here – as at MAN's other sites.

Site certification

Sites	Certified ISO 14001	Validated EMAS	Certified ISO 45001	Certified ISO 50001
Truck				
Munich	●	●	●	●
Kraków	●	●	●	●
Dachau	●	nv	●	●
Salzgitter	●	nv	●	●
Pinetown	●	nv	●	●
Bus				
Ankara	●	nv	●	●
Olifantsfontein	●	nv	●	2024
Starachowice	●	nv	●	●
Components				
Bánovce	Stage 1	nv	●	2024
Nuremberg	●	●	●	●
Salzgitter	●	●	●	●

nv = not validated

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Environmental management

Organization and objectives

Our environmental management systems are organized in an integrated system across all sites. Together with the central function for the environmental, energy, and occupational health and safety management system, all sites are working to continuously improve environmental and safety performance and energy efficiency.

MAN Truck & Bus pursues overarching environmental, climate protection, and energy targets:

- Reducing CO₂ emissions (→page 25)
- Decreasing energy consumption (→page 25)
- Using renewable energy sources (→page 24)
- Using water efficiently and reducing waste (→page 32 f.)
- To assess and calculate the environmental impact, MAN uses the Production Environmental Footprint (PEF), which integrates environmental impact on the basis of the “ecological scarcity method”. The Production Environmental Footprint takes into account key environmental aspects such as fresh water, waste or VOC (volatile organic components) emissions in addition to the CO₂ and energy targets already defined.

On this basis, further targets and measures are developed and implemented at the sites, supplemented by additional local targets and measures as needed. Information is exchanged between the corporate center

and the sites through regular meetings on environmental protection, occupational safety, climate protection and energy management within the business units.

Audits and guidelines

Progress and improvements as well as conformity in accordance with management standards are regularly reviewed by external service providers and auditors. Internal audits are conducted with a cross-site team of auditors. A two-day training course for our internal auditors was held in the year under review. In addition to auditing in compliance with standards, this also enables us to exchange information between the sites so that we can learn from each other.

Other essential systems and instruments for systematic environmental and energy management include:

- Internal policies and guidelines
- Regulations on environmental protection, occupational safety, and energy
- Internal reporting on joint progress
- Integrated education and training measures on environmental, energy, and occupational safety topics

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PEOPLE AND CULTURE

MAN sees its human resources strategy as an important component on the path to fundamental transformation. To attract young and talented professionals, retain employees and make diversity visible within the company, we pursue the vision of a “Strong Team” that makes a decisive contribution to our future success. To this end, among other measures, we offer comprehensive onboarding programs for new employees, facilitate the professional qualification of our workers, and are committed to cross-divisional cooperation. We ensure the prevention of occupational accidents and the promotion of our employees’ health by means of a company health and occupational safety management system.



In focus:

- Creating attractive, competitive, and flexible structures within the company
- Targeted promotion of young talent and continuous professional development for all employees and managers
- Continuous improvement of occupational health and safety
- Promoting diversity and equal opportunities in all aspects of the company, including the goal of a proportion of women in management positions of at least 30% by 2029

Key figures 2022:

- 19.2 years¹** average length of service
- 18 hours** average number of qualification hours
- 12.5%** proportion of women in management positions

¹ Active workforce of MAN Truck & Bus as of reporting date 12/31/2022

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HUMAN RESOURCES STRATEGY

As part of MAN's strategy, the "Strong Team" approach is an important component of our corporate culture. Now and in the future, this means attracting talented and skilled employees, offering them professional development opportunities and an innovative working environment, and actively promoting diversity within the company. In doing so, we take account of social changes and enshrine responsibility for these issues in our corporate culture. The key priorities for the implementation of our human resources strategy are:

Attract employees

Our employer marketing activities are aligned with the demands of digitalization and new generations of employees. We offer a variety of opportunities for getting started at MAN – from internships for secondary-school students through a wide range of vocational training programs, our Global Champion Trainee Program, and traditional direct hiring.

Retain employees

We offer flexible working hours models such as "new work" arrangements, trust-based hours, or working from home. Open-plan concepts for different working environments are intended to boost our employees' efficiency, innovativeness, and satisfaction. We support our employees by offering them targeted training opportunities and recognize performance by ensuring that all employees share in the company's success, which is regulated by the group works agreement on profit-sharing. At the same time, occupational health and safety are important concerns for MAN as a manufacturing company.

Embody diversity

We view diversity as an opportunity and see it as a central component of our HR strategy. MAN is committed to various standards designed to

actively strengthen diversity within the company. This is evidenced by the 2019 group works agreement on "Plurality, inclusion, respect and tolerance", to give one example.

Organization

Human resources work is the responsibility of the Chief Human Resources Officer and Labor Director of MAN Truck & Bus and is managed via the central Human Resources department. In the areas of expertise, we develop uniform methods and instruments and bring together competencies with the aim of leveraging synergy effects and setting consistently high quality standards.

Principles and guidelines

MAN operates in more than 180 countries. We stand for respect and tolerance, have made a clear commitment to diversity, and do not discriminate based on age, gender, religion, ethnic origin, or sexual orientation. Wherever MAN has production sites, we support local economic development through recruitment measures in the region. The following policies provide a binding framework for our human resources work around the globe:

- UN Global Compact
- OECD Guidelines for Multinational Enterprises
- Code of Conduct, as amended
- Charter on Labor Relations
- Charter on Temporary Work
- International Framework Agreement of the MAN based on the Conventions of the International Labour Organization (ILO)

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ATTRACTIVE EMPLOYER

Strong Team

We want to create competitive and flexible structures to become and remain robust and resilient, even in times of crisis. We achieve this by each individual employee doing their part for our shared success – as a “Strong Team”. To live up to this claim, the company pursues the following aims, among others:

- Offering comprehensive onboarding programs to integrate new employees into the world of MAN as quickly as possible,
- Providing topic-specific and interdisciplinary training and CPD,
- Facilitating the creation of professional and international networks,
- Promoting cross-divisional cooperation,
- Enabling internal further training and supporting employees throughout the transformation process.

The process of structural change within our working world is being influenced by megatrends such as globalization and the use of new technologies, e.g. digitalization, autonomous driving, and electric mobility. This means that the needs of employees and applicants are also changing. MAN needs employees with skills that are in demand now and will remain in demand as we move into the future. We see it as our task to continually train employees and develop their capabilities in order to drive lasting cultural change.

Fostering young talent

We offer young people who are attending or have recently graduated from universities a whole range of opportunities to get their first foot on the career ladder at MAN. These include internships, scholarships, disserta-

tion placements, and talent programs (Global Champion Trainee Program, PhD program). In addition, MAN cooperates with strategically important partner universities in the area of training, for example as part of various combined vocational training and degree programs. Further cooperation with universities is achieved through technically oriented master's degree programs. Within the context of doctoral programs, MAN works with a large number of academic chairs in a Germany-wide cooperation network. Our measures to foster young talent focus on the forward-looking fields we have defined for MAN – namely, digitalization, electrification and automation.

Job security

As one of the world's leading commercial vehicle manufacturers, MAN Truck & Bus aims to further expand its market position by leveraging its performance and innovative strength. In doing so, it aims to positively shape its future and that of its employees. As part of a realignment of its production network, MAN is currently undergoing a comprehensive transformation process. Despite global challenges such as the COVID-19 pandemic, the war in Ukraine and the strained situation with regard to supply chains, our goal is to secure jobs in the long term and remain competitive. Measures such as the future collective agreement concluded with IG Metall in 2021 will help us to achieve these goals and confirm that we have set the right course for the future.

Employee rights

The principles enshrined in the Code of Conduct are based on MAN's shared corporate values: Customer focus, integrity, respect, team spirit, and determination. The Code of Conduct focuses on the integrity and

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responsibility of each individual. It also uses practical examples to explain how each individual can live up to this responsibility and act appropriately – especially in conflict situations. Integrity and compliance are the cornerstones of our entrepreneurial activities and are of great importance for MAN. Violations can be reported via the company-wide whistleblower portal “Speak up!” or to the compliance officer or the compliance contacts within the individual departments.

Moreover, integrity and compliance form the basis for the Group’s reputation, for the trust that our customers and business partners place in us, for the well-being of our employees, and for our long-term commercial success – aspects which we are not prepared to jeopardize by risking hefty financial losses resulting from administrative fines, confiscated profits, obligations to pay damages, or criminal prosecution. Indications of discrimination as well as individual offences, such as thefts, were investigated during the reporting year 2022 and sanctioned, if confirmed.

MAN recognizes the rights of workers to form and participate in unions and to conduct collective bargaining. Practically all of our permanent staff in Germany are covered by collective agreements. The proportion of employees covered by collective regulations worldwide is just under 90%. We are not aware of any production sites or suppliers where employees’ right to exercise freedom of association or to engage in collective bargaining may have been violated or could be significantly at risk.

Employee structure

The MAN headcount is defined as all active employees (permanent staff), employees in the passive phase of partial retirement, and vocational trainees. It does not include subcontracted employees.

The changes in the number of employees in Germany are largely the result of a voluntary workforce reduction program set up and rolled out in 2021, which was continued into 2022. As part of this program, employees were offered various HR instruments according to the principle of double voluntary action: Partial retirement, termination agreements, relocation to a transfer company, and a move to another company in the Volkswagen Group. Abroad, the production site in Bánovce (Slovakia) was consolidated and is thus now part of the employee structure. In addition, the production site in Krakow (Poland) was expanded and new employees were hired.

Employees by business area

	2020	2021	2022
Commercial Vehicles	37,665	34,702	35,230
Other (Group loans)	5	4	2
MAN Truck & Bus	37,670	34,706	35,232

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Employee structure¹

	2020	2021	2022
Permanent staff	34,741	32,111	32,648
of which women	4,593	4,269	4,485
of which men	30,148	27,842	28,163
of which part-time employees	1,134	981	987
of which women	812	718	704
of which men	322	263	283
of which employees on fixed-term contracts	2,154	1,832	2,879
of which women	373	323	576
of which men	1,781	1,509	2,303
Vocational trainees	2,410	2,083	2,010
of which women	352	310	307
of which men	2,058	1,773	1,703
of which in Germany	1,573	1,387	1,255
Employees, passive partial retirement	514	508	572
Headcount	37,665	34,702	35,230
Subcontracted employees	1,714	1,985	2,376
of which women	120	183	339
of which men	1,594	1,802	2,037

¹ At the end of the year

Employee turnover

The employee turnover rate indicates what percentage of employees left the company during a one-year period. Employees on fixed-term contracts and employees starting retirement or partial retirement are not included in the calculation of this indicator. The 2,390 departures this concerned in 2022 (2021: 2,426) resulted in a fluctuation rate of 7.4%. The fluctuation rate is therefore 0.1 percentage points lower than in the previous year (7.5%).

Employees by location

	2020	2021	2022
Germany	21,285	20,197	19,467
of which MTB ¹	15,482	14,598	14,013
of which MTBD ² + MSSG ³	5,803	5,599	5,454
Other countries	16,380	14,505	15,763
of which production sites	9,567	7,651	9,199
of which sales companies (NSC)	6,813	6,854	6,564
Total	37,665	34,702	35,230
% in other countries	43	42	45

¹ MAN Truck & Bus SE

² MAN Truck & Bus Deutschland GmbH

³ MAN Service & Support GmbH

Age structure¹

	2020	2021	2022
≤ 30	6,589	5,994	6,395
31 – 40	9,401	8,586	8,561
41 – 50	9,623	8,845	8,916
51 – 60	8,003	7,506	7,558
≥ 61	1,125	1,180	1,218
Total	34,741	32,111	32,648

¹ Only permanent staff

In the year under review, we hired a total of 3,401 people, while 2,893 left our company.¹

¹ Employees who have left the company include 503 employees on fixed-term contracts and employees starting retirement or partial retirement. These are not included in the aforementioned departures (2,390). The deconsolidations of NSC Thailand and NSC Russia carried out in the reporting period are not included in the fluctuation data shown above.

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VOCATIONAL AND OTHER TRAINING

Vocational training and the dual model

We promote young technical and commercial talent through qualified training and the offer of a dual study program or a course of study as part of a joint practical training program. Training at the German sites is anchored centrally in the MAN Academy, while training at sites outside of Germany is decentralized to the relevant Human Resources departments. In the fall of 2022, for example, 465 apprentices and nine dual students in Germany, Turkey and Poland began their professional career at MAN Truck & Bus, with women making up 15% of the apprentices and 22% of the dual students. In the year under review, the ratio of apprentices at the various sites was between one and four percent. This describes the proportion of apprentices and dual students in the permanent workforce at the sites which offer training.

In the year under review, there were 2,010 trainees in one of over 23 different vocational training careers, 15% of them were women. In cooperation with various universities, 57 dual students are currently completing their studies in 13 different courses at our sites in Germany – 30% of them women.

In order to prepare MAN for the digital future of the working world and to familiarize vocational trainees and students on dual programs with the challenges of Industry 4.0, they are taught the relevant content as part of their vocational training/studies. To this end, the “Vocational Training 4.0” platform was further expanded to complement practical employment, and mobile devices were made available to every trainee or dual student in Germany. MAN continues to invest systematically in new technol-

ogies and offers qualification programs on alternative drive systems such as hybrid or electric drives, as well as collaborative robot technology and augmented reality. MAN also attaches great importance to digitalization and training in electric mobility for assembly professions. In addition to the technical aspects, social commitment and sustainability are also fixed components of the teaching program, as demonstrated by cooperations with various associations and the annual training of energy scouts.

Training and education costs¹

in €	2020	2021	2022
Costs for training and education	23,552,731	17,134,000	41,385,675

¹ In 2020 and 2021, the costs of education (i.e. continuous professional development) were reported; from 2022, the costs of both training and education were included in the reporting: €26,402,908 was spent on training and €14,982,767 on education. Together, these comprise the total costs of €41,385,675.

Study

MAN’s support for the Germany Scholarship opens up educational opportunities to high-performing students regardless of their social background. Around 400 scholarships have been funded since 2011. In the year under review, 19 German scholarship holders were supported. Courses of study in the fields of electrical and automotive engineering, as well as IT, are a particular focus in this regard. In the context of digitalization, other focal points include future competencies for new technologies such as electric mobility, autonomous driving, or digital connectivity and energy informatics.

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In the course of MAN's transformation, new generations of employees are becoming part of the company and changing the requirements for working methods, the working environment, and forms of collaboration, communication and leadership behavior. With this in mind, we have developed targeted measures for continuous professional development and training. In 2022, members of permanent staff took part in around 6800 continuous professional development and qualification measures approximately 123,000 times. Average qualification hours per employee were 18.0 hours in 2022 (2021: 21.6 hours).

Internal experts impart specific specialist skills as part of the "Berufsfamilien Academies" (BFA) concept, ensuring systematic knowledge transfer and employee training. The MAN Academy broadens this scope with the aim of guaranteeing uniform standards of quality and

competencies around the globe. Strategic and technological innovation and the transformation of the working world, driven by CO₂-free mobility, digitalization, and automation, call for targeted training measures and new forms of learning. For all qualification content, the digitalization of learning formats is particularly important to us. In this regard, we focus on the implementation of external digital learning platforms.

Leadership and management training

In order to ensure that managers continue to receive fresh food for thought on management and leadership issues and to maintain a platform for dialog, we have made the switch from face-to-face training to online events. The focus has been on topics such as leadership in transformation and plurality and inclusion.

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DIVERSITY AND EQUAL OPPORTUNITIES

Equal opportunities

At MAN, we consider diversity and equal opportunity to be fundamental prerequisites for securing the company's future. We are developing our corporate culture further, inviting our employees to contribute their diverse skills, knowledge, experience, and perspectives to our company. We have established a dedicated "Diversity & Inclusion" department to ensure that these considerations are implemented sustainably. The aim is to establish a diverse and inclusive culture in order to strengthen MAN in the face of demographic and social change and secure the future success of the company. We provide equal opportunities for all people, regardless of ethnicity, national origin, gender, gender identity, religion, belief, age, disability, sexual orientation, skin color, political affiliation, social origin, or any other characteristic protected by law.

We focus on ensuring that all employees have equal opportunities. For example, MAN offers special HR development measures to support women who are starting out as specialists and managers, such as its mentoring program or an orientation program to motivate potential female candidates to embark on a management career. Our guidelines for management hiring specify that diversity and the placement of qualified women, in particular, are to be given due consideration. Our new managers receive training to raise their awareness of the issue of equal opportu-

nities. The proportion of female managers was 12.5% in the year under review (2021: 12.6%). In addition, the company's Supervisory Board meets the target set by the Supervisory Board in accordance with Section 111(5) of the German Stock Corporation Act (AktG) of women making up at least 30% of its members.

We continue to work on helping our employees to achieve a better work-life balance. MAN therefore offers various flexible working hours models, as well as the option of splitting a full-time position into two part-time positions. We also offer part-time hours for management staff. We have also added the aspect of "broad social experience such as caregiver leave, maternity leave and parental leave" to the criteria for entry into a management career.

Women in management positions

	2020	2021	2022
Senior Management	0	0	1
Senior Management	36	30	31
Management	76	80	74
Total	112	110	106
Proportion ¹ in %	10.7	12.6	12.5

¹ Women in management to management total

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Diversity and inclusion are part of a holistic strategic approach that we pursue at MAN in order to be successful in the long term. The company management, the General Works Council, and the Group Council for Employees with Disabilities see inclusion as an opportunity for the embodiment of diversity and equal opportunities. Inclusion describes the consideration of different opinions, perspectives, experiences and other factors. The company therefore signed the German Diversity Charter back in March 2017.

The “Skill Capture for Inclusive Leadership” labs are one measure that is helping to shape inclusive transformation at MAN. Through participating in these labs, all managers have been trained on plurality and

inclusion since September 2020. The training courses take a sustainable approach and provide suggestions and ideas that encourage management to establish new patterns of thinking.

In addition, one focus of the topic of inclusion is on the inclusion of people with disabilities. In the year under review, MAN employed 1,472 (2021: 1,487) disabled people within Germany. Examples of active measures to promote inclusion at our Munich site include redesign of workstations, creation of new jobs for persons with severe disabilities, accessible communication for deaf employees, and support for adapting the working environment and routes around the workplace to better accommodate persons with specific mobility impairments.

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OCCUPATIONAL HEALTH AND SAFETY



Occupational health and safety management

Demographic change, digitalization, the switch to new propulsion technologies, coping with the COVID-19 pandemic, and the contemporary design of occupational health and safety are the main challenges that MAN is currently facing. Another key factor is the rapidly changing product portfolio. Work on electrically powered vehicles, for example, requires new forms of occupational safety. Within the context of our comprehensive occupational health and safety system at MAN, we consider occupational health checkups, prevention, occupational health promotion, corporate reintegration management, and ergonomics to be our top priorities. Health management at MAN pursues a cross-company strategy. The aim is to develop and uphold principles that apply at every site in order to achieve a coordinated strategic approach to health services worldwide. The individual site also take measures independently to address specific concerns. Furthermore, our health managers are involved in constant dialog with the brands of the Volkswagen Group and participate in various working groups. Health and safety is not the subject of formal agreements worldwide – rather, the issue is addressed on a local level.

Preventive occupational safety

Occupational health and safety includes all measures related to preventing workplace accidents, work-related illnesses, and occupational diseases. All plants systematically evaluate workstation ergonomics and potential physical and psychological workplace hazards. Throughout the Group, we have further developed all existing initiatives to cut accident rates and prevent work-related illnesses. In addition, we regularly conduct internal

and external occupational health and safety audits and inspections. Continuous improvement has been proved by the recertification of the occupational safety management system at all MAN Truck & Bus sites. All MAN production sites as well as the Dachau site and the Salzgitter spare parts warehouse are certified to ISO 45001.

Occupational safety is an integral component of the production strategy in the strategic pillar of sustainability. The “Safety first” initiative prioritizes occupational safety and defines the safety and health of employees as key elements. We also strengthen our employees’ understanding of safety through appropriate measures such as the current “One Second Counts” campaign. To accompany our strategic development in organizational terms, we established the Corporate Safety Solutions (CSS) unit in 2021 and entrusted the occupational safety department at our Munich site with the overarching coordination and management of all occupational safety activities. We expanded the department further in the year under review and anchored it in the operational structures and committees. This brings together all occupational safety activities within the production strategy and improves technical cooperation with the sites. In this way, through multiple workshops, five top targets to be achieved by 2025 were developed for each site. Examples of these include the use of uniform occupational health and safety software, or the development of behavior-related measures to reduce the number of accidents.

To further optimize occupational safety and make it measurable, we pressed ahead with the introduction of the Safety Performance Index (SPI) in the reporting period. The SPI is a data-based metric used to evaluate the safety performance of all plants and processes. The associated occupational safety model provides transparency in all operationally relevant occupational safety processes and makes the occupational safety

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performance at each production site measurable and comparable. This will make it possible to develop and implement company prevention programs even more effectively in the future. In 2022, there was one (2021: none) fatal occupational accident¹.

Lost-time injuries¹

	2020	2021	2022
Number of lost-time injuries ²	348	296	343
Accident frequency index ³	9.98	9.43	10.20

¹ Only lost-time injuries affecting permanent staff in production or at production-related sites. All figures exclude subcontracted employees. Lost days are only considered up to December 31 of a fiscal year.

² In accordance with the German Social Code (Sozialgesetzbuch), lost-time injuries are defined as injuries incurred by the insured while carrying out their insured employment. We count lost-time injuries starting at one day of missed work.

³ The accident frequency index is an indicator of the frequency of lost-time injuries relative to the sum of all hours worked. The formula for calculating the index is the number of workplace accidents multiplied by 1 million hours worked.

Committees for cross-site cooperation

We promote the health of all of our employees by taking measures to reduce accidents, prevent occupational illnesses, and help maintain good health. Employees are also free to use the company suggestions scheme to submit ideas for further occupational safety measures. Employers and employees based at all of our sites in Germany discuss occupational safety and health protection in the *Arbeits sicherheitsausschuss* (ASA — Occupational Safety Committee). Similar committees have been established at the production sites abroad. The General Works Council responsible for the German sites, *Gesamtbetriebsrat – Deutsche Standorte* (GBR), has

appointed a representative to attend the international meetings of the occupational safety experts and report concerns raised by employees.

Occupational health

At MAN, protecting and promoting the health of employees is a high priority. We therefore integrate current occupational health findings into operational processes in order to strengthen sustainable workplace health promotion. Sufficient emergency care in case of need and efficient company reintegration management complement our catalog of measures.

MAN Health Services advises the employer on a company-wide health management strategy and its implementation. It is also committed to maintaining, promoting and restoring the health and employability of its employees. Direct measures to promote physical and mental health are based on the operating conditions. Targeted initiatives also promote employees' individual health behavior and strengthen their sense of personal responsibility.

In addition to implementing ongoing operational measures for dealing with the COVID-19 pandemic, MAN Health Services focused on providing information on mental wellbeing, among other aspects, during the year under review. Online mindfulness training, regular articles on the intranet, and the "Diaphon" employee support program raised awareness and provided support for employees and managers. MAN Health Services also contributed occupational medical expertise in shaping the transformation toward new working environments. Possible psychological and physical stresses that can arise from working in a home office were

¹ The fatal industrial accident involved an external employee of the security service who had been commissioned under a contract for work and services.

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actively addressed and suitable compensation aids were offered. We were already able to make a significant contribution to this through our existing portfolio, which includes detailed medical consultations and a medical check-up.

MAN achieves the coordinated implementation of measures to maintain health through the development of a cross-site health strategy. Intensive and consistent global communication with the brands of the

Volkswagen Group and TRATON, as well as cooperation in working groups, also ensure coordinated action by all health stakeholders of the VW brands. The healthcare departments of the individual MAN plants also plan measures independently in line with demand.

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ROAD, PRODUCT, AND SERVICE SAFETY

MAN considers it both an opportunity and a challenge to increase road safety and simplify our customers' daily work with our solutions. As a "smart innovator", we are focusing on intelligent driver assistance systems and aim to be one of the pioneers in this field through pilot projects in autonomous driving. Our goal is to make MAN products even safer, more efficient, and more innovative.



In focus:

- Continuous safety testing and monitoring of our products
- Increasing the reliability and safety of our products through continuous innovation right up to autonomous driving
- Greatest possible reduction of traffic accidents through technological advancements of assistance systems, among other measures
- Maximizing customer satisfaction

Key figures 2022:

- 34%** reduction in critical driving events through the Adaptive Cruise Control driver assistance system
- 100%** of MAN products are continuously checked and monitored for safety aspects
- 90%** of customers surveyed rate their customer experience in service with at least 4 out of 5 stars

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Road, Product, and Service Safety**Product safety**

In addition to the issue of decarbonization, MAN focuses in particular on the safety of its products for drivers and road users. We meet our customers' increased demands for road safety with digital assistance systems, increasingly automated services, and our ProfiDrive® professional driver training sessions, among other solutions.

All MAN products are checked and monitored for safety aspects on an ongoing basis. MAN Truck & Bus lives up to its responsibility for the products placed on the market by ensuring intensive and systematic product monitoring, efficient reporting channels, and a committee structure established for this purpose. This is set out in subgroup policy 19 101, which is based on Volkswagen Group Policy 4 "Product Safety and Conformity". The system described in this policy is used to monitor and ensure product safety and conformity for MAN Truck & Bus products.

Driver assistance systems

MAN relies on continuous innovation to increase safety in its vehicles and on the road. To further reduce risks in traffic, the truck models for long-haul transport rely on the latest driver assistance systems developed over the course of many years of accident research. Some examples are listed below – for more information, please visit our [website](#).

- Turn assist
- Lane change support (LCS)
- MAN CruiseAssist
- Adaptive Cruise Control (ACC)

- MAN Traffic Jam Assist (TJA)
- Emergency Brake Assist (EBA)
- Lane Departure Warning System (LDW)
- MAN OptiView

Driver assistance systems from MAN increase safety in traffic and can also help to reduce fuel consumption. This is confirmed by the euroFOT European research project from 2012, which involved companies and institutions from ten different countries: Using ACC, the trucks consumed an average of almost two percent less diesel fuel during the test period, with a higher average speed. Additionally, critical events such as hard braking or sudden evasive maneuvers were reduced by more than one-third.

Autonomous driving

Autonomous freight transportation has the potential to significantly improve transportation costs and efficiency, as well as reliability, sustainability, and most importantly, safety. Autonomous vehicles are leading to a radical transformation of the business model, and MAN is accompanying this change as a provider of intelligent and sustainable transport solutions. MAN's goal is to open up the path to logistics 4.0 with automated commercial vehicles, particularly in hub-to-hub applications.

The advantages are:

- Fewer accidents due to human error
- More flexibility and efficiency by detaching the transport processes from statutory driving and rest times

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- Reduction of unattractive driving tasks on long-distance routes in favor of more demanding and varied driving activities in urban and regional transport for the few drivers still available

On the basis of various current practical projects, the continuous development steps from autonomous driving on closed terrain to fully autonomous driving on the highway between logistics centers will become clear. The  ANITA project, for example, is developing the autonomous delivery and collection of containers at a road-rail transshipment terminal operated by the cooperation partner Deutsche Bahn, which will significantly optimize the transshipment process and consequently facilitate climate-friendly combined transport. The  ATLAS-L4 project, on the other hand, is already working on the concrete implementation of autonomous hub-to-hub transports, which have been possible since 2022 as a result of the law on autonomous driving. Thanks to ATLAS-L4, the first truck to drive autonomously on a German highway is expected to be deployed by the end of 2024.

ProfiDrive® driver training sessions

MAN ProfiDrive® is the professional advanced training system from MAN Truck & Bus used around the world. Industry-specific training sessions in accordance with the German Professional Driver Qualification Act (Berufskraftfahrerweiterbildungsgesetz – BAG) teach drivers how to adopt a care-

ful driving style in order to avoid road traffic risks. These training sessions are offered for truck drivers as well as for bus and van drivers. This increases safety, reduces fuel consumption, and cuts the costs associated with wear and tear.

Customer satisfaction and information

MAN conducts surveys on product and service satisfaction in all its business units on a regular basis. MAN Truck & Bus continually tracks customer satisfaction along important touchpoints using the CustomerFirst Study (CFS). In 2022, we conducted more than 30,000 interviews in the course of the CFS 2022. These indicated customer satisfaction to be at a high level: Around 90% of respondents rated their customer experience with service with at least four out of a possible five stars (62% five stars, 28% four stars).

We provide our customers with information and instructions for all our products. We inform them specifically about factors such as rolling resistance and aerodynamic drag, which influence vehicle emissions and fuel consumption. We present information on the CO₂ emissions generated by our vehicles with reference to the total lifetime mileage. In addition to information formats for products and services, we offer MAN Truck & Bus sales staff regular training on climate-related and environmental topics, allowing us to ensure that we can provide our customers with expert advice.

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COMPLIANCE, ETHICS, AND INTEGRITY

For MAN, sustainable corporate success means consistently monitoring and implementing compliance, ethics, and integrity. We have therefore established a compliance management system covering the topics of white-collar crime, antitrust law, and business and human rights, and set out our corporate values and guidelines on integrity in a Code of Conduct. Through regular training courses for our employees and managers, we ensure that these values are also embodied in everyday working life.



In focus:

- Creating a culture that accepts only ethical behavior and behavior with integrity
- Ensuring a robust corporate structure via supportive and effective management systems
- Continuously improving implemented standards and guidelines
- Implementation of the requirements of the German Supply Chain Due Diligence Act (LkSG), to further define and improve MAN's activities to protect human rights

Key figures 2022:

1,798 participants in in-person compliance training courses

13,858 participants in online compliance training courses

45 central + 927 local requests answered by the compliance helpdesk

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GOVERNANCE, RISK MANAGEMENT, AND COMPLIANCE

Compliance and integrity are key elements for lasting corporate success and are therefore important foundations for MAN's corporate strategy. They are essential for successful cooperation within MAN and with our business partners. With this in mind, we have defined integrity as one of our corporate values. MAN has an effective compliance management system to ensure that corporate, product-specific and environmental regulations are observed at a national and international level. In addition, managers and employees are enabled to act with integrity and to comply with ethical standards and corporate values in their day-to-day work.

In addition, the management of risks and opportunities is an inseparable component of corporate management and business processes. MAN has established a comprehensive risk management system to create transparency about risks and opportunities in the company at an early stage and to implement risk-reducing measures at management and process level.

Organization

The Executive Board of MAN Truck & Bus has established the Governance, Risk and Compliance (GRC) function as part of its responsibilities. This function is managed by the Head of GRC/Chief Compliance Officer at MAN Truck & Bus, who reports directly to the Chief Executive Officer of MAN Truck & Bus as well as to the Head of GRC/Chief Compliance Officer of the TRATON GROUP. In addition, a report is submitted to the Supervisory Board of MAN Truck & Bus once a year. The GRC Organization is responsible for compliance, integrity, data protection, and risk manage-

ment issues throughout the company. The Corporate GRC Office of the TRATON GROUP supports the MAN GRC department in this regard, for example in the creation of company-wide guidelines and specifications as well as in the planning and implementation of training for employees. MAN's GRC organization is responsible for implementing the TRATON-wide minimum standards for the compliance management system and the risk management system at MAN companies. This also includes the implementation of risk management processes and the further development of risk management tools in cooperation with the risk/ICS (internal control system) managers.

The Head of GRC/Chief Compliance Officer at MAN Truck & Bus is supported by compliance officers, data protection managers and officers, and risk/ICS managers in the various business units and sales regions. Finally, tasks relating to compliance, integrity, and risk management are also performed by Compliance Champions and risk/ICS coordinators. They are not full-time GRC employees, but rather MAN employees and managers who take on special responsibility for topics related to compliance, integrity and risk management.

Elements of the MAN compliance management system

The MAN compliance management system addresses the topics of white-collar crime (in particular, combating corruption and preventing money laundering and terrorism funding), antitrust law and business and human rights.

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Governance, risk management, and compliance

Code of Conduct

Ethical principles of conduct and fundamental compliance requirements for MAN are laid down in the [Code of Conduct](#). The Code also outlines the corporate values and establishes guidelines regarding integrity.

Reporting

At different organizational levels, regular status reports on compliance measures are presented in the responsible committees.

Risk analysis

A specific risk analysis is carried out on a regular basis to identify potential compliance risks for the Group and to align and further develop the company-wide compliance management system based on these risks.

Policies

The GRC Organization has also developed policies on issues such as combating corruption, antitrust law, money laundering prevention, and data protection. These policies represent uniform and binding requirements for all employees throughout the company.

Business Partner Approval Tool

MAN checks the integrity of its business partners as part of the tool-supported Business Partner Approval Process. The process is used primarily, but not exclusively, for business partners providing sales support.

Compliance training sessions

The GRC Organization conducts regular face-to-face and online training sessions on topics such as preventing corruption, antitrust law, and money laundering prevention. In the first quarter of the year under review, a new e-learning course on the subject of anti-corruption was introduced. MAN is also working on the creation of e-learning programs relating to the Code of Conduct and to human rights. These programs are expected to be made available in the first half of 2023.

Compliance Helpdesk

All MAN employees can contact the relevant compliance officers in person, by phone or e-mail to obtain answers to compliance-related questions. The Compliance Helpdesk is also available to them (by phone and e-mail). This gives the GRC Organization an overview of frequently asked questions in order to develop further preventive compliance measures as and when required.

Reporting compliance violations

MAN's whistleblower system serves to uncover and prevent potential risks for MAN. In order to meet the requirements of the EU Whistleblowing Directive 2019/1937, necessary adjustments to the processes of the whistleblower system have already been initiated. MAN provides various reporting channels to enable the early disclosure of grievances and risks. The "Speak up!" whistleblower portal can be accessed via MAN's corporate website and is thus available not only to MAN's own employees, but also to external actors such as customers, business partners, suppliers and other

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third parties. Tips are received and processed via “Speak up!” – anonymously upon request. Information regarding potential violations of the law, particularly in the area of white-collar crime (for example, corruption offenses, suspected money laundering activities and/or terrorist financing), antitrust law, and violations of human rights and/or data protection can be submitted via this portal. These reports are investigated in detail and violations are dealt with and sanctioned in line with the penalties permitted under labor law. In addition to the “Speak up!” portal, there are also direct contact options within the company by phone, e-mail or mail, as well as a 24/7 hotline and ombudsmen within the Volkswagen Group. All contact channels are listed on the intranet and on our [website](#).

In 2022, MAN received over 150 tip-offs. There were no compliance violations that resulted in a corporate fine.

Memberships

MAN participates in the United Nations Global Compact initiative. MAN is also involved in the Alliance for Integrity, an initiative of Germany’s Federal Ministry for Economic Cooperation and Development together with the German development agency Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), the Federation of German Industries (BDI), and numerous other German companies that is designed to promote integrity in the world of business. MAN is also a member of the German Institute for Compliance (DICO e.V.) and Transparency International.

Compliance measures**2022**

Business Partner Approval Tool	423 business partner audits were approved in 2022. As at December 31, 2022, a total of 3,695 business partner audits had been approved.
Compliance training sessions	In 2022, the GRC unit held 171 in-person training sessions with 1,798 participants. Among others, this included a new training course focusing on corruption and conflicts of interest, which was specifically designed for HR employees in cooperation with the HR Ressort and Internal Investigation departments. This training is to be continued in the 2023 reporting year. In addition, 13,858 employees took part in online training courses, mainly on the topic of Anti-corruption.
Compliance Helpdesk	The central Compliance organization managed to answer 45 questions, while another 927 were answered locally.
Together4Integrity	MAN further expanded the Together4Integrity (T4I) program in 2022. The program aims to promote the company’s integrity, compliance, culture, and risk management initiatives so that these are on a par with the company’s key priorities. The objective is to work hand in hand with employees to create a culture of integrity. The program contains numerous measures in various areas of the company, in line with the five principles defined by the internationally recognized Ethics & Compliance Initiative (ECI). Integrity, as a guiding principle for appropriate behavior, is firmly established as one of MAN’s five corporate values. In total, 146 of the 166 measures defined in the T4I programme could be fully implemented by 31 December 2022.
Additional measures	In the year under review, various communication measures were also implemented with regard to compliance and integrity. They include, in particular, advice on integrity and compliance issues in specific business situations. For example, this involved sending out GRC newsletters and “GRC alerts” to make employees aware of GRC risks. Risks were also highlighted company-wide by means of intranet posts. In addition, a compliance champions conference was held with the aim of informing colleagues about current compliance and integrity topics. The topic of human rights played an important role in the reporting year 2022. MAN communicated the adoption of the Declaration on Human Rights Principles to all employees via the intranet and published a corresponding document on its website.

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TAX PAYMENTS

MAN is an internationally active commercial vehicle manufacturer that is subject to taxation in many countries worldwide as a result of its business activities. MAN is aware of its social responsibility in fulfilling these tax obligations and has made an explicit commitment to complying with national and international legislation in its Code of Conduct. Compliance with statutory rules and regulations is important to us in ensuring that we foster trust among customers, tax authorities and the general public. It is the responsibility of all departments and employees to design internal operating processes and structures so as to ensure that taxes and duties payable are calculated, recorded, and paid correctly, in full, and by the relevant deadline.

Tax concept

MAN has set itself the following strategic tax objectives, which are set out in the Group Tax Policy adopted by the Executive Board:

- Due and proper fulfillment of tax obligations and the minimization of tax risks are a top priority. Tax risks are communicated to management, proactively managed and monitored.
- All of the relevant tax laws, rules and regulations are adhered to, and reporting and disclosure obligations are complied with. All taxes and duties are declared and paid on time.
- Any tax planning/structuring activities must be responsible and consistent with the applicable legislation. Binding information is sought in an active attempt to gain assurance. Tax positions are supported by relevant legal opinions.

- Transactions must be structured transparently so that their actual scope is not obfuscated.
- Inappropriate structures that result in advantages that run contrary to what is intended by law must not be used. Tax arrangements and assessments are only pursued if and to the extent that it is possible to demonstrate that they will, in all likelihood, be recognized in rulings passed by the highest courts and/or in the local opinions of tax authorities.
- Transactions between companies within the Group are concluded at arm's length where this is required for tax purposes.

Taking these principles as a basis, the Tax function (FS) has an obligation to comply with the statutory requirements. The aim of the Tax function is to ensure that the tax obligations of MAN Truck & Bus are consistently fulfilled adequately, on time, and in full, while at the same time making the best possible contribution to the achievement of existing corporate objectives. The task of FS as a central tax function is therefore to optimize MAN's tax position in both financial and qualitative terms. The following main principles apply:

- Compliance with all tax obligations: Timely and complete fulfillment of all tax obligations
- Development of "sensitivity to, and awareness of, tax issues" within the organization by providing clear information about tax obligations and their potential impact on the business
- Support for operating activities by proactively tackling, addressing, and resolving potential tax issues in close collaboration with all of the areas/functions involved

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- Adopting a proactive, consistent, and reliable stance in aligning and coordinating business needs with fiscal requirements
- Efficient use of resources and costs

Tax governance

The Tax Compliance Officer (TCO) monitors the tax compliance management system (CMS) with regard to compliance with domestic tax obligations in collaboration with the related functions. Within this context, the TCO reports to the Head of Tax on tax compliance matters on both a regular and an ad-hoc basis (including results of the tax compliance risk assessment, changes in the tax compliance risk profile, analysis of any changes in the legal basis for tax compliance, a summary of the tax compliance findings/shortcomings identified). If compliance violations are identified, the cases are processed, and possible sanctions defined, not by the Tax function, but rather individually by HR and Compliance, where appropriate in coordination with the management team involved.

In the year under review, for further quality assurance of the established tax compliance management system, MAN had its conception, appropriateness and implementation audited by an external auditing firm in accordance with the relevant auditing standard IDW PS 980 in conjunction with practical note 1/206. The auditors issued an unqualified positive audit opinion with no findings.

Managing tax risks

Tax compliance risks are identified taking the tax compliance objectives into account. Tax compliance risks are scenarios that could lead to violations of the rules to be followed (statutory requirements and requirements put in place by the company itself) and, as a result, to a failure to meet tax compliance targets. The process involves carrying out a systematic risk identification and assessment process that is commensurate with the company's organization. Based on the general principles for risk management that apply at MAN, the central tax function has been given a key role in the company's internal monitoring system. With regard to the implementation of, and compliance with, the Tax CMS, the central tax function has implemented a risk management process (including monitoring). The aim is to observe and document the management of these tax risks. Accordingly, MAN uses ongoing processes to systematically address its risks in general and the tax risks it is exposed to in particular. Tax opportunity and risk management involves capturing the relevant tax risks, i.e. the risks of noncompliance with, and deviations from, tax regulations, on the basis of the tax compliance targets. An appropriate systematic risk identification and assessment process is carried out within this context. Tax risks are identified, assessed, and classified accordingly. There are set routines for dealing with mistakes in place to ensure continuous improvements in tax risk management and the effective resolution of any

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issues that arise. If mistakes are identified (e.g. as part of a company tax audit or other internal checks), an escalation process is triggered and the resolution of the issue is documented. In order to ensure that the mistake is not repeated in the future, suitable adjustments are made (e.g. in the IT system, in processes) and action is taken to either introduce additional checks or revise existing ones. A regular dialog process on new compliance

topics and methods and their potential impact on the Tax CMS at MAN is in place with the Governance, Risk and Compliance function to ensure continuous improvement. All employees within the company are also invited to submit suggestions and ideas for improvement. This means that the Tax CMS is subject to an ongoing process of change and improvement.

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DATA PROTECTION

Measures to implement the EU General Data Protection Regulation (GDPR) in Europe form the focal point of MAN's data protection activities. We also regularly monitor and analyze developments in data protection law. The aim is to establish and maintain the level of data protection required by national law or the MAN Policy in all MAN companies. The current data protection laws in China, South Africa and Turkey were particularly relevant to MAN.

In order to meet all of the statutory challenges as well as the challenges it has set itself, MAN maintains a global network of more than 70 data protection specialists, some full-time and some part-time, who work hand in hand with the specialist functions to ensure that the data privacy rights of all employees, customers, suppliers, and business partners are protected in the context of MAN's activities. Group Data Protection, a central organizational unit at MAN Truck & Bus, is responsible for coordinating this network.

The principles governing the handling of personal data and the organization of data protection at all MAN companies are described in greater detail in Group Policy MAN 4.6. This Policy was updated in the summer of 2020, when the "data protection manager" function was added. Data protection managers support the MAN companies in the operational fulfillment of their data protection duties.

To facilitate and ensure compliance with all mandatory organizational, information and documentation requirements, MAN uses a globally renowned IT tool for data protection management. Following its implementation in all German companies, MAN began the international roll-out of the tool in 2022. However, as a result of restrictions on person-

nel resources due to the COVID-19 pandemic and internal restructuring measures, the roll-out was unable to be carried out as planned. Of the total of 30 MAN companies included in the planning, around 20 were able to actively use the tool by the end of 2022. The roll-out at the remaining companies is expected to be completed by mid-2023.

As in the previous year, a standardized data protection maturity measurement was carried out in all relevant companies in the 2022 fiscal year. A comparison of the two years showed that the results of these measurements, which are carried out partly locally and partly centrally, have become more meaningful and reliably indicate the focus action fields for the future. The results are addressed in regular data protection discussions between the central unit and the relevant data protection colleagues on site. For the reporting year 2023, it is planned to further harmonize local and central benchmarks and to verify local measurements by means of centrally conducted assessments.

In addition, internal structures and processes are constantly being developed in line with privacy-by-design principles. Completion of a corresponding e-learning session is mandatory to ensure that all employees have sufficient information about data protection and in general. In addition, specific data protection training is offered, particularly for focus areas such as HR, IT and Sales. MAN also plans to implement further communication measures by the end of the year to raise employee awareness of the issue of data protection.

Within the relevant companies, processes for data subject requests and data privacy incident management have been established on a system-supported basis.

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RESPONSIBILITY ALONG THE VALUE CHAIN

As an international commercial vehicle manufacturer, MAN believes it has a responsibility to help shape circular, climate-neutral, and fair supply chains. We are therefore committed to using resources sparingly throughout supply chains and to ensuring compliance with employee and human rights in collaboration with our suppliers and business partners. As part of the Volkswagen Group, MAN is represented in the Sustainability Procurement Network, where we exchange views on current developments and long-term challenges in our supplier relationships across national borders.



In focus:

- Reinforcing sustainability management in procurement
- Responsible use of resources along the value chain
- Compliance with workers' rights and human rights at our suppliers and business partners

Key figures 2022:

87%¹ of production suppliers have a certified environmental management system according to ISO 14001 and/or EMAS

Implementation of the new management approach "Responsible Supply Chain System" (ReSC System) in response to the requirements of the German Supply Chain Due Diligence Act (LkSG)

¹ based on suppliers with S rating (purchasing volume)

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RESPONSIBILITY IN OUR SUPPLY CHAIN

The supply chain of MAN Truck & Bus, as part of the Volkswagen Group, is highly complex, widely ramified globally, and subject to constant change due to the diverse nature of its products. Our goal is to design responsible supply chains to make a sustainable contribution for the future of generations to come. In doing so, we want to set an example in designing circular, climate-neutral and fair supply chains.

Operational management of sustainability issues in our supply chains is carried out by the Sustainability in Supplier Relations team in Procurement. To identify current developments and long-term challenges in the individual countries, we also rely on communication between the brands and regions of the Volkswagen Group through the Sustainability Procurement Network, in which more than 70 experts from five continents work together.

MAN purchases most of its raw materials, goods, and services locally, i.e. in the locations in which the company has its production operations. This allows us to contribute to local economic and social development. For example, 93% of production material suppliers to MAN Truck & Bus have their registered offices in Europe and Turkey; around 50% of them in Germany. Growth potential leveraged by demand for goods and services from MAN has a positive impact on infrastructure thanks to downstream effects: Jobs are created and local incomes rise.

Management approach redefined

In the year under review, we adapted our management approach to procurement to meet the specifications of the new German Supply Chain Due Diligence Act (LkSG), which came into force on January 1, 2023. The “Prevent, Detect, React” approach previously used within the VW Group has been replaced by the “Responsible Supply Chain System (ReSC System)”.

Based on a systematic risk analysis, the new approach aims to avoid or minimize risks of human-rights-related, social or environmental nature as well as corruption along MAN’s supply chain. It is also intended to help eliminate violations and continually improve the sustainability performance of suppliers. The ReSC system includes the following elements, which build on each other:

- **Risk analysis:** A regular risk analysis serves to proactively identify risks in the supply chain. The analysis is based on the supplier’s business models and takes into account external and internal data on human-rights-related and environmental risks. Based on the assessment of the risks, each supplier is assigned a high, medium or low sustainability risk. For suppliers with a low sustainability risk, a country risk score is also used. If there is an increased country risk for the supplier, it is upgraded to the medium risk range. The risk analysis is updated once a year and/or on an ad hoc basis by Group Procurement Sustainability in consultation with relevant parent companies of the Volkswagen Group.
- **Standard measures:** These proactive and reactive measures include the Code of Conduct for suppliers and business partners, the supply chain grievance mechanism, the media screening, the sustainability rating, and supplier and employee qualification.
- **Deep dive measures:** These include the human rights focus system in the supply chain, the raw material due diligence management system, and collaboration with external partners to further develop the concept of sustainability in the supply chain.

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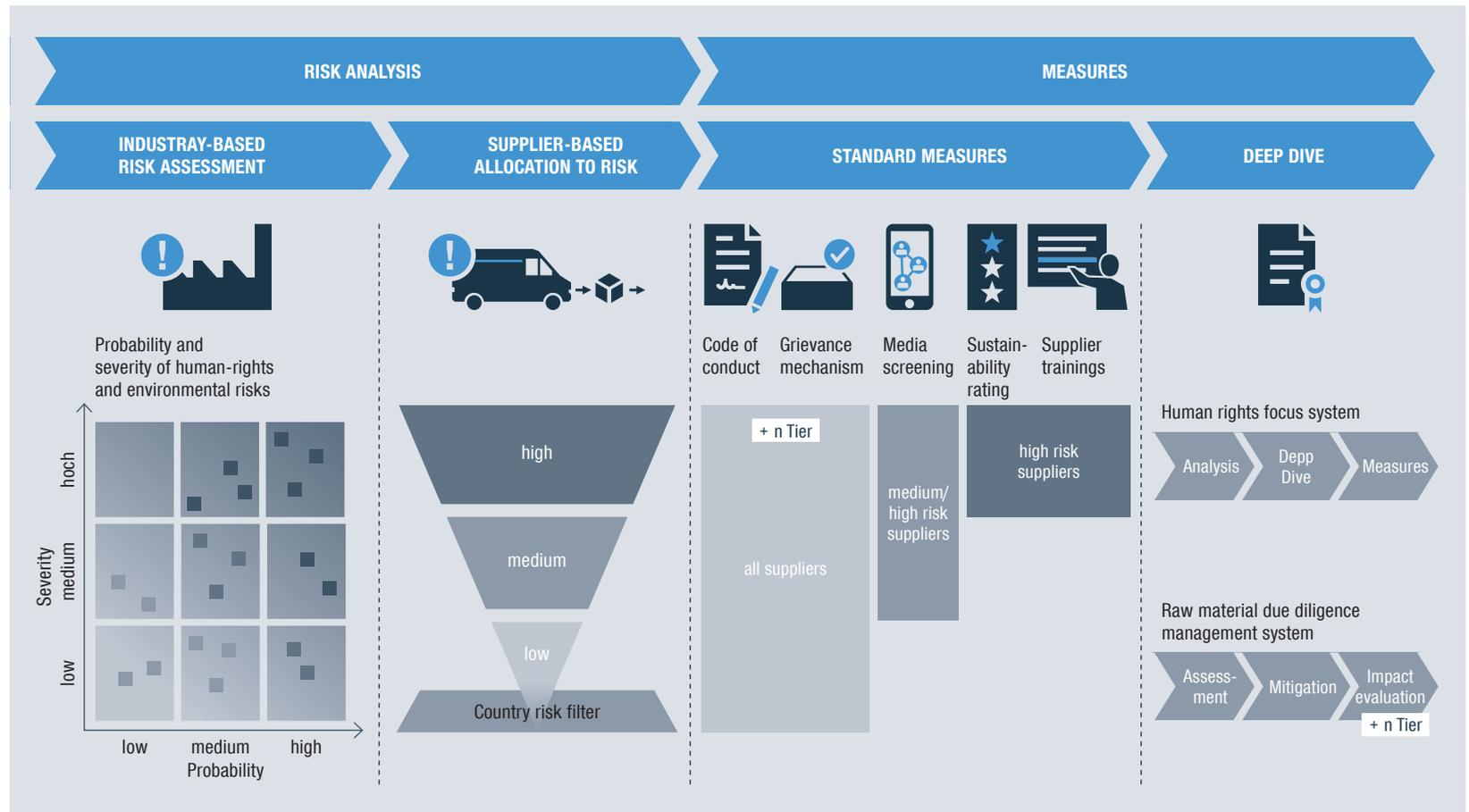
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Our management approach in practice

Implementation of the management approach is binding worldwide and anchored in corresponding MAN guidelines. MAN identifies the sustainability risks that may arise from its business relationships. The risk analysis processes represent the first step of our ReSC system. Based on the risks identified, a package of measures to prevent and mitigate risks is assigned to suppliers in the respective business models and countries.

Code of Conduct for suppliers and business partners

We have defined core elements of our supplier management in our  Code of Conduct for Suppliers and Business Partners. This document contractually sets out our expectations for the conduct of business partners with regard to key human-rights-related, environmental, social and compliance-related standards. The stipulations are based on various guidelines, including the OECD Guidelines for Multinational Enterprises, the UN Guiding Principles on Business and Human Rights, and the relevant conventions of the International Labour Organization (ILO). The Code of Conduct is not just based on international standards, however, but also on the goals, rules and guidelines of the Volkswagen Group.

Before submitting a bid, our suppliers must confirm that they accept the sustainability requirements in the Code of Conduct for Suppliers and Business Partners. After a period of twelve months, they must update this information when submitting a new bid. We also encourage our direct suppliers to pass on our requirements formulated in the Code of Conduct for Suppliers and Business Partners along the supply chain. In

2022, the Code of Conduct for Suppliers and Business Partners was revised and supplemented to include the requirements of the German Supply Chain Due Diligence Act (LkSG). In addition to the Code of Conduct for Suppliers and Business Partners, there are further product-specific requirements for suppliers. These are set out in specifications and define the way in which certain products must be manufactured. For example, one of the requirements is to achieve full disclosure of the cobalt supply chain for battery cells. These requirements are also binding for the suppliers concerned.

Supply chain grievance mechanism

The supply chain grievance mechanism is used to process tip-offs of human-rights-related and environmental risks as well as violations of human rights-related or environmental obligations by direct and indirect suppliers of the Volkswagen Group.

Through the channels of the  "Speak up!" whistleblower system, the mechanism is accessible and open to all potentially affected parties and stakeholders, such as employees of suppliers, civil society actors, or representatives of communities in the immediate vicinity of our production sites. The standardized processing of cases is described in a binding manual, is managed by the Group and is carried out jointly with the brands and regions of the Volkswagen Group. Identified violations are categorized by severity to ensure adequate processing. Appropriate measures are then initiated according to the categorization of the violation. In the event of serious violations, temporary blocking of suppliers from new awards or even termination of the business relationship is possible.

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Continuous and risk-based media screening of relevant suppliers¹ takes place via an IT tool. If the IT tool identifies indications of possible violations of our Code of Conduct for Suppliers and Business Partners, these are examined and processed in the supply chain grievance mechanism if necessary.

Sustainability rating

As a key measure, the sustainability rating (S rating) was introduced in 2020 for all relevant companies and suppliers with a high sustainability risk. The S rating is used to check the sustainability performance of relevant suppliers² and to identify opportunities for continuous improvement. It evaluates suppliers' environmental performance as well as their social sustainability and integrity. The S rating is directly relevant to the awarding of contracts: If a supplier does not meet our requirements for compliance with sustainability standards, it is generally not eligible to be awarded a bid. This serves as a direct incentive for suppliers to improve their sustainability performance.

The S rating is reviewed in a process comprising several stages. In an initial step, a risk exposure is calculated based on a combination of the country risk and the supplier's corporate processes and policies. In addition, the sustainability performance of the companies is reviewed in the course of on-site checks.

¹ The relevance of a supplier for media screening is determined, among other things, by the procurement volume or the risk exposure derived from the type of product or service.

² The relevance of a supplier for the S rating is determined, among other things, by the size of the company or the risk exposure derived from the type of product or service.

Data supplied by a specialized service provider is used to determine the country risk. The company's sustainability performance is analyzed using a standardized Self-Assessment Questionnaire (SAQ). This questionnaire was developed jointly with other automotive groups in the "DRIVE Sustainability" working group based at CSR Europe. Relevant topics were added to the SAQ as part of the preparation for the German Supply Chain Due Diligence Act (LkSG). The information and documents in the SAQ are checked and validated by a service provider via a central platform: If a supplier states that it has appropriate processes and guidelines in place, it must provide evidence of this in the form of appropriate documentation. Every supplier to whom the S rating is applied must fulfill the requirements incorporated within the questionnaire in the areas of corporate governance, environment, social affairs, human rights, compliance and supplier management. As of the year under review, selected questions in the SAQ have been mandatory minimum requirements for all suppliers with a site size of ten employees or more. In addition, as of this year, proof of a certified and/or validated environmental management system is mandatory for all suppliers with a production site that accommodates 100 employees or more. Suppliers in scope without an existing environmental management certificate can, during a transition phase, submit a commitment letter that assures certification will be completed in a timely manner. If a supplier does not meet the minimum requirements, is not eligible to be awarded a bid.

In addition, suppliers that we have identified as having a higher risk of corruption due to their business activities and region are subjected to an in-depth corruption risk assessment. This process is called business partner due diligence (BPDD) and takes place before a contract award deci-

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sion is made. Subsequently, all relevant business partners are continually checked for changes in general conditions through screening of risks and news.

We also constantly work on avoiding duplication in auditing and for broader supply chain coverage together with original equipment manufacturers (OEMs). Together with suppliers in a working group of the German Association of the Automotive Industry (VDA), we are also developing a common standard for on-site checks. To this end, MAN joined forces with other Volkswagen Group companies and eleven other partners in 2021 to establish the Responsible Supply Chain Initiative e. V., which continued to grow in the year under review. In the year under review, i.e. 2022, the first pilot projects for the on-site check standard were implemented within this framework.

Sustainability training for employees and partners

The systematic training of our employees and suppliers is a central component of our strategy and essential for improving sustainability in the supply chain.

The topic of sustainability is an integral part of the competence profile for all procurement employees in the VW Group. In 2022, the year under review, a total of over 2000 employees completed sustainability training for procurement.

To facilitate continuous supplier development, we conduct topic-specific sustainability training and workshops with our suppliers at selected sites or online, and offer online-based training. In the reporting period, over 2900 suppliers were trained in this manner. This includes 245 suppliers who took advantage of the online training and e-learning offered by the “Drive Sustainability” initiative. Voluntary, in-depth human rights training has been available to suppliers since 2020, and was again implemented in 2022, the year under review.

In addition to training courses, we provide current suppliers with an e-learning module on sustainability in nine languages.

Human rights focus system

As part of our sustainable supplier management system, we are particularly committed to protecting those groups that may be exposed to a high risk of potential human rights violations at all stages in our supply chain. In order to comply with international frameworks and requirements, and in particular with the German Supply Chain Due Diligence Act (LkSG), the Volkswagen Group implemented a human rights focus system (HRFS) in 2022, the year under review. The system aims to identify and appropriately address particularly high risks in our supply chain with regard to human rights violations and environmental aspects. To this end, we evaluate aggregated data from our supply chain grievance mechanism, on-site checks, and information from studies, NGO reporting, and stakeholder discussions to determine a longlist of relevant topics. For 2023, we plan to determine focus activities from this, that will then be worked on during the year. To this end, a toolbox of measures has been developed to reduce the identified risks from the reporting year 2023 onward.

Raw material due diligence management system

With regard to responsible raw materials procurement, the Volkswagen Group implements the five steps of the OECD Due Diligence Guidance for Responsible Business Conduct and the requirements of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas. In 2020, a raw material due diligence management system was implemented to address these requirements. It is used to identify, assess and prevent actual and potential risks to human rights in our upstream raw material supply chains and currently covers 16 particularly high-risk raw materials. These include the battery raw materi-

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als cobalt, lithium, nickel and graphite; the conflict minerals tin, tungsten, tantalum and gold (3TG); and aluminum, copper, leather, mica, steel, natural rubber, platinum group metals and the rare earths.

This risk-based approach prioritizes activities based on the severity and likelihood of the infringement and the company's ability to influence it. In addition, Group structures are systematically used to develop and implement specific preventive and remedial measures, the effectiveness of which is reviewed. Through the management system, new reporting structures and toolkits have been developed and existing instruments such as the supply chain grievance mechanism have been integrated. The measures are continually adapted and improved according to the results of the due diligence process.

Since 2021, the Volkswagen Group has provided information on the fulfillment of its human rights due diligence obligations in the raw materials supply chain, including reporting on the status, progress and targets of the raw materials due diligence management system, in an annual  "Responsible Raw Materials Report". The specific activities and measures for the 16 particularly high-risk raw materials are also listed there.

An important prerequisite for identifying, preventing and mitigating human rights risks in the upstream supply chain is increasing transparency. To this end, the Volkswagen Group works closely with its direct suppliers and business partners as part of its raw materials due diligence management system.

Among other things, we cooperate with service providers who use artificial intelligence to facilitate comprehensive supplier screening. For example, continuous monitoring of freely available Internet sources and

social media provides us with information about possible violations by suppliers.

As human rights-related risks are often highest at the beginning of the supply chain and can be most effectively addressed there, direct cooperation with mine operators regarding the certification of mines is another part of our strategy. This is intended for the purposes of reviewing, evaluating and improving the sustainability performance of the mines in our supply chain in the medium term.

Collaboration with external partners and engagement in international initiatives

In addition to working closely with our direct suppliers and (sub)suppliers, the Volkswagen Group is engaged in initiatives and on-site projects to address human rights risks upstream in the supply chain and beyond contractual relationships. These initiatives, which are both cross-industry and in some cases raw material-specific, are listed in the "Responsible Raw Materials Report". Goals in collaboration with partners in the automotive industry and along the value chain include knowledge transfer, the development of standardized risk assessment tools, and the introduction of standards for responsible raw material supply chains in terms of human rights, the environment and compliance.

In the year under review, the Volkswagen Group and its brands joined further important initiatives. For example, Volkswagen AG has been a member of the "Initiative for Responsible Mining Assurance" (IRMA) since 2022, the year under review. IRMA is a multi-stakeholder alliance that promotes sustainable standards in mining. The IRMA standards

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include the protection of human rights and the rights of local communities, the exclusion of corruption, and measures to ensure health and environmental protection as well as workplace safety. The Volkswagen Group has also been a member of the Leather Working Group since 2022, the year under review. Porsche AG also joined the “Responsible Mica Initiative” in the 2022 reporting year.

MAN Truck & Bus’s commitment in this regard relates to international and cross-industry initiatives such as the “Global Platform for Sustainable Natural Rubber” or the industry initiative “The Copper Mark”, which has been associated with MAN as the first European truck manufacturer in a partnership since the 2022 reporting year. Both initiatives contribute to an increase in sustainable practices in the relevant value creation process.

For battery raw materials, especially cobalt, we pursue the goal of creating transparency throughout the supply chain, from mining in the mine to the manufacture of the finished product. We have been passing on the requirement for full transparency to our direct battery suppliers in our contracts on a mandatory basis since 2022. The review and verification of the data received will be carried out in this regard via partner companies through so-called “second-party supply chain mapping audits”. As part of the “Cobalt for Development” project in the Democratic Republic of Congo, the Volkswagen Group is working with partners to improve working and living conditions for people in the small-scale mining of cobalt and in the surrounding communities of mines. The pilot project aims to strengthen compliance with laws, improve health and safety con-

ditions, and improve social well-being for local people. Additional information is available on the [☞](#) project website.

For the battery raw material of lithium, the Volkswagen Group, together with other partners, has launched the “Responsible Lithium Partnership” initiative, which promotes the responsible use of natural resources and sustainable extraction of lithium in the Salar de Atacama in Chile. This will be achieved through a multi-stakeholder platform that includes all relevant stakeholders in the Salar basin – from civil society groups, including indigenous communities, to government institutions and local mining companies.

Progress and developments at our suppliers

A total of 2,788 active MAN suppliers had submitted a sustainability questionnaire for the S rating by the end of the reporting period. In the year under review, appropriate measures were taken at 191 suppliers to improve their sustainability performance. Based on purchasing volume, over 87% of our suppliers with a production site that accommodates 100 employees or more have documented that they have a certified environmental management system in accordance with ISO 14001 or validation in accordance with EMAS or a “commitment letter”.

Risk-based, in-depth on-site audits are carried out following an initial analysis of supplier data. Nine on-site inspections were conducted worldwide in 2022 (2021: 12).

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By the end of the year under review, 2032 S ratings had been issued to MAN suppliers, whose order volume corresponds to around 72% of the total procurement volume. Of these suppliers, 919 have an A rating, 10 are rated C and are therefore not currently eligible to be awarded a contract. Suppliers who do not meet our requirements for compliance with our sustainability standards are also not eligible to be awarded a bid.

In the reporting period, four tip-offs regarding violations were processed from the supply chain grievance mechanism. This related to suppliers whose conduct was found to be non-compliant with the rules or contractually non-compliant on the basis of the information received. In no case did these tip-offs lead to a cessation of cooperation with the supplier.

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OVERVIEW OF KEY INDICATORS

Financial figures

Financial figures

	2020	2021	2022
Sales revenue (€ million)	9,659	10,934	11,331
Incoming orders (in units)	84,921	143,531	109,700
Operating result (in € million)	-553	249 ¹	139

¹ Adjusted for restructuring charges in accordance with IFRS

Employee indicators

Employee structure¹

	2020	2021	2022
Permanent staff	34,741	32,111	32,648
of which women	4,593	4,269	4,485
of which men	30,148	27,842	28,163
of which part-time employees	1,134	981	987
of which women	812	718	704
of which men	322	263	283
of which employees on fixed-term contracts	2,154	1,832	2,879
of which women	373	323	576
of which men	1,781	1,509	2,303
Vocational trainees	2,410	2,083	2,010
of which women	352	310	307
of which men	2,058	1,773	1,703
of which in Germany	1,573	1,387	1,255
Employees, passive partial retirement	514	508	572
Headcount	37,665	34,702	35,230
Subcontracted employees	1,714	1,985	2,376
of which women	120	183	339
of which men	1,594	1,802	2,037

¹ At the end of the year

Employees by business area

	2020	2021	2022
Commercial Vehicles	37,665	34,702	35,230
Other (Group loans)	5	4	2
MAN Truck & Bus	37,670	34,706	35,232

Women in management positions

	2020	2021	2022
Top Management			1
Senior Management	36	30	31
Management	76	80	74
Total	112	110	106
Proportion ¹ in %	10.7	12.6	12.5

¹ Women in management to management totalLost-time injuries¹

	2020	2021	2022
Number of lost-time injuries ²	348	296	343
Accident frequency index ³	9.98	9.43	10.20

¹ Only lost-time injuries affecting permanent staff in production or at production-related sites. All figures exclude subcontracted employees. Lost days are only considered up to December 31 of a fiscal year.² In accordance with the German Social Code (Sozialgesetzbuch), lost-time injuries are defined as injuries incurred by the insured while carrying out their insured employment. We count lost-time injuries starting at one day of missed work.³ The accident frequency index is an indicator of the frequency of lost-time injuries relative to the sum of all hours worked. The formula for calculating the index is the number of workplace accidents multiplied by 1 million hours worked.

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Environmental indicators

Energy consumption

in MWh	2020	2021	2022
Direct energy consumption (combustion fuels and gases)	337,754	333,018	278,547
Indirect energy consumption	353,544	366,238	385,256
Electrical energy	226,446	226,723	257,993
Of which bought in from renewable energy sources	67,282	128,643	232,329
Thermal energy	127,098	139,515	127,263
Of which generated in-house from renewable energy sources	0	0	0
Of which bought in from renewable energy sources	0	0	6,688
Total	691,298	699,256	663,803

Absolute direct and indirect CO₂ emissions¹

in tons of CO ₂	2020	2021	2022
Indirect emissions	115,552	77,341	63,203
Direct emissions	75,872	73,164	33,587
Total	191,424	150,505	96,790

¹ Direct emissions result from the combustion of primary energy sources, e.g. natural gas, heating oil, diesel; indirect emissions result from purchased electricity and district heating. Emissions are calculated on the basis of the emission factors of the German Association of the Automotive Industry (VDA) as a general rule. This includes all production sites, including the St. Petersburg location.

Production waste

in tons	2020	2021	2022
Total waste for disposal	7,216	7,947	7,497
Hazardous	3,353	3,355	6,074
Non-hazardous	3,863	4,592	1,423
Total waste for recycling	30,519	38,468	33,984
Hazardous	8,836	9,826	11,394
Non-hazardous	21,683	28,642	22,591
Metallic waste	36,225	40,601	41,376
Total waste	73,961	87,016	82,858
Recycling ratio (%)	90	91	91

Atmospheric pollutants

in tons	2020	2021	2022
Sulfur dioxide (SO ₂)	0.45	0.42	0.37
Nitrogen oxides (NO _x)	169	143	145
Particulates	0.73	0.58	0.58
Volatile organic compounds (VOCs)	656	534	601

Electric vehicles

in units	2021	2022
Incoming orders for electric vehicles		
Truck	4	11
Bus	204	637
Van	1047	417
Sales of electric vehicles		
Truck	18	14
Bus	133	263
Van	826	686

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EU TAXONOMY

The EU taxonomy is a classification system for sustainable economic activities. In this system, companies in the real economy must disclose which part of their sales, capital expenditures and operating costs meet the requirements of the regulation for the respective EU environmental targets. These are currently available for the two EU environmental goals “climate protection” and “adaptation to climate change”.

The corresponding information must be differentiated according to taxonomy eligibility and taxonomy alignment. The economic activities covered by the EU taxonomy and thus eligible for taxonomy are those described in the delegated acts. Taxonomy-aligned (environmentally sustainable) activities are those that additionally a) make a significant contribution to the environmental objective on the basis of specified technical assessment criteria, b) at the same time do not impair any other environmental objective (so-called “Do No Significant Harm” criteria), and c) have procedures in place that ensure a minimum level of protection with regard to human rights, social and labor standards (so-called minimum safeguards).

As part of the TRATON GROUP, MAN reports the taxonomy-eligible and taxonomy-aligned portions of its sales revenue, capital expenditures, and operating expenses for fiscal years 2021 and 2022 in the adjacent table. The low taxonomy-aligned portion of sales revenue is mainly due to the

electric product portfolio, which is only just being established and is characterized by a growing sales market for electric buses. With the market launch of the first electric truck in 2024, capital expenditures in sustainable activities are expected to grow increasingly, while taxonomy-aligned operating expenses in Research & Development are already at a high level.

Further information on the determination of taxonomy eligibility and alignment can be found in the [annual report of the TRATON GROUP](#).

KPI

In m€	2021		2022	
Total revenue	10,934		11,331	
of which taxonomy-eligible	9,596	88%	9,821	87%
of which taxonomy-aligned	93	1.0%	251	2%
CAPEX total	1,996		1,738	
of which taxonomy-eligible	1,939	97%	1,659	95%
of which taxonomy-aligned	91	4.7%	173	10.4%
OPEX (R&D) total	416		390	
of which taxonomy-eligible	398	96%	353	91%
of which taxonomy-aligned	67	16%	65	17%

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GRI CONTENT INDEX

This report has been prepared in accordance with the GRI Standards.

GRI Standards		Page/Annotation	Declaration of omission
GRI 2	General Disclosures 2021		
The organization and its reporting standards			
2-1	Organizational details	3/4	
2-2	Entities included in the organization's sustainability reporting	About this report	
2-3	Reporting period, frequency and contact point	About this report	
2-4	Restatements of information	3/4, About this report	
2-5	External assurance	79 ff.	
Activities and workers			
2-6	Activities, value chain and other business relationships	3/4, 62	
2-7	Employees	41/42	
2-8	Workers who are not employees	42	
Governance			
2-9	Governance structure and composition	☞ Management, AR 32	
2-10	Nomination and selection of the highest governance body	AR 121 – 123	
2-11	Chair of the highest governance body	☞ Management, AR 32	
2-12	Role of the highest governance body in overseeing the management of impacts	6/7, 54; AR 33 ff.	
2-13	Delegation of responsibility for managing impacts	6/7, 54	
2-14	Role of the highest governance body in sustainability reporting	6/7; AR 121 ff.	
2-15	Conflicts of interest	54 – 56; AR 121	
2-16	Communication of critical concerns	6/7, 56	
2-17	Collective knowledge of the highest governance body	6/7; AR 122/123	
2-18	Evaluation of the performance of the highest governance body	AR 121 ff.	
2-19	Remuneration policies		Not detailed for confidentiality reasons

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2-20	Process to determine remuneration		Not detailed for confidentiality reasons
2-21	Annual total compensation ratio		Not detailed for confidentiality reasons
2-22	Statement on sustainable development strategy	1/2, 5	
2-23	Policy commitments	54/55, 62/63	
2-24	Embedding policy commitments	13, 39, 55	
2-25	Processes to remediate negative impacts	55/56, 64-68	
2-26	Mechanisms for seeking advice and raising concerns	55	
2-27	Compliance with laws and regulations	36/37, 53 – 55, 57/58; AR 210/211 No known violations of environmental protection laws and regulations during the reporting period.	
2-28	Membership associations	56	
2-29	Approach to stakeholder engagement	8, 13	
2-30	Collective bargaining agreements	40/41	
GRI 3 Material Topics 2021			
3-1	Process to determine material topics	7–10	
3-2	List of material topics	9	
GRI 200 Economic			
GRI 205 Anti-Corruption 2016			
GRI 3-3	Management of material topics	53 – 56	
GRI 205-1	Operations assessed for risks related to corruption	54	
GRI 205-2	Communication and training about anti-corruption policies and procedures	54 – 56	
GRI 206 Anti-competitive Behavior 2016			
GRI 3-3	Management of material topics	53 – 56	
GRI 206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	AR 210/211	

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GRI Standards	Page/Annotation	Declaration of omission
GRI 300 Environmental		
GRI 302 Energy 2016		
GRI 3-3 Management of material topics	14/15, 24/25	
GRI 302-1 Energy consumption within the organization	24/25	
GRI 302-3 Energy intensity	24/25	
GRI 302-4 Reduction of energy consumption	24/25	
GRI 302-5 Reduction in energy requirements of products and services	24 – 28	
GRI 305 Emissions 2016		
GRI 3-3 Management of material topics	14/15, 16/17	
GRI 305-1 Direct (Scope 1) GHG emissions	17, 24/25	
GRI 305-2 Energy indirect (Scope 2) GHG emissions	17, 24/25	
GRI 305-3 Other indirect (Scope 3) GHG emissions	17	
GRI 305-4 GHG emissions intensity	24/25	
GRI 305-5 Reduction of GHG emissions	17, 24/25	
GRI 305-7 Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	25	
GRI 306 Waste 2020		
GRI 3-3 Management of material topics	29 – 32	
GRI 306-1 Waste generation and significant waste-related impacts	32	
GRI 306-2 Management of significant waste-related impacts	32	
GRI 306-3 Waste generated	32	
GRI 308 Supplier Environmental Assessment 2016		
GRI 3-3 Management of material topics	61 – 63	
GRI 308-1 New suppliers that were screened using environmental criteria	65/66, 68	

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GRI 400	Social		
GRI 401	Employment 2016		
GRI 3-3	Management of material topics	38/39	
GRI 401-1	New employee hires and employee turnover	41/42	
GRI 403	Occupational Health and Safety 2018		
GRI 3-3	Management of material topics	47– 49	
GRI 403-1	Occupational health and safety management system	47– 49	
GRI 403-2	Hazard identification, risk assessment, and incident investigation	47	
GRI 403-3	Occupational health services	48	
GRI 403-4	Worker participation, consultation, and communication on occupational health and safety	48	
GRI 403-5	Worker training on occupational health and safety	48	
GRI 403-6	Promotion of worker health	47– 49	
GRI 403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	48/49	
GRI 403-9	Work-related injuries	48	
GRI 404	Training and Education 2016		
GRI 3-3	Management of material topics	38 – 40, 43/44	
GRI 404-1	Average hours of training per year per employee	44; the information by employee category and gender is not currently disclosed. The collection of corresponding data is planned	
GRI 404-2	Programs for upgrading employee skills and transition assistance programs	43/44	
GRI 405	Diversity and Equal Opportunity 2016		
GRI 3-3	Management of material topics	38/39, 45/46	
GRI 405-1	Diversity in governance bodies and employees	45/46	

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GRI Standards		Page/Annotation	Declaration of omission
GRI 407	Freedom of Association and Collective Bargaining 2016		
GRI 3-3	Management of material topics	39 – 41, 61 – 63	
GRI 407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	40/41, 68/69	
GRI 408	Child Labor 2016		
GRI 3-3	Management of material topics	39, 61 – 63	
GRI 408-1	Operations and suppliers at significant risk for incidents of child labor	68/69	
GRI 409	Forced or Compulsory Labor 2016		
GRI 3-3	Management of material topics	39, 61 – 63	
GRI 409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	68/69	
GRI 414	Supplier Social Assessment 2016		
GRI 3-3	Management of material topics	61 – 63	
GRI 414-1	New suppliers that were screened using social criteria	65/66, 68/69	
GRI 415	Public Policy 2016		
GRI 3-3	Management of material topics	13, 54	
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GRI 416-1	Assessment of the health and safety impacts of product and service categories	52	

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GRI Standards	Page/Annotation	Declaration of omission
Further disclosures¹		
GRI 201-1 Direct economic value generated and distributed	3, 70	
GRI 201-2 Financial implications and other risks and opportunities due to climate change	17/18	
GRI 201-3 Defined benefit plan obligations and other retirement plans	40/41	
GRI 207-1 Approach to tax	57–59	
GRI 207-2 Tax governance, control, and risk management	58	
GRI 207-3 Stakeholder engagement and management of concerns related to tax	58/59	
GRI 303-1 Interactions with water as a shared resource	33	
GRI 303-2 Management of water discharge-related impacts	33	
GRI 303-3 Water withdrawal	33	
GRI 406-1 Incidents of discrimination and corrective actions taken	40/41	
GRI 417-1 Requirements for product and service information and labeling	52	

¹ The information outlined under "Further disclosures" is comprised of issues that were deemed immaterial as part of the 2022 materiality analysis. Nevertheless, these were disclosed for transparency reasons.

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INDEPENDENT PRACTITIONER'S REPORT ON A LIMITED ASSURANCE ENGAGEMENT

To MAN Truck & Bus SE, Munich

We have performed a limited assurance engagement on selected disclosures of the sustainability report of MAN Truck & Bus SE, Munich (hereinafter the "Company") for the period from 1 January 2022 to 31 December 2022.

Our engagement exclusively refers to the disclosures marked with the symbol in the German PDF version of the sustainability report (hereinafter the "report"). Not subject to our assurance engagement are other references to disclosures made outside the report as well as prior year disclosures.

Responsibilities of the executive directors

The executive directors of the Company are responsible for the preparation of the report in accordance with the Sustainability Reporting Standards of the Global Reporting Initiative (hereafter "GRI criteria") as well as the selection of the criteria to be assessed.

These responsibilities of the Company's executive directors include the selection and application of appropriate sustainability reporting methods and making assumptions and estimates about individual disclosures that are reasonable in the circumstances. Furthermore, the executive directors are responsible for such internal control as the executive directors consider necessary to enable the preparation of a report that is free from material misstatement, whether due to fraud (manipulation of the report) or error.

Independence and quality assurance of the auditor's firm

We have complied with the German professional requirements on independence as well as other professional conduct requirements.

Our audit firm applies the national legal requirements and professional pronouncements – in particular the BS WP/vBP ["Berufssatzung für Wirtschaftsprüfer/vereidigte Buchprüfer": Professional Charter for German Public Accountants/German Sworn Auditors] in the exercise of their Profession and the IDW Standard on Quality Management issued by the Institute of Public Auditors in Germany (IDW): Requirements for Quality Management in the Audit Firm (IDW QS 1) and accordingly maintains a comprehensive quality management system that includes documented policies and procedures with regard to compliance with professional ethical requirements, professional standards as well as relevant statutory and other legal requirements.

Responsibilities of the auditor

Our responsibility is to express a conclusion with limited assurance on the disclosures marked with the symbol in the report based on our assurance engagement.

We conducted our assurance engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information" issued by the IAASB. This standard requires that we plan and perform the assurance engagement to obtain limited assurance about whether any matters have come to our attention that cause us to believe

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that the disclosures that are marked with the symbol in the report of the Company are not prepared, in all material respects, in accordance with the GRI criteria.

In a limited assurance engagement, the procedures performed are less extensive than in a reasonable assurance engagement, and accordingly, a substantially lower level of assurance is obtained. The selection of the assurance procedures is subject to the professional judgment of the auditor.

In the course of our assurance engagement we have, among other things, performed the following assurance procedures and other activities:

- Gain an understanding of the structure of the Group's sustainability organization
- Inquiries of employees responsible for the data capture and consolidation as well as the preparation of the report in order to assess the sustainability reporting system, the data capture and compilation methods as well as internal controls to the extent relevant for the limited assurance engagement on the disclosures that are marked with the symbol in the report
- Identification of likely risks of material misstatement on the disclosures that are marked with the symbol in the report
- Analytical procedures regarding the quality of the reported data on the disclosures that are marked with the symbol in the report

- Inspection and Inquiry of the relevant documentation of the systems and processes for compiling, aggregating and validating data on the disclosures marked with the symbol

- Critical review of the draft report to assess plausibility and consistency

- Evaluation of the presentation of the selected key disclosures marked with the symbol in the report

Assurance conclusion

Based on the assurance procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the disclosures that are marked with the symbol in the report of the Company for the period from 1 January to 31 December 2022 have not been prepared in all material aspects, in accordance with the relevant GRI criteria. We do not express an assurance conclusion on the other references to disclosures made outside the report as well as prior-year disclosures.

Restriction of use

We draw attention to the fact that the assurance engagement was conducted for the Company's purposes and that the report is intended solely to inform the Company about the result of the assurance engagement. As a result, it may not be suitable for another purpose than the aforementioned. Accordingly, the report is not intended to be used by third parties for making (financial) decisions based on it. Our responsibility is to the Company alone. We do not accept any responsibility to third parties. Our assurance conclusion is not modified in this respect.

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Annex – Limited assurance report**General Engagement Terms and Liability**

The “General Engagement Terms for Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften [German Public Auditors and Public Audit Firms]” dated 1 January 2017 are applicable to this engagement and also govern our relations with third parties in the context of this engagement (www.de.ey.com/general-engagement-terms). In addition, please refer to the liability provisions contained there in no. 9 and to the exclusion of liability towards third parties. We accept no responsibility, liability or other obligations towards third parties unless we have concluded a written agreement to the contrary with the respective third party or liability cannot effectively be precluded.

We make express reference to the fact that we will not update the report to reflect events or circumstances arising after it was issued, unless required to do so by law. It is the sole responsibility of anyone taking note

of the summarized result of our work contained in this report to decide whether and in what way this information is useful or suitable for their purposes and to supplement, verify or update it by means of their own review procedures.

Munich, 31 March 2023

**Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft**

Nicole Richter
Wirtschaftsprüferin
[German Public Auditor]

Elisabeth Hauschildt
Wirtschaftsprüferin
[German Public Auditor]

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ABOUT THIS REPORT

[2-29] Since 2011, each year we have provided our stakeholders with information about our progress in implementing our sustainability strategy. This 2022 GRI Report by MAN Truck & Bus is aimed at analysts, investors, customers, and business partners. It presents relevant management approaches, measures, indicators, and data related to sustainable business practices at MAN. Furthermore, it outlines the ways in which MAN lives up to its commitment to the Ten Principles of corporate responsibility defined by the UN Global Compact.

Report structure

The structure of the GRI Report is based on the six action fields of our CR strategy: Decarbonization; Circular Economy; People and Culture; Road, Product, and Service Safety; Compliance, Ethics and Integrity; and Responsibility along the Value Chain. In each of the six chapters, we discuss the management approaches taken in the relevant action field, as well as measures implemented and progress made in the year under review, 2022.

Report standard

[3-1] This report was prepared in “Accordance” with the GRI standards. MAN’s CR reporting was preceded by a process of materiality analysis, which also took stakeholder views into account – as described on →pages 07f. The GRI Content Index outlines our compliance with the relevant disclosures from the GRI Standards (→page 73ff.), and represents our UN Global Compact Communication on Progress.

Report audit

We voluntarily submitted our 2022 GRI Report to an independent audit by auditing firm Ernst & Young (EY), which was conducted in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (revised) (→page 79 f.). The focus of the audit is on the topics of products, environment (SBTi targets, energy, CO₂ emissions, air, water, waste, decar-

bonization in the supply chain) and employees (employment structure, equal opportunities, occupational health and safety). The verified content is marked in the report with the symbol.

Scope

[2-2, 2-4] The 2022 reporting period is identical with the 2022 fiscal year, which runs from January 1 through December 31. The closing date for contributions was March 30, 2023. An annual reporting cycle applies. The previous 2021 GRI Report was published in June 2021. With the exception of the environmental and energy data, the facts and figures published in this report relate in principle to all MAN Truck & Bus sites. The environmental and energy data takes into account all production and logistics sites for the 2022 reporting year that, on the one hand, were managed as a consolidated company in the entire 2022 reporting year and, on the other hand, have an environmental and energy management system. This means that all production sites are part of the 2022 reporting. The logistics locations include the two sites in Dachau and Salzgitter. Modification centers and sales regions are not included. Deviations from the defined scope are indicated in the report at the appropriate place. The key indicators for waste, water, energy, and emissions were taken from the key indicator recording system as of the reporting date of January 31, 2023. Since, in accordance with internal guidelines, extrapolated figures for Q4 of the previous year are still being compared up to June 30, 2023 on the basis of the invoices received from the service providers, corrections may be made retroactively from one year under review to the next. The period for reporting on SBTi target achievement differs from the reporting period mentioned here. An explanation can be found on →page 17.

Editorial information

To facilitate legibility, “they” and “their” are used here as singular pronouns to denote persons of all gender identities equally.

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Annex

PUBLISHING INFORMATION AND ADDITIONAL DETAILS

Publishing information

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