GEA
Engineering
for a better
world.

SUSTAINABILITY REPORT 2023

CONTENTS

Climate Transition Plan 2040

We have upped our ambitious
climate targets even further.
To achieve these, we have published
a Climate Transition Plan 2040.

Foreword by Stefan Klebert

Chief Executive Officer

Dear Readers,

The ten warmest years since weather records began in the mid-19th century were all after the turn of the millennium. The year 2023, the hottest ever, has now set a new, sadly negative record. If any proof were needed, the past few months have provided it. They have shown us that global warming is our immediate reality, not some abstract future threat. We are facing an enormous challenge that our global community – which is increasingly marked by conflict and also divided on the issue of global warming – can only overcome by working together.

Action is what is needed to combat climate change. We are all called upon to act if we want to change things for the better. Innovative companies can make a key contribution because of their expertise coupled with their ability to identify creative solutions. This applies in particular to the mechanical and plant engineering sector, which is in a position to develop environmentally responsible technologies and design more sustainable production processes.

GEA is one of those innovative companies. As a pioneer in our industry and a trailblazer when it comes to climate and environmental protection, we see sustainability as the corner-stone of our actions. Nothing encapsulates this better than our purpose: "Engineering for a better world". We believe our responsibility is to safeguard the quality of life of current and future generations with our progressive solutions.

In this report, we will show you the steps we are taking to achieve our goals. We will take you on a journey through 2023 – our Year of Innovation in Sustainability.

Here are a number of highlights: We have stepped up the pace on the road to net-zero emissions by 2040, raised our mid-term climate targets and defined a new short-term target. Both our new mid-term targets and our Net Zero target have meanwhile been validated by the Science Based Targets initiative (SBTi). We are additionally aiming to be the first company in the DAX index family to adopt a Say on Climate resolution, which means that we let our shareholders vote on our Climate Transition Plan 2040 at the Annual General Meeting 2024.

At the same time, we are ensuring clear-cut responsibilities and transparency. The successful reduction of Scope 1 and Scope 2 emissions has been part of the Executive Board's long-term variable remuneration since 2022. Scope 3 emissions will be added this year.

On the product side, our TÜV-validated "Add Better" label sets new standards. Since 2023, "Add Better" highlights all GEA solutions that are significantly more resource-efficient than their predecessors. Incidentally, when we say "solutions," we mean not only machines. According to our comprehensive approach, this also includes processes and complete plants. This is how "Add Better" helps to ensure sustainable value creation for us and our customers.

It also applies to GEA's carbon capture technologies, which allow high-emission sectors such as the cement, glass and chemical industries to operate in a far more environmentally sustainable way than before. We have likewise made significant progress with this technology. The first practical applications are already being used in the cement industry.

In addition, GEA is a prominent manufacturer of industrial heat pumps for the manufacturing industry as well as for communities that operate district heating networks. This means we can help save a large quantity of greenhouse gas emissions every year.

Alongside the environmental dimension, our sustainability strategy has a social dimension, which is very important to us. For GEA, this includes recognizing the diversity of our employees and actively encouraging it. We also support numerous initiatives – often in the regions close to our sites – that are socially committed and support charitable causes. We do this not only through donations but also by providing intangible assistance. Since 2023, for example, all GEA employees can spend one paid day a year doing voluntary work – an opportunity that was already used in the first year.

I would like to take this opportunity to express my sincere gratitude to our employees who make GEA's success possible and whose commitment breathes life into all these activities. They know how important sustainable development is for us and impressively put this insight into practice day in, day out. I am really proud of that!

We also continue to receive a great deal of encouragement for our efforts from external parties. I was particularly pleased when GEA was included in the Dow Jones Sustainability World Index (DJSI World) last year. Having already been included in the DJSI Europe in 2022, this achievement is further proof that GEA is one of the most sustainable companies in our industry. Incidentally, we were the only German company to be added to the DJSI World in 2023.

Dear readers, thank you for taking the time to study this report and take a closer look at our sustainability activities. It is my conviction that protecting our livelihoods is our most urgent task and that we need the innovative strength of industry to tackle complex tasks such as the climate crisis. State-of-the-art, climate-friendly technologies can only be developed with engineering expertise and ingenuity. This is also the key to safeguarding our future prosperity, because only an industrial base that focuses on sustainability will remain competitive and strong on exports going forward.

And that's why it is well worth investing in sustainability so that we can shape tomorrow's world.

Sincerely,

Stefan Klebert

⇒ My sustainability highlight of 2023

There are many events that come to mind, some of which I already mentioned above. One experience I would like to highlight was my trip in early 2023 to numerous start-ups specializing in the development of alternative proteins in Israel. Alternative proteins are an essential element of our new food strategy and are crucial for sustainably feeding a growing world population. My encounters with the dedicated teams creatively working on forward-looking solutions were extremely inspiring. I am proud that GEA plays an important role in this sector and is significantly involved in the production and introduction of pioneering new foods.
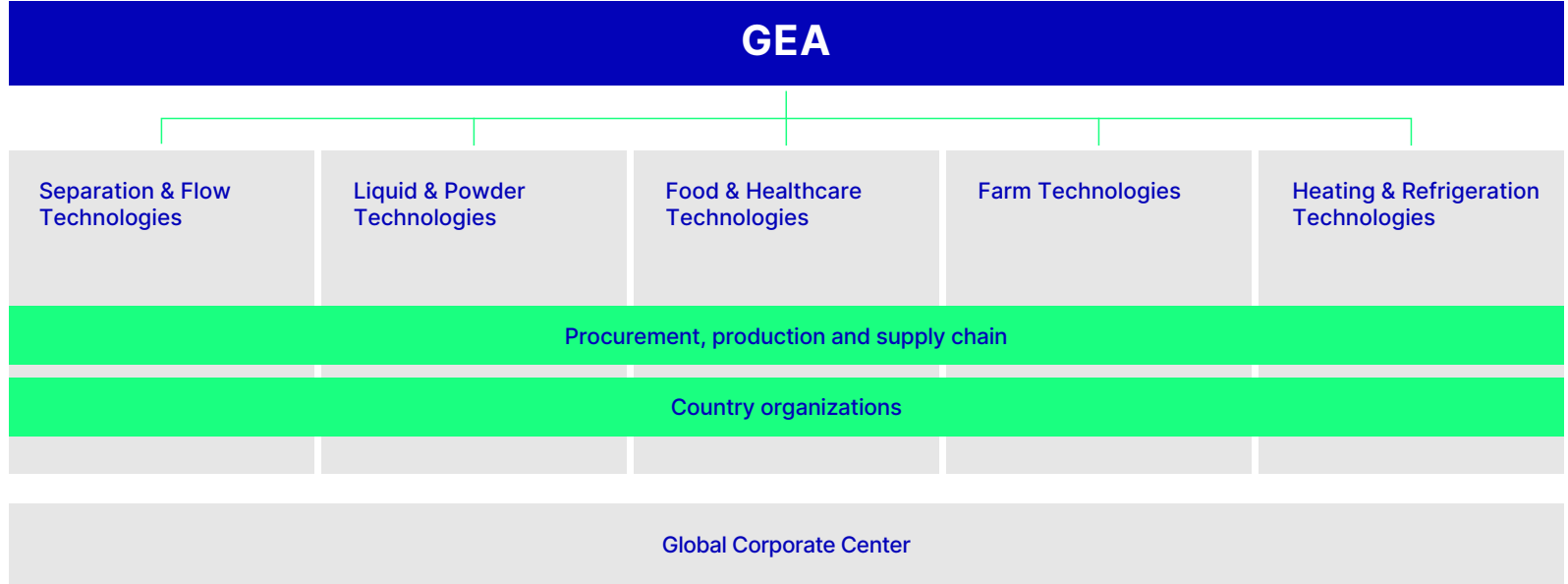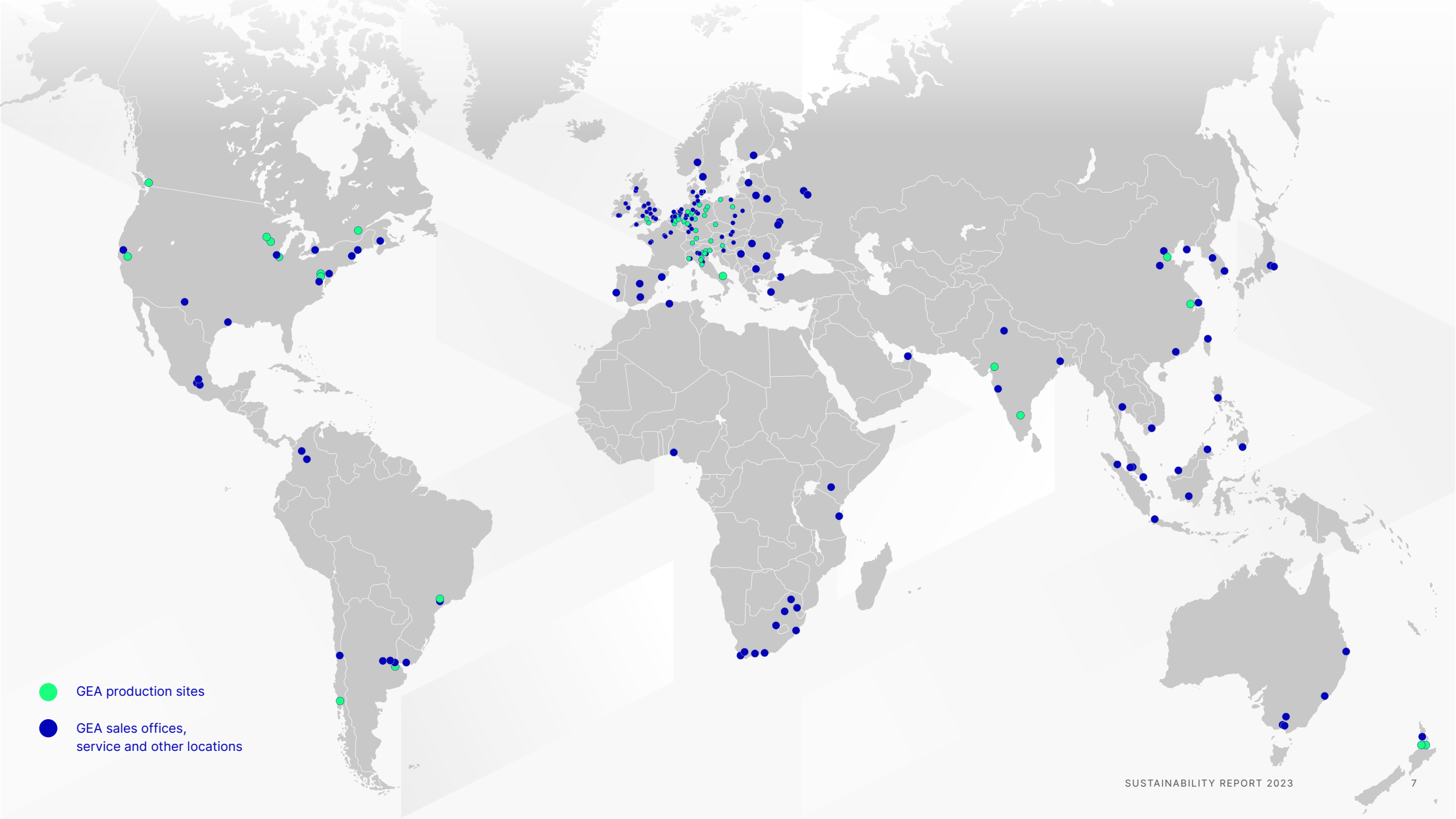
GEA
AT A GLANCE

GEA at a glance

GEA is one of the world's largest suppliers of systems and components to the food, beverage and pharmaceutical industries. The international technology group, founded in 1881, focuses on machinery and plants, as well as advanced process technology, components and comprehensive services.

With more than 18,000 employees, the group generated revenues of about EUR 5.4 billion in more than 150 countries in the 2023 fiscal year. GEA plants, processes, components and services enhance the efficiency and sustainability of customer's production. They contribute significantly to the reduction of CO_2 emissions, plastic usage and food waste. In doing so, GEA makes a key contribution toward a sustainable future, in line with the company's purpose: „Engineering for a better world".

GEA ist listed on the German MDAX, the European STOXX® Europe 600 Index and is among the companies comprising the DAX 50 ESG, MSCI Global Sustainability as well as Dow Jones Sustainability World and Dow Jones Sustainability Europe Indices.

GEA				
Separation & Flow Technologies	Liquid & Powder Technologies	Food & Healthcare Technologies	Farm Technologies	Heating & Refrigeration Technologies
Procurement, production and supply chain				
Country organizations				
Global Corporate Center				

- ● GEA production sites
- ● GEA sales offices, service and other locations

Separation & Flow Technologies Division

World-class components and equipment for production excellence

Separators . Homogenizers . Valves & Pumps

Separation & Flow Technologies encompass process engineering components and machines, including separators, decanters, homogenizers, valves and pumps. These technologies are at the heart of many production processes.

Our solutions contribute to a cleaner environment in numerous industrial applications. They also ensure the efficient separation and homogenization of liquids used in the production of foods, beverages, medicines and home & personal care products that consumers enjoy and rely on. GEA pumps and valves guarantee that raw materials and products move safely and efficiently through plants.

Revenue	EBITDA before restructuring expenses	EBITDA margin before restructuring expenses	Employees
1,511	**396**	**26.2**	**5,072**
EUR million	EUR million	Percent	Full-time equivalents
Previous year: EUR 1,416 million	Previous year: EUR 360 million	Previous year: 25.4 percent	Previous year: 4,907

All figures relate to the fiscal year 2023 respectively 2022 for the previous year.

Liquid & Powder Technologies Division

Specialists in processing equipment and integrated solutions

Liquid & Filling Technologies . Powder & Thermal Separation Technologies . New Food

Liquid & Powder Technologies provide processing equipment and integrated solutions for the dairy, food, new food, beverage, chemical and home & personal care industries. The portfolio includes brewing systems, liquid processing, aseptic and non-aseptic filling & packaging, concentration, fermentation, crystallization, purification, drying, powder handling & packaging as well as systems for carbon capture and emission control.

GEA designs, builds, configures and installs versatile and sustainable equipment and technologies, processing lines and complete plants.

Revenue	EBITDA before restructuring expenses	EBITDA margin before restructuring expenses	Employees
1,724	**178**	**10.3**	**5,607**
EUR million	EUR million	Percent	Full-time equivalents
Previous year: EUR 1,716 million	Previous year: EUR 166 million	Previous year: 9.7 percent	Previous year: 5,404

All figures relate to the fiscal year 2023 respectively 2022 for the previous year.

Food & Healthcare Technologies Division

Safe foods and medicines for a growing population

Pasta, Extrusion & Milling . Bakery . Slicing & Packaging . Food Application Solutions . Pharma & Healthcare

Food & Healthcare Technologies provide solutions for food processing. This covers preparation, marinating and further processing of meat, poultry, seafood and vegan products, in addition to processing lines for pasta, baked goods, snacks, breakfast cereals, confectionery and pet food. GEA also offers spiral- and tunnel freezers, as well as equipment for slicing and packaging of food.

GEA solutions for the pharmaceutical industry include machines and plants for processing solid dosage forms, including highly potent drugs for batch or continuous production. This portfolio also includes freeze-drying technology for liquids, such as vaccines.

Revenue	EBITDA before restructuring expenses	EBITDA margin before restructuring expenses	Employees
1,029	**78**	**7.6**	**3,508**
EUR million	EUR million	Percent	Full-time equivalents
Previous year: EUR 1,001 million	Previous year: EUR 107 million	Previous year: 10.7 percent	Previous year: 3,571

All figures relate to the fiscal year 2023 respectively 2022 for the previous year.

Farm Technologies Division

Next generation farming

Dairy Farming: Milking, Feeding, Manure, Digital Herd Management, Hygiene & Service

Farm Technologies offer integrated customer solutions for efficient and sustainable high-quality milk production and livestock farming. This includes automatic milking and feeding systems, conventional milking solutions and digital herd management. GEA manure management solutions ensure operators have the right tools for the safe storage, application and upcycling of this important resource.

All solutions are served and fully embedded into our service lifecycle. They are complemented by a wide range of hygiene products and chemicals to promote optimum udder health and superior milk quality.

Revenue	EBITDA before restructuring expenses	EBITDA margin before restructuring expenses	Employees
784	**110**	**14.0**	**2,045**
EUR million	EUR million	Percent	Full-time equivalents
Previous year: EUR 742 million	Previous year: EUR 86 million	Previous year: 11.6 percent	Previous year: 1,909

All figures relate to the fiscal year 2023 respectively 2022 for the previous year.

Heating & Refrigeration Technologies Division

Industrial heating and cooling solutions for climate-friendly production processes

Compressors & Compressor Packages . Heat Pumps . Chillers . Controls . Valves . Turnkey Installations . Digital Solutions

Heating & Refrigeration Technologies combine extensive production process knowledge and integrated heating and cooling expertise. It provides sustainable, energy-saving solutions for customers in the food, beverage and other key industries. All offerings are supported by comprehensive digital and service platforms.

GEA plays an important role in the decarbonization of production processes, cities and other market activities. Via a sustainable engineering solutions platform, which includes a comprehensive portfolio of heat pumps, GEA delivers the precise temperatures critical to each customer's operation. These proven technologies provide integrated, high-efficiency solutions that significantly reduce CO_2 emissions and energy costs.

Revenue	EBITDA before restructuring expenses	EBITDA margin before restructuring expenses	Employees
556	**66**	**11.9**	**1,757**
EUR million	EUR million	Percent	Full-time equivalents
Previous year: EUR 524 million	Previous year: EUR 57 million	Previous year: 10.9 percent	Previous year: 1,716

All figures relate to the fiscal year 2023 respectively 2022 for the previous year.
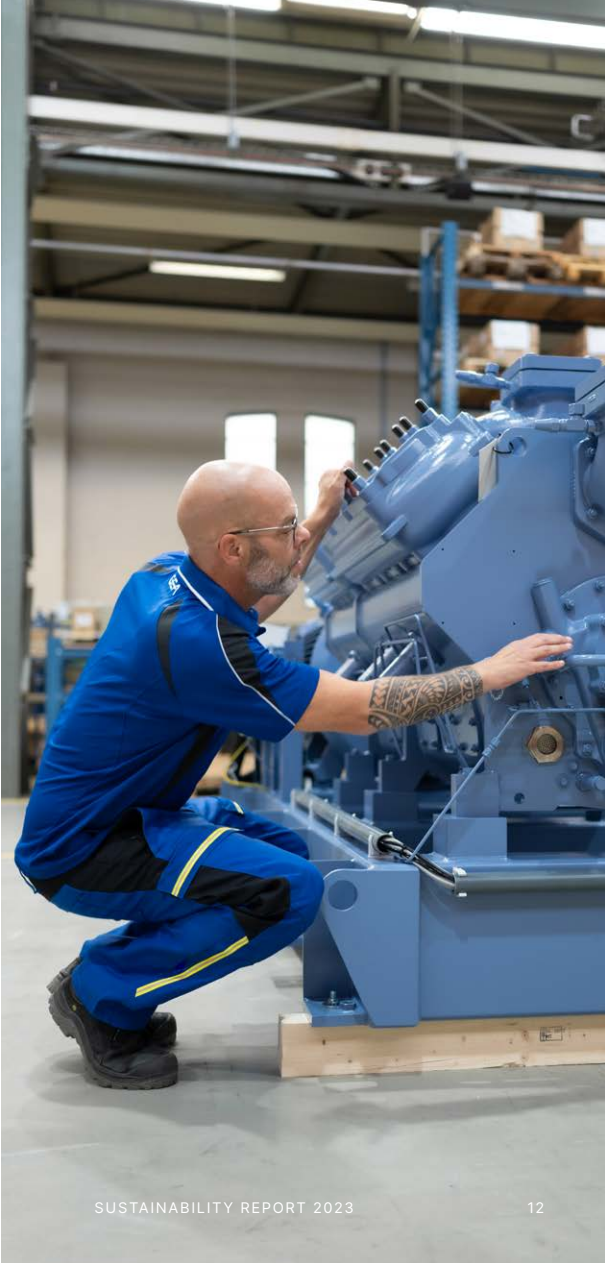
Interview with Dr. Nadine Sterley

Chief Sustainability Officer

Net-zero emissions by 2040 is an ambitious goal. How is GEA going to achieve this?

We are working intensely on this and have devised a broad-based Climate Transition Plan 2040. It includes levers and measures to bring our greenhouse gas emissions to Net Zero at every link in the value chain. To achieve our target, we intend to invest a total of around EUR 175 million to decarbonize our sites by 2040. We are moving away from fossil fuels, electrifying our vehicle fleet, expanding our own renewable energy production as well as enhancing the energy efficiency of our production and our buildings. In 2023, we introduced an internal CO_2 pricing to encourage climate-friendly investments to an even greater extent. Additionally, we are decarbonizing our supply chain and developing innovative, resource-efficient solutions for our customers. We are involving all our employees, business partners and customers in these fundamental transformations.

At the end of 2023, we significantly increased our mid-term climate targets for 2030. In parallel, we defined a short-term target for 2026 for the first time. These moves will serve to accelerate our progress toward Net Zero. Emissions from our own operations, i.e. Scope 1 and 2, are to be reduced by 60 percent by 2026 and 80 percent by 2030. In Scope 3, we now plan to achieve a 27.5 percent reduction by 2030. We are proud that the higher mid-term targets and our Net Zero target have already been validated by the Science Based Targets initiative (SBTi).

Everyone is talking about digital transformation and artificial intelligence. Are these issues also driving sustainability at GEA?

Digital solutions are key drivers for greater sustainability. They help us extend the service life of systems, optimize their operation and make them as resource-efficient as possible. Intelligent technologies help our customers significantly reduce their emissions and their consumption of energy, water and materials. Artificial intelligence (AI) and machine learning in particular are making valuable contributions to this. One example: OptiPartner, our software solution for spray dryers and evaporators, works like a digital autopilot on top of the existing control system. We use advanced algorithms to reduce variations, increase productivity and additionally save up to 14 percent energy. This is a considerable saving in light of the high energy requirements of a spray drying system.

Intellicant is another example. This system equips our decanter centrifuges with smart sensors. Data is collected continuously and analyzed by an AI, enabling us to optimize the performance of the centrifuge. Intellicant is more efficient at separating solids than any manual control, thereby reducing disposal costs and helping to extend the operational life of the systems.

Besides optimizing existing solutions, advancing digital transformation will also enable us to offer disruptive solutions – such as pay-per-use models – going forward. In a nutshell, we are harnessing the power of digital transformation to maximize progress when it comes to sustainability.

Good people are needed everywhere. GEA also wants to be a top employer. Where does the company stand?

GEA has established itself as an attractive employer. Our strong purpose of "Engineering for a better world" and the company's clear focus on sustainability motivate our teams worldwide. They know that their work, in every function and every region, makes a positive contribution to our customers and to society.

Committed employees are crucial to GEA's long-term success. That is why we do so much to attract talent as well as provide education and career development opportunities for our employees. We are stepping up our employer branding activities to further strengthen GEA's positive image on the labor market. We promote diversity, equality and inclusion as well as offering continuous learning and development opportunities. We cultivate regular dialog within our teams and systematically implement the results of our employee survey in follow-up measures. This lets us foster a culture of open feedback and continuous impro-vement. Another key aspect of our commitment is to appoint women to more management positions in our company. Our target is to increase the proportion of women in the top three management levels to 21 percent by 2026. We already achieved that target in 2023.

Our goal is to create a working environment in which all employees feel valued and can develop to their full potential. At the same time, external awards prove that we are successful in this regard. In early 2023, we were recognized as a Top Employer in Germany by the Top Employers Institute. Having similarly undergone the validation processes for Belgium, Poland, Portugal and Spain for the first time, we have even been named a Top Employer Europe for 2024.

⟶ My sustainability highlight of 2023

For me, that's definitely the "Add Better" label! It offers our customers genuine added value because it shows them at a glance which GEA solutions are significantly more resource-efficient and environmentally friendly than their predecessors. This is not just about energy efficiency but also about reducing emissions as well as water and raw material consumption. All of this is backed up by technical data. It was measured using a proven ISO calculation method and validated by TÜV Rheinland. Twenty GEA solutions are now part of our constantly growing "Add Better" family. Ensuring maximum transparency, the label facilitates decision making for our customers when it comes to purchasing machines, introducing new processes or even configuring entire plants.

We also support our customers by means of tailored consulting services, fully leveraging the potential offered by sustainable GEA production solutions which helps them achieve their own sustainability goals more efficiently. We will continue to develop these services and offer them under "Add Better Consulting" starting in 2024.

MISSION 26

OUR SHARED JOURNEY TOWARD A BETTER WORLD

Sustainability is the pivotal factor for the future of our planet. Doing business more sustainably is vital when it comes to positively shaping the world of tomorrow. Mechanical engineering makes a significant contribution to a better future because it is at the interface of many industries and influences almost all areas of life. It is our responsibility to make an active contribution. That is why sustainability is at the heart of our product development. In order to make even more rapid progress in this area, we have declared 2023 the Year of Innovation in Sustainability and launched various initiatives that will change our products and pave the way to a more environmentally friendly future.

One highlight was the introduction of our new "Add Better" label. It identifies GEA products that deliver significant savings in energy, greenhouse gas emissions, water or materials compared with predecessor models. This label helps our customers make informed decisions in line with their environmental goals (see also the ⬈ "Sustainable Solutions" chapter).

Supporting groundbreaking innovations

Additionally, seven Sustainathons were held in 2023. In these workshops – based on the hackathon principle – interdisciplinary GEA teams brainstormed ideas for disruptive, sustainable solutions to specific problems. The best proposals will be taken for further development. Of course, the journey to market maturity still calls for a great deal of perseverance, but the creative approaches show that we are on the right track. Based on the promising results, we will continue to hold the Sustainathons going forward (see also the ⏎ "People" chapter).

Another highlight for mobilizing commitment to the Year of Innovation in Sustainability were the Sustainability Focus Weeks in June. In addition to best-practice presentations, various GEA Talks were held together with the divisions. These involved a series of live interviews in which top managers and GEA experts discussed current topics. Workshops were also held on the circular economy, next generation farming and the survival of the oceans; the GEA Better World Awards were also presented.

Our carbon capture solution, which is currently in its pilot phase, is similarly forward-looking. This technology captures CO_2 from production processes before it is released into the atmosphere. Once separated, the gas can be stored or used in industrial processes. Especially in emission-intensive industries such as cement production, carbon capture can make a key contribution to reducing greenhouse gas emissions. GEA has been conducting in-depth practical testing of a carbon capture pilot plant at the Phoenix cement works at Beckum in the German region of Westphalia since May 2023 (see also the ⏎ "Climate Strategy" chapter).

Thinking about the end right from the start

Circular economy is a major step on the road to sustainability as it reduces environmental pollution, conserves resources and at the same time offers economic advantages. It is one way of decoupling economic growth from the consumption of non-renewable raw materials. For GEA, this presents tremendous opportunities to accelerate the transition to a sustainable future. As a first step towards introducing the circular economy, we have developed a process with which the Separation business unit has already established circularity for 90 percent of its service and spare parts. By 2026, all business areas will introduce circular economy principles for spare parts and packaging materials. GEA is participating in the "CIRCLE – Cross-Industry Realization of Circular Lifecycle Engineering" project at Germany's RWTH Aachen University to develop and test circular economy methods in close cooperation between researchers and industry (see the ⏎ "Sustainable Solutions" chapter for more information on the circular economy).

Life cycle assessments (LCAs) play a key role in calculating the carbon footprint in the early phase of product development. This is why GEA has started to systematically underpin the environmental footprints of its own solutions using specific figures based on life cycle assessments. The company has been actively involved in a research initiative to develop specialized LCA software in order to better meet the diverse requirements of our customer-specific projects. The "Climate-neutral business in OWL" project is part of the technology network "its OWL" (Intelligent Technical Systems Ost-WestfalenLippe), in which around 200 companies, research institutions and organizations are masterminding solutions for the digital and sustainable transformation of Small and Medium-sized Enterprises (SMEs) (see also the ⏎ "Sustainable Solutions" chapter).

The Year of Innovation in Sustainability at the Supplier Summit

The Year of Innovation in Sustainability was also the focus of the fourth GEA Supplier Summit in September 2023. The Supplier Summit is one of GEA's most important annual events. It offers an excellent opportunity to exchange news and views with top suppliers and work together on ideas for tomorrow's innovations (see also the ⏎ "Responsible Operations - Sustainable Supply Chain" chapter).

GEA Sustainathons

Sustainathons are events based on the hackathon principle in which interdisciplinary teams work in a short space of time to develop pioneering and disruptive innovations for sustainable solutions.

NET ZERO by 2040

At GEA, we take a 360-degree approach to sustainability and have set ourselves ambitious targets.

Greenhouse gas emissions (GHG)

We will reduce Scope 1 and 2 GHG emissions compared to 2019 by 60 percent by 2026, and by 80 percent by 2030.

We will reduce Scope 3 GHG emissions compared to 2019 by 27.5 percent by 2030.

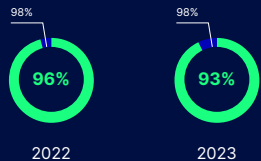| -80% | -51% | 2022 |
-80%	-53%	2023
24%	-27.5%	2022
-22%	-27.5%	2023

Energy

By 2026, 50 percent of our total energy needs will be covered by a certified energy management system.

We will cover 25 percent of GEA's global energy needs with self-generated electricity by 2030.

23%	50%	2022
22%	50%	2023
1%	25%	2022
6%	25%	2023

Waste

The waste recycling rate will be 98 percent by 2026.

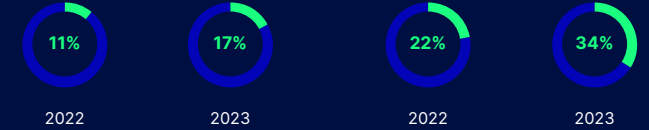| 98% | 96% | 2022 |
| 98% | 93% | 2023 |

Sustainable procurement

By 2026, all of GEA's preferred suppliers will meet our sustainability criteria, and all A suppliers by 2030.
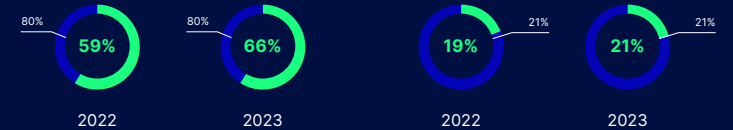
A suppliers with SBTi targets

A suppliers with EcoVadis sustainability rating

| 11% | 2022 |
17%	2023
22%	2022
34%	2023

Talents & diversity

80 percent of vacancies at all management levels will be filled by our own junior staff by 2026.

Until 2026, we will increase the proportion of women at the top three management levels to 21 percent.

80%	59%	2022
80%	66%	2023
19%	21%	2022
21%	21%	2023

Coverage rate of management systems

ISO 9001	ISO 14001	ISO 45001	ISO 50001
71%	58%	64%	8%
2023	2023	2023	2023
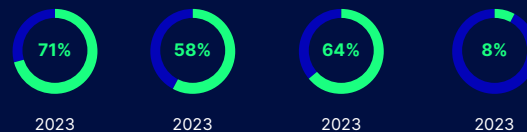
Employee satisfaction

In the regular employee survey, our goal is for at least 80 percent of employees to recommend GEA as a good employer by 2026.

| 80% | 78% | 2022 |
| 80% | | 2024* |
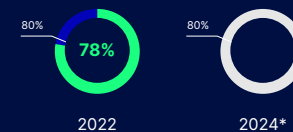
*) Results will be available in Q2 2024

Our responsibility for tomorrow's world.

Sustainability is an integral component of GEA's corporate culture and a key element in ensuring the long-term viability of the entire group. That is why sustainability is a pivotal part of our "Mission 26" group strategy and a benchmark for how we act on a daily basis. This means that we are transforming our company, optimizing our processes, ensuring that our products and services enable our customers to achieve their sustainability goals and engaging globally in dialog with local communities around our sites to build a future worth living.
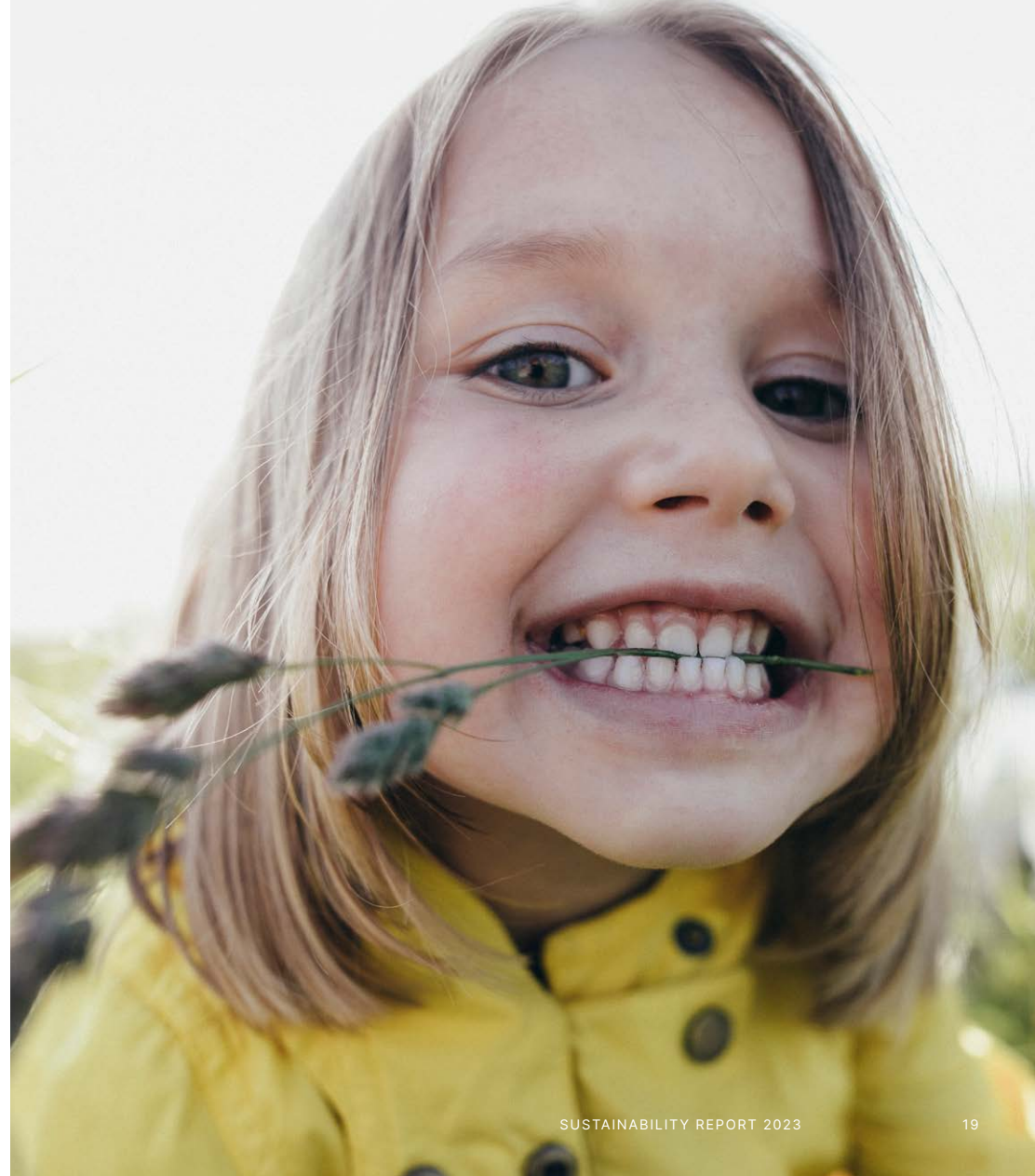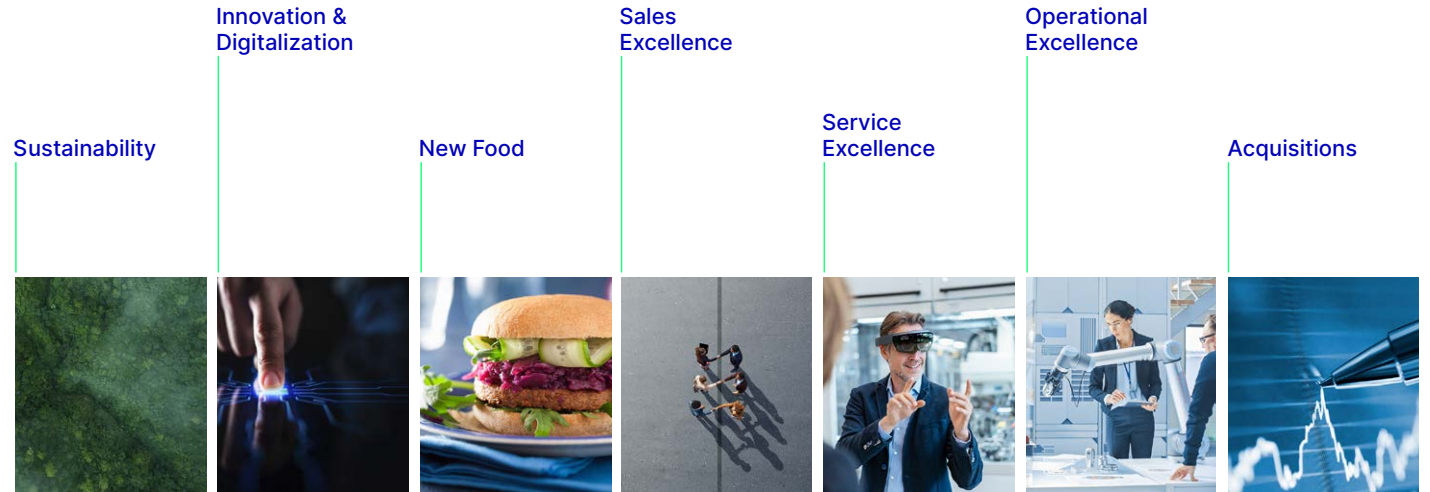
GEA has set itself highly ambitious targets with regard to the environmental, social and corporate governance aspects of the group. We want to be nothing less than the frontrunner in our industry by 2026. Sustainability is the first of seven key levers for attaining our "Mission 26" targets. Yet it is also firmly included in the other six levers, underscoring its overarching nature and strong significance for our company. As in the previous year, we reached a number of milestones in 2023 on the path to attaining our targets. At the same time, having defined even more ambitious climate change mitigation targets, we have thus raised the bar once again.

As a multinational company, GEA has the ability and the determination to contribute to a better world. This is also mirrored in our corporate purpose "Engineering for a better world," from which we derived our vision: "We safeguard future generations by providing sustainable solutions for the nutrition and pharmaceutical industries."

Our sustainability strategy is aligned with the 17 Sustainable Development Goals (SDGs)* of the United Nations. These goals serve to ensure sustainability in global economic, environmental and social development. GEA is committed to the Ten Principles of the UN Global Compact and the seven Women's Empowerment Principles (WEPs) for gender equality.

*) With the exception of SDG 11 ("Sustainable cities and communities"), our strategy supports all 16 other SDGs.

Mission 26
Seven key levers

MISSION 26

Sustainability

Innovation & Digitalization

New Food

Sales Excellence

Service Excellence

Operational Excellence

Acquisitions

2019

Alliance of CEO Climate Leaders
To drive forward progress toward the climate protection targets, GEA participates in the World Economic Forum (WEF) Alliance of CEO Climate Leaders. The goal of this global community of CEOs from major corporations across different industries is to facilitate the transition to a net-zero economy by the middle of the century at the latest by encouraging action across all sectors and engaging with policymakers. The Alliance was founded to support the Paris Agreement and climate protection measures by companies. These companies set themselves ambitious targets, reduce their own emissions and encourage others to do the same.

2021

Science Based Targets initiative (SBTi)
The SBTi validated GEA's climate targets for the first time in 2021. Our heightened ambitions for 2030 and our Net Zero target for 2040 were again validated in 2023. The SBTi defines and promotes best practices for greenhouse gas reduction and Net Zero targets in line with climate science. Based on climate science and the Paris Agreement's 1.5°C target, the SBTi Net Zero Standard requires companies to achieve rapid, marked emission reductions through short- and long-term science-based targets.

Business Ambition for 1.5°C
Companies like GEA who have joined the "Business Ambition for 1.5°C" campaign are maintaining their commitment as part of the SBTi and are systematically working toward Net Zero targets. By joining, we want to lead the race together with other innovative companies. This will inspire suppliers, customers and other companies to follow our example while at the same time encouraging governments to take bolder action when it comes to protecting the environment.

UN Global Compact
GEA has committed to upholding the Ten Principles of the UN Global Compact, a worldwide pact between businesses and the United Nations that aims to make globalization more socially and ecologically responsible.

Blue Competence initiative of the VDMA
Since 2021, GEA has been committed to the twelve sustainability principles of the "Blue Competence" initiative of the German Mechanical and Plant Engineering Association (VDMA). Promoting sustainability in mechanical and plant engineering, this initiative aims to inform the industry about sustainable solutions.

2022

Alliance for Clean Air
GEA has been a member of the Alliance for Clean Air, which is organized by the World Economic Forum together with the Clean Air Fund, since 2022. The Alliance brings together business leaders committed to measuring and reducing value chain air pollutant emissions, investing in innovation and working with policymakers and other peers to champion the social, economic and climate benefits of tackling air pollution.

econsense
GEA joined the econsense sustainability network in 2022. This network of 49 multinational companies leading in the field of sustainability aims to work together to actively shape the transition to a more sustainable economy. Through our membership of this organization, we intend to step up our dialog with other international companies and encourage legislators in Germany and the European Union to further enhance sustainability standards.

Women's Empowerment Principles
GEA is committed to the seven Women's Empowerment Principles (WEPs) for gender equality. The WEPs are a joint initiative of UN Women and the UN Global Compact. By joining, we are signaling our intention to promote sustainable business practices and empower women. By 2026, we aim to increase the proportion of women at the top three management levels in the company to 21 percent.

International Sustainability Standards Board
GEA has been supporting the development and adoption of the sustainability reporting standards issued by the International Sustainability Standards Board (ISSB) since 2022. The ISSB develops reporting standards geared to the needs of investors and financial markets.

2023

Science Based Targets initiative
In 2023, the SBTi validated GEA's upgraded climate targets and the Net Zero target for 2040.

EV100
GEA joined the Climate Group's leading global EV100 initiative in 2023 to accelerate the adoption of electromobility. As part of the initiative, GEA has committed to replacing at least 1,200 vehicles weighing less than 3.5 tons with electric vehicles by 2030, as well as to equipping all German sites with charging infrastructure for electric vehicles by no later than 2025.

German Sustainability Award
The German Sustainability Award recognizes companies and corporate partnerships that are committed to sustainability and take responsibility for their supply chains. GEA was a finalist in the category "Transformation Field Climate" in 2023.

2024

SteelZero Initiative
Starting in 2024, GEA is now a member of "SteelZero", a joint initiative of the "Climate Group" and "Responsible Steel". As a processor of stainless steel products, we are committed to accelerating the transformation to a decarbonized steel industry.

Actively shaping change
GEA is committed to being actively involved and helping to shape change. This objective includes a public commitment to sustainable topics and ongoing efforts to take a proactive role. The continuous evaluation of and participation in prominent sustainability initiatives are an integral part of our strategy.

1.5°C

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Our ambitious targets
By 2040, GEA will reduce greenhouse gas emissions to Net Zero at every link in the value chain. This is our most challenging target. In 2021, we had our interim climate targets for 2030 validated by the SBTi. After positioning ourselves at the forefront of our industry, we further sharpened our ambitions in 2023 and increased the interim targets for 2030, as well as defining a short-term target to reduce greenhouse gas emissions from our own operations (Scope 1 and 2) by 2026 (see also the ⤢ "Climate Strategy" chapter). Our increased mid-term target, as well as our Net Zero target for 2040, were validated by the SBTi at the end of 2023. This underscores our role as a sustainability pioneer. The SBTi has confirmed that our pledges are in line with the latest climate research findings and will make an effective contribution to achieving the 1.5°C target.

Creating sustainable value

GEA's corporate purpose is closely linked with the sustainability ambition: "We responsibly engineer sustainable solutions for a better world together with great people." This aspiration defines the three main approaches of our sustainability strategy:

- **Sustainable solutions**: We develop environmentally friendly, sustainable solutions for a better world and to support our customers' sustainability goals.
- **Responsible operations**: We uphold the highest environmental and social standards at our own sites and in our purchasing activities.
- **Great people**: Our employees consider GEA to be the employer of choice in the engineering industry. By increasing diversity, placing the focus on equality and inclusion as well as providing opportunities for lifelong learning and long-term career development prospects, we aim to become the most attractive employer in the engineering industry.

For a better world: We generate value for society based on solutions that help reduce food and water shortage as well as improving nutrition and health. GEA is actively leveraging its own expertise and skills to empower local communities.

We have defined quantifiable targets for each of the three approaches described above that guide our actions (see graphic). Find out more about how we aim to achieve these targets and the progress we made in 2023 in the following chapters of this report.

Engineering for a better world

NET ZERO by 2040

Sustainable Solutions

- Reduce greenhouse gas emissions scope 3 by 27.5% by 2030
- 100% of solutions will be offered with zero freshwater-use by 2030
- 100% of packaging-related solutions use sustainable packaging materials by 2030
- 100% of service parts and machinery packaging material to fulfill one of the five R's of circular economy (Reduce; Re-use; Repair; Remanufacture; Recycle) by 2026

Responsible Operations

- Reduce greenhouse gas emissions scope 1 & 2 by 60% by 2026 and 80% by 2030
- 50% of total energy demand is covered by certified energy management system by 2026
- All sites in water-stressed areas that implemented a water strategy by 2026
- Waste recovery rate at production sites >98% by 2026
- 100% of preferred suppliers fulfill GEA's sustainability criteria by 2026 and 100% of A-suppliers by 2030
- 100,000 people reached through skill-based volunteering in 2026
- Donation of 1% of net profit per year

Employer of Choice

- 80% favorable rating on the question: "Would you recommend GEA as a good place to work?" in internal employee engagement survey by 2026
- 21% female representation in management levels L1 – L3 by 2026
- 80% of open positions filled by own talent across management levels L1 – L7 by 2026
- Building a diverse talent pool to further strengthen diversity on all management levels by 2026

Sustainability principles
Sustainability principles at GEA are based on the following policies and processes (see graphic):
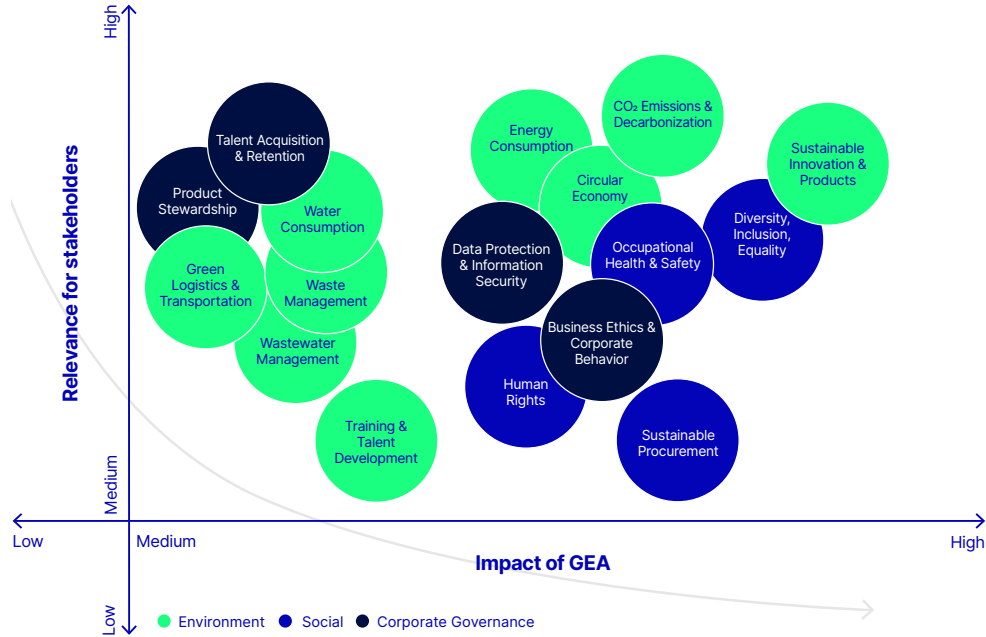
1. Group Code of Conduct
The GEA Code of Conduct describes the values, principles and policies that guide corporate conduct at GEA. The purpose of the Code of Conduct is to ensure company-wide compliance with standards and to create a working environment characterized by integrity, respect as well as fair and responsible conduct. It applies to all GEA employees and corporate entities worldwide. The Code of Conduct integrates the formerly separate "Code of Corporate Responsibility" with the ethical and legal standards that are binding for all employees, making sustainability-based conduct mandatory for all employees. This covers human and workers' rights, diversity and inclusion as well as human development and education. As a globally successful technology group with more than 18,000 employees and operating companies in 55 countries, GEA is committed to fair world trade as a prerequisite for global economic growth.

2. Code of Conduct for Suppliers and Subcontractors
The Code of Conduct for Suppliers and Subcontractors requires our suppliers to operate in an environmentally responsible manner, to respect human rights and to refrain from using conflict resources. This Code of Conduct defines the GEA principles and requirements applicable to all suppliers of goods and services, to subcontractors and to group companies of suppliers and subcontractors with regard to responsibility toward society, the environment and the people involved in the production of goods and/or the provision of services. The Code of Conduct also includes references to the UK Slavery Act 2015, the German Act on Corporate Due Diligence in Supply Chains and further legislation on environmental protection. It additionally includes the topics of data protection and information security.

More information about sustainability management at GEA can be found in the ⤢ "Compliance and Governance" chapter.

Basic principles

Code of Conduct
Code of Conduct for Suppliers and Subcontractors

Policies

- Policy Governance Policy
- Community Engagement Policy
- Sponsorship Policy
- Data Protection Policy
- Compliance (Integrity Policy, Third Party Policy, Competition Policy)
- Whistleblower Protection Policy
- Diversity and Inclusion Policy
- Information Security Policies
- Internal Audit Policy
- Environmental Responsibility Policy
- Biodiversity Commitment
- Occupational Health and Safety Policy
- Quality Policy
- Human Rights Policy
- Procurement Policy
- Global Packaging Policy
- Conflict Minerals Policy

Processes

- Processes for Compliance Approvals
- Process for Compliance Risk Assessment
- Documentation and evaluation of processing activities (data protection process)
- Data protection impact assessment (data protection processes)
- Vendor assessment
- IT system evaluation
- Data breach notification process (data protection process)
- Dealing with requests from affected persons (data protection process)
- Security and business continuity processes

High
Relevance for stakeholders
Medium
Low

Talent Acquisition & Retention
Product Stewardship
Water Consumption
Energy Consumption
CO₂ Emissions & Decarbonization
Circular Economy
Sustainable Innovation & Products
Green Logistics & Transportation
Waste Management
Data Protection & Information Security
Occupational Health & Safety
Diversity, Inclusion, Equality
Wastewater Management
Business Ethics & Corporate Behavior
Human Rights
Training & Talent Development
Sustainable Procurement

Low   Medium   High
Impact of GEA

● Environment ● Social ● Corporate Governance

Key sustainability matters

In accordance with legal requirements (CSR-RUG, German CSR Directive Implementation Act) and the guidelines of the Global Reporting Initiative (GRI), GEA regularly assesses the topics that are material to understand the economic, environmental and social impact of its business activities (see chart). The materiality assessment covers topics such as climate change mitigation, occupational health and safety, supply chain, human rights and other social aspects, governance and the assessment of existing internal controls, processes and guidelines. As a result of the assessment, 17 topics, that are reflected in GEA's sustainability strategy and in the "Mission 26" targets, were classified as material in accordance with the GRI materiality principles. 13 of these were defined as material under the CSR-RUG. In addition to the internal assessment, including the assessment by the Executive Board, the expectations and interests of our most important external stakeholders, such as investors, customers and employees as well as independent institutions such as non-governmental organizations (NGOs), are also taken into account.

The materiality assessement is carried out by the Sustainability department with the involvement of the Risk & Internal Control Management & Data Governance department and aligned with all relevant departments. The alignment with the internal specialist departments ensures that the perspective of external stakeholders is also taken into account on a representative basis. This makes it possible to assess whether the financial impact of risks and opportunities is material or not.

The financial auditor audited and confirmed with limited assurance the non-financial Group statement and thus also the sustainability matters identified as material in accordance with CSR-RUG. The validity of the material topics and action areas was confirmed for the reporting year. Further information can be found in the Independent Auditor's report in the GEA Annual Report.

In addition, GEA has established a process for identifying and assessing non-financial risks in accordance with the legal requirements of the German Commercial Code. This covers the areas of environmental protection, employees, social aspects, human rights and the prevention of corruption and bribery. The assessment of non-financial risks is carried out by the sustainability department. Both the materiality analysis and the assessment of non-financial risks are carried out annually and submitted to the Management Board for approval and validation.

In the reporting year, we started adapting the materiality analysis to the requirements of the Corporate Sustainability Reporting Directive (CSRD), including the European Sustainability Reporting Standards (ESRS), which will apply to us starting in 2024. GEA has established an interdisciplinary working group in order to meet these requirements in the future. The working group is coordinated by the Sustainability and Risk & Internal Control Management & Data Governance departments. It examines our non-financial impacts, risks and opportunities taking into account double materiality based on a holistic, company-wide risk management approach (enterprise risk management). The CSRD is an EU Directive that imposes stricter reporting obligations on the sustainability matters of a company by means of mandatory sustainability standards. The key element here is the concept of "double materiality". The sustainability department at GEA will also be responsible for its application. The double materiality principle requires companies to always consider the materiality of sustainability matters from two perspectives:

1. How do our business activities impact people and the environment? (inside-out perspective, or "impact materiality")
2. What financial risks and opportunities arise for GEA as a result of sustainability matters such as climate risks? (outside-in perspective, or "financial materiality")

According to the CSRD, a topic must be reported even if it is classified as material from only one of the above two perspectives. Previously, topics only had to be reported if both perspectives applied.

Certification of management systems
All management systems at GEA are regularly reviewed as they not only govern value-creation processes but also contain an inherent commitment to keep on improving. We align quality management, energy management, environmental management as well as occupational health and safety with international standards, and supplement them with GEA-specific standards and regulations, such as the Environmental Responsibility Policy, the Occupational Health and Safety Policy, the Quality Policy, the GEA Safety Core Rules and the GEA Environmental Core Rules (fundamental safety and environment-related rules), as well as globally applicable process descriptions. Developed together with QHSE officers in the divisions and countries, these rules apply to all GEA companies and are implemented with the support of the global QHSE organization. GEA holds a total of 211 certificates for its various ISO management systems. These cover all different types of GEA locations, including production, sales and administration sites.

We started successively certifying our sites with integrated management systems in 2016. GEA Group Aktiengesellschaft, headquartered in Düsseldorf, Germany, leads the way with certification to ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018. One aspect of the "Mission 26" group strategy is certification of all GEA production sites in line with the quality, environment and occupational safety management systems. In the year under review, we achieved coverage of 71 percent for ISO 9001:2015, 58 percent for ISO 14001:2015 and 64 percent for ISO 45001:2018. By 2026, we aim to have half of our annual energy requirements covered by an energy management system certified to ISO 50001:2018; in 2023, 22 percent of total energy requirements were covered. Unrelated to certification, environmental protection measures and projects as well as consumption data measurement are performed in cooperation with the QHSE department.

Management systems

	Coverage rate 2023 (in %)	Number of certified Production sites 2023	Number of Production sites total*
DIN EN ISO 9001:2015	71	37	52
DIN EN ISO 14001:2015	58	30	52
DIN EN ISO 45001:2018	64	33	52
DIN EN ISO 50001:2018	8	4	52

*) Compared to the previous year, the number of production sites has decreased from 58 to 52: Two locations were sold (Quinto di Treviso, Italy and Klimovsk, Russia), one location (Romeoville, IL, USA) is no production site any longer, one site will not be certified until 2024 due to a relocation (Tianjin, China) and two locations are currently not certified by TÜV due to Russia's war of aggression.

ISO 9001 is the standard that specifies requirements for a quality management system. Organizations use the standard to demonstrate their ability to consistently provide products and services that meet customer and regulatory requirements. The standard also helps organizations to continually improve their quality management system.

ISO 14001 is the international standard that specifies requirements for an effective environmental management system (EMS). It is part of the ISO 14000 family of standards on environmental management.

ISO 45001 specifies requirements for an occupational health and safety (OH&S) management system and gives guidance for its use. It was published by the International Organization for Standardization in March 2018.

ISO 50001 specifies requirements for establishing an energy management system. The intended outcome is to allow an organization to continually improve its energy performance.

ESG ratings and rankings

Sustainable corporate governance is a core issue for GEA and our product solutions meet high standards when it comes to environmental protection and the preservation of resources. Our sustainability efforts are frequently recognized in international ratings and rankings. The acronym ESG encompasses criteria from the environmental, social and governance fields.

DAX 50 ESG
Our exemplary approach to environmental, social and governance issues has earned GEA a place among the 50 companies listed in the DAX 50 ESG Index.

CDP
In February 2024, GEA was once again honored by CDP (formerly: Carbon Disclosure Project) for its performance and transparency in reporting, this year with an "A" rating in the climate protection category and an "A-" rating for water security. This puts GEA among the handful of almost 21,000 companies surveyed worldwide that made it onto the A List.

In addition, GEA once again received the annual "Supplier Engagement Leader" award from CDP for 2023. This award recognizes the commitment of our Procurement department in implementing risk prevention and environmental protection measures in close cooperation with suppliers.

EcoVadis
In the sustainability assessment by the independent rating agency EcoVadis, GEA's "Gold" rating was confirmed in the reporting year with 75 out of 100 points. This places GEA among the top three percent of all mechanical engineering companies assessed by EcoVadis worldwide. EcoVadis analyzes companies' sustainability performance in the areas of environment, labor and human rights, ethics and sustainable procurement.

Dow Jones Sustainability Indices
GEA was included in the Dow Jones Sustainability Index World (DJSI World) for the first time in December 2023. The company is also represented in the Dow Jones Sustainability Europe Index (DJSI Europe) for the second year in a row. Inclusion in the indices is based on the annual results in the S&P[1] Global Corporate Sustainability Assessment. More than 13,000 companies were invited to take part in the assessment in 2023. GEA was able to significantly improve its score from 69 in 2022 to 75 out of 100 points in 2023.

MSCI[2]
In January 2024, US-American financial services provider MSCI again rated GEA "AAA" in its ESG Ratings.

FTSE4Good Index Series
Following the index review in June 2023, GEA continues to be included in the FTSE4Good Index Series. This is designed to measure the performance of companies that demonstrate strong environmental, social and governance (ESG) practices.

ISS ESG Corporate Rating[3]
In September 2022, ISS ESG confirmed "Prime Status" for GEA, putting us at the top of the industry index group. ISS ESG is a service provider for institutional investors.

Sustainalytics[4]
GEA's Sustainalytics ESG risk rating improved from 18.3 to 14.2 in 2023. GEA's risk of material financial impacts as a result of ESG factors was classified as low. The ESG risk rating places GEA in the 2nd percentile (1st percentile = lowest risk) in the mechanical engineering industry, as rated by Sustainalytics. Additionally, GEA was recognized by Sustainalytics as an ESG Industry Top Rated company in 2023. Sustainalytics, a Morningstar company, is a leading provider of environmental, social and governance analytics, ratings and data.
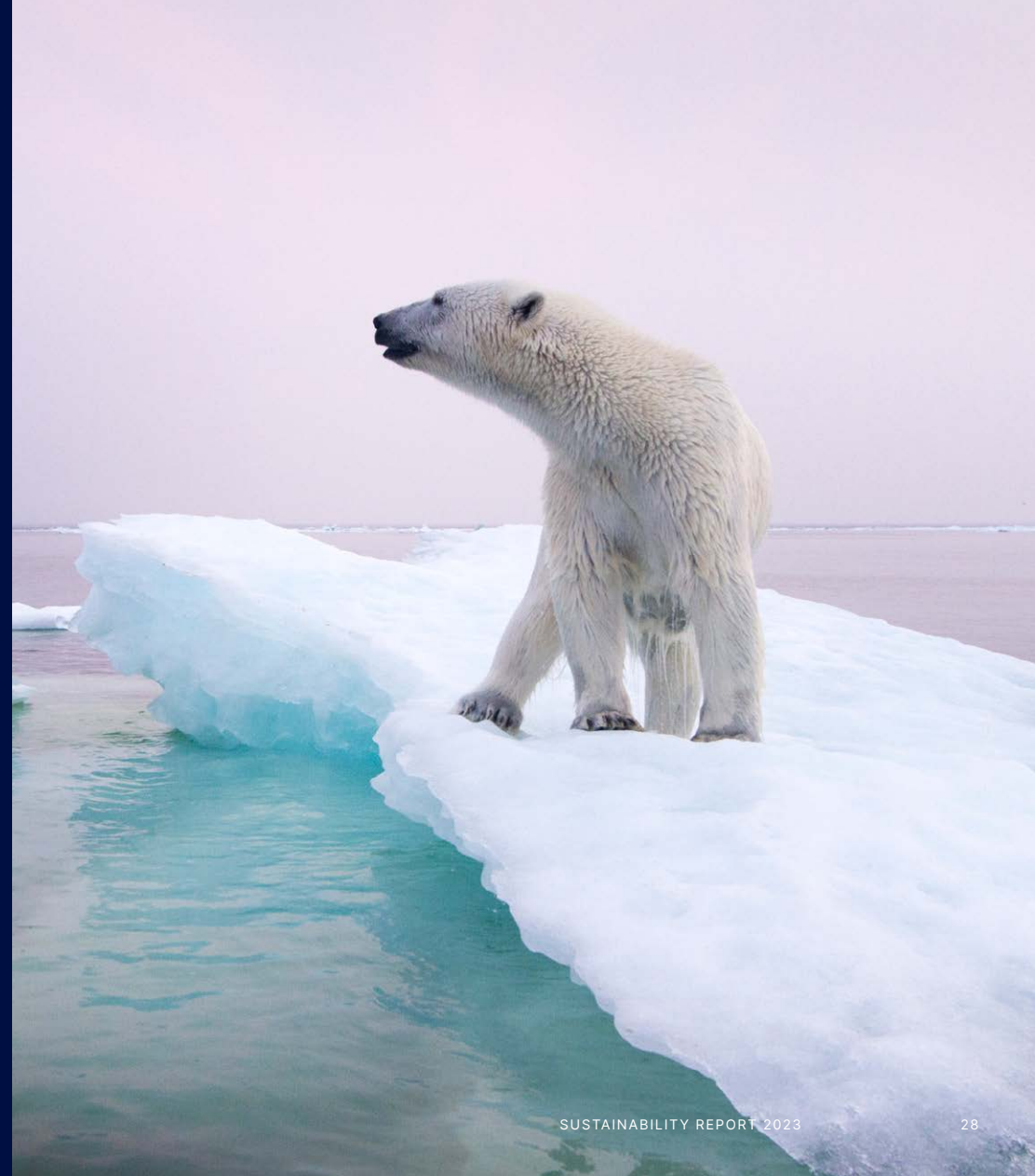
CLIMATE STRATEGY
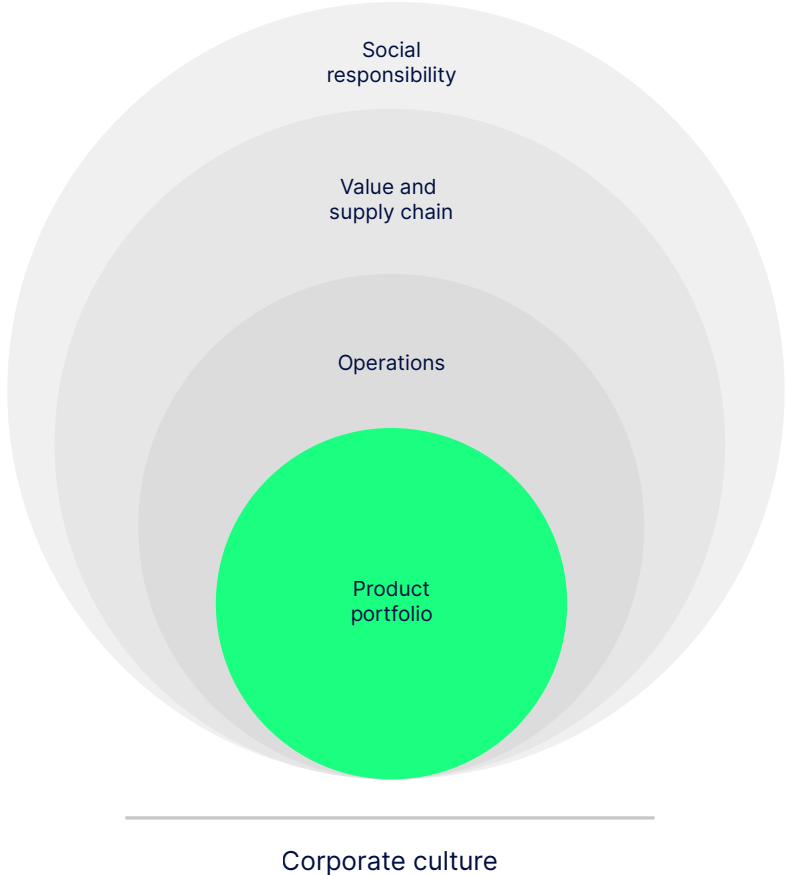
OUR CLIMATE TRANSITION PLAN 2040

GEA ups its climate targets and asks shareholders to vote on its Climate Transition Plan 2040

Having positioned itself at the forefront of its industry two years ago with its ambitious climate strategy, GEA is now shifting up a gear and going a step further. By holding a "Say on Climate" vote, we are actively involving our shareholders in our transformation to a net-zero company, and thereby creating maximum transparency regarding our climate protection activities.

At the Annual General Meeting in April 2024, GEA will voluntarily present the Climate Transition Plan 2040 to its shareholders and ask them to approve this plan in an advisory vote. This emphasizes our role as a pioneer when it comes to sustainability. GEA is the first member of the DAX index family* to hold a "Say on Climate" vote.

*) DAX: German equity index.

Our levers at every link in the value chain

Social
responsibility

Value and
supply chain

Operations

Product
portfolio

Corporate culture

Why are we doing this? We want to underscore the importance of climate protection as a core element of our strategic corporate strategy. Sustainability – and hence also climate protection – is not just a statement for us, but a key factor in our successful future growth. A compelling and systematic plan, coupled with maximum transparency about our future activities, are crucial for credible climate protection.

We are transforming our business model to develop solutions that enable us to offer more sustainable or climate-neutral products and services by 2040.

What are GEA's levers for achieving Net Zero by 2040? Firstly, we are transforming our product portfolio and our own operations. This means that we are developing sustainable solutions to minimize our customers' environmental footprint, electrifying our production sites as well as investing in climate-friendly building infrastructure and in generating our own renewable energy. Secondly, we are holding our entire value and supply chain accountable. We require our suppliers to define their own SBTi-validated (Science Based Targets initiative) climate targets and expect climate-friendly action from all partners along the full length of the value chain. At the same time, we are committed to raising public awareness of climate protection and playing an active role by sharing our experience and expertise and inspiring others. Yet the cornerstone is our corporate culture. And that is why GEA also takes responsibility for its employees. We will ensure that all of our employees are able to act responsibly and in harmony with our climate strategy at all times.

The Climate Transition Plan 2040 calls for the joint effort of each and every employee, business partner, customer and investor. We are implementing our goals at a faster pace than Germany and the European Union.

By working hard, we can ensure that our business strategy is sustainable and takes account of all risks and opportunities arising from climate change. As we consider climate change to be a significant risk for mankind, we aim to be proactive and exert a positive impact while also creating value for our shareholders. Every three years, we will inform about the status of implementation and upcoming measures under the Climate Transition Plan 2040.
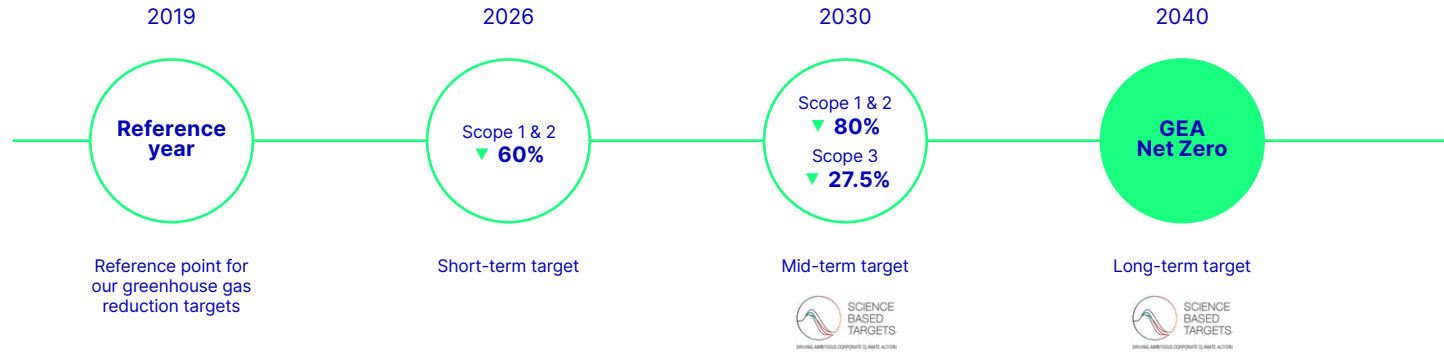
The journey to climate neutrality.

2023 was the hottest year since weather records began – and probably even for around 125,000 years. This is leading to a growing threat from extreme weather events, which have a direct impact on life, society and the global economy. According to the latest scientific findings, current efforts to limit global warming to 1.5°C by 2050 are no longer sufficient. If we still want to have a chance of achieving the goals of the Paris Climate Agreement, the global community must step up its efforts to decarbonize. We need to drive forward the transformation of our economy and find new solutions faster than ever before.

GEA has a special responsibility to help preserve a world worth living in. Machines, equipment and production processes play a key role in decarbonization. The question of whether the climate crisis can still be mastered depends not least on our ability to develop innovative technologies and solutions. GEA can make a positive difference with its engineering expertise.

Our climate targets at a glance

2019 — **Reference year**
Reference point for our greenhouse gas reduction targets

2026 — Scope 1 & 2 ▼ **60%**
Short-term target

2030 — Scope 1 & 2 ▼ **80%** / Scope 3 ▼ **27.5%**
Mid-term target

SCIENCE BASED TARGETS — DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

2040 — **GEA Net Zero**
Long-term target

SCIENCE BASED TARGETS — DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

GHG Protocol:
Scope 1 covers all direct greenhouse gas emissions from GEA's own activities, such as primary fuel sources combusted directly at company sites. Examples include natural gas, heating oil, gasoline and diesel. This also covers emissions from refrigerant leakages and the combustion engine vehicle fleet.
Scope 2 relates to the indirect greenhouse gas emissions from GEA's own activities from the generation of purchased energy. The CO_2 emissions are caused by the consumption of secondary energy sources, such as electricity, district heating, steam or cooling energy in buildings and electric vehicles.
Scope 3 covers other indirect greenhouse gas emissions in the upstream and downstream value chain that are primarily associated with the company's activities. Scope 3 emissions are split into 15 categories – for example, the consumption of energy in the use phase of our machines and systems, the procurement of raw materials and semi-finished products, our business trips and employee commuting.

Even more ambitious targets

Our corporate purpose is clear-cut: "Engineering for a better world." And that means climate protection is a key issue for GEA. For instance, our machines and solutions are paving the way for decarbonizing the food and pharmaceutical industries.

We launched our ambitious climate strategy as early as 2021. We aim to achieve climate neutrality at every link in the value chain by 2040. Also in 2021, we defined ambitious interim targets for 2030 that were validated by the Science Based Targets initiative (SBTi). This globally recognized organization examines whether GEA's targets are in line with the latest climate research findings and will make an effective contribution to attaining the 1.5°C target.
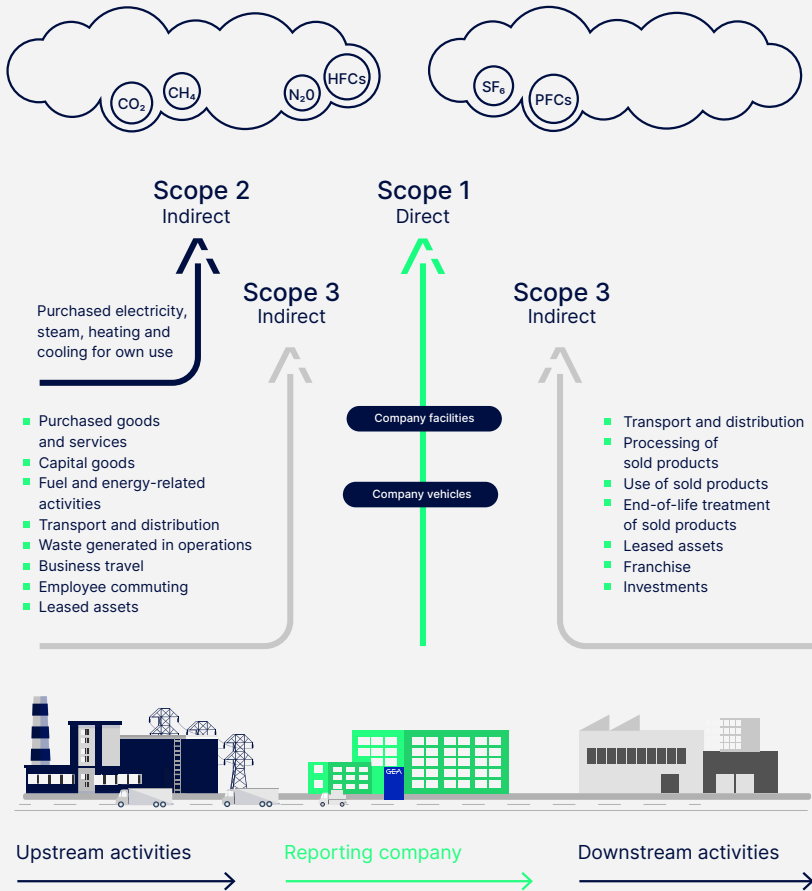
In 2022, we stepped up our ambitions and defined sustainability criteria for our suppliers. This ensures that our procurement strategy is linked to our sustainability commitments and covers the entire value chain. Since 2022 we have been sourcing 100 percent green electricity worldwide. Last but not least, we have linked Executive Board remuneration to the achievement of our climate targets. These and all other efforts by GEA to become a sustainable company have been confirmed by numerous international ratings and rankings.

Having positioned ourselves at the forefront of our industry with our ambitious climate targets, we went a step further in 2023 and raised those ambitions. The following climate targets now apply compared with our reference year 2019:

- Greenhouse gas (GHG) emissions from GEA's own operations (Scope 1 and 2) will be cut by 60 percent by as early as 2026.
- GHG emissions from Scope 1 and 2 will be cut by 80 percent by 2030. We are also increasing our Scope 3 reduction target from 18 to 27.5 percent by 2030.
- By 2040, we will reduce GHG emissions to Net Zero along the entire value chain.

Net Zero means reducing all direct and indirect emissions by at least 90 percent and neutralizing unavoidable greenhouse gas emissions through the sustainable removal of CO_2. What does that mean in concrete terms? We will achieve a reduction by means of measures to avoid, reduce or eliminate greenhouse gas emissions along the value chain. A maximum of ten percent of emissions will be neutralized through measures enabling us to permanently remove CO_2 from the atmosphere to offset unavoidable emissions.

The heightened targets for 2030 and the Net Zero target for 2040 were validated by the SBTi in December 2023. The SBTi thus confirms that our pledges are in line with the latest climate research findings and will make an effective contribution to achieving the 1.5°C target.

Scope 2
Indirect

Purchased electricity, steam, heating and cooling for own use

Scope 3
Indirect

- Purchased goods and services
- Capital goods
- Fuel and energy-related activities
- Transport and distribution
- Waste generated in operations
- Business travel
- Employee commuting
- Leased assets

Scope 1
Direct

Company facilities

Company vehicles

Scope 3
Indirect

- Transport and distribution
- Processing of sold products
- Use of sold products
- End-of-life treatment of sold products
- Leased assets
- Franchise
- Investments

Upstream activities   Reporting company   Downstream activities

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27.5%

By 2030, we aim to cut our
Scope 3 emissions along our product
value chain by 27.5 percent.

Product portfolio transformation

GEA's biggest challenge are Scope 3 greenhouse gas emissions, meaning the sum of all emissions generated during the entire life cycle of an individual product – from the emissions caused by the production of our raw materials and services provided, through transportation and distribution to our production facilities, down to the use of transportation by our employees at our sites and our sales force. The most important factor, however, are the "downstream" greenhouse gas emissions that arise when our customers use our products.

Up to 95 percent of our greenhouse gas emissions are generated during the use phase of a product. This high percentage applies not only to GEA but also to the entire mechanical engineering sector. In addition to the long operational life of the machines, this is primarily due to our customers' generally highly energy-intensive production processes.

In order to reduce the Scope 3 footprint, we need more innovations for transforming our product portfolio to achieve maximum energy efficiency. It is also about using electrification to replace fossil fuels. More digital services are to let our customers better manage our solutions, which will enhance efficiency as well as reduce travel for our service and sales staff. Additionally, we will support our customers in assessing their emissions and choosing solutions to decarbonize their production facilities and processes with consulting services such as "Add Better Consulting".

Sustainable solutions such as our "Add Better" products are a key element in reducing Scope 3 emissions (see also the ⤢ "Sustainable Solutions" chapter).
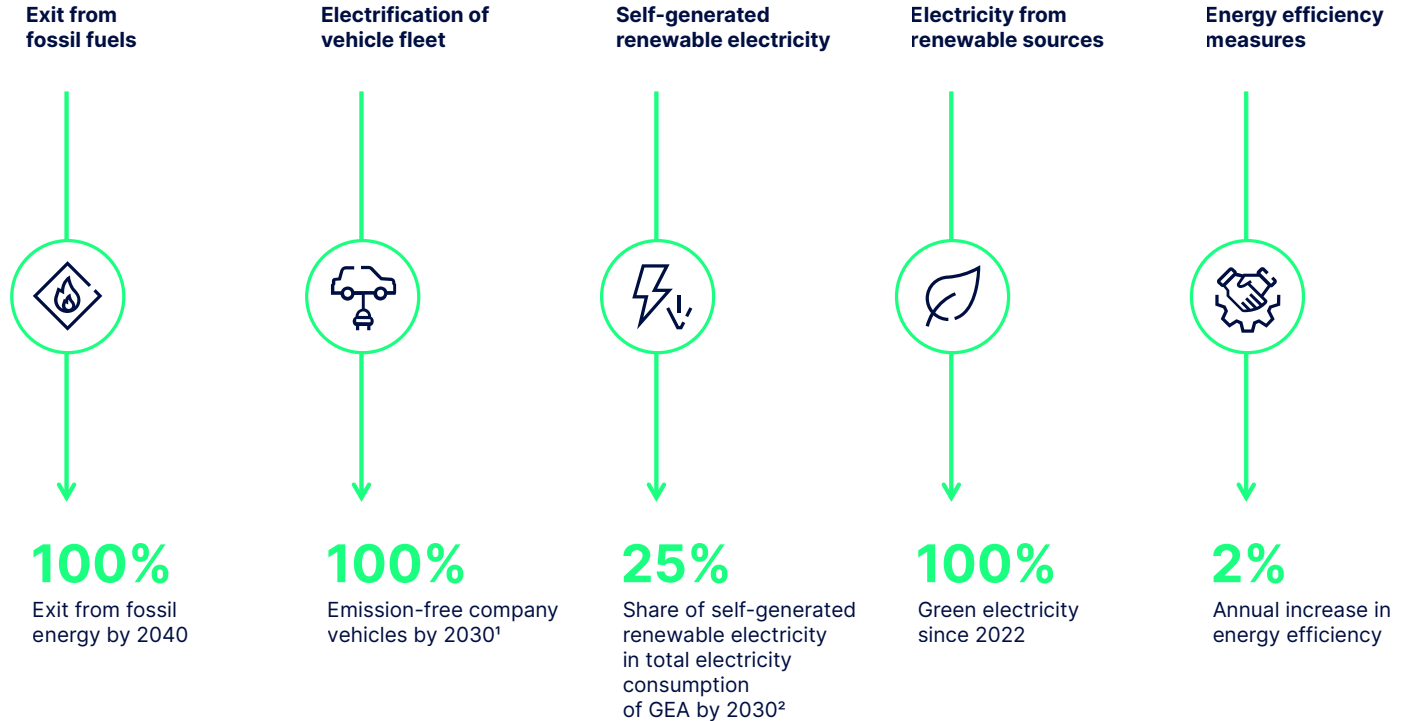
Exit from fossil energies

It is just as important to decarbonize our own operations. We have identified five levers to achieve the Net Zero target at our own locations and plan to invest around an additional EUR 175 million by 2040. "Additional" means going beyond the necessary investments in the building stock to maintain it in order to meet the requirements for achieving carbon-neutral operation. Most of the investments will be accounted for by the exit from fossil fuels. We are likewise electrifying our vehicle fleet with the aim of using solely zero emission management company cars by 2030.

Electric company car fleet

Since 2021, we have been swiftly converting our company to sustainable mobility. By 2030, our global fleet of management company cars will have been replaced by all-electric vehicles. Around 30 percent of the company cars used by managers worldwide have been electrified, and this figure has already reached 50 percent in Germany.

We are additionally committed to increasing the proportion of self-generated electricity from renewable energies to 25 percent by 2030. Since 2022, we have been exclusively sourcing green electricity worldwide. Investments in energy and building management systems are anticipated to increase energy efficiency by two percent every year.

Five levers for decarbonizing our sites worldwide

Exit from fossil fuels	Electrification of vehicle fleet	Self-generated renewable electricity	Electricity from renewable sources	Energy efficiency measures
100%	**100%**	**25%**	**100%**	**2%**
Exit from fossil energy by 2040	Emission-free company vehicles by 2030[1]	Share of self-generated renewable electricity in total electricity consumption of GEA by 2030[2]	Green electricity since 2022	Annual increase in energy efficiency

1) Remaining vehicle fleet (functional vehicles) by 2040, possibly earlier if taking into account technical developments in the automotive industry.
2) This includes both owned renewable energy plants and those financed by GEA, such as photovoltaic or wind power plants.

GEA began planning its own financed photovoltaic park in Hachen, Germany, in the year under review. Starting in 2026, the park will supply up to six gigawatt hours of green electricity for around six German production sites, which will enable us to cover some 18 percent of our electricity requirements in Germany. Additional power purchase agreements for renewable electricity (PPA*) are planned for 2024. However, these are only the first steps. Further expansion of self-generated electricity from wind and solar power is also planned for other countries.

Alongside the packages put together to decarbonize our sites, we began in 2023 to apply an internal price for CO_2 associated with each investment measure. By introducing carbon pricing, we have put a notional monetary value on expected greenhouse gas emissions. This allows us to evaluate and assess our investment projects in advance based on the expected emissions. We consider high emissions to be a risk factor that will incur costs in the future, either directly (e.g. through taxes) or indirectly (e.g. through consumer behavior). We apply carbon pricing to factor this risk into our business processes. At EUR 126 per ton of CO_2e emitted, above the average amount we are aware of that companies earmark for internal purposes, which sets us positively apart.

GEA on a carbon capture mission
We aim to neutralize greenhouse gas emissions that cannot be avoided. There are both nature-based methods (such as planting trees) and technology-based approaches for permanent carbon removal from the atmosphere. Our commitment will focus exclusively on technology-based carbon removal measures. As a technology company, we are championing technical carbon removals, focusing primarily on scaling and fine-tuning GEA's carbon capture, storage and utilization solutions.

Investments in climate protection projects
We have been investing in "Gold Standard" climate protection projects since 2021. According to the German Environment Agency, the only projects eligible for Gold Standard certification are those that demonstrably lead to a reduction in greenhouse gases and, at the same time, are good for the local environment and cater to the population's social needs.

*) Power Purchase Agreements (PPA) are long-term agreements between energy producers, energy traders and consumers that define details such as price, term, risk distribution and electricity characteristics. They facilitate the financing of renewable energy systems as well as secure the price and supply of electricity.

SUSTAINABLE SOLUTIONS

"ADD BETTER" EMPOWERING CUSTOMERS WITH RESOURCE-EFFICIENT SOLUTIONS

Numerous sectors such as the food, beverage and pharmaceutical industries are facing the challenge of making their energy-intensive processes more efficient and more sustainable. Machines and systems make a significant contribution to this. With its "Add Better" label, GEA has launched a pioneering initiative to identify sustainable solutions. The label lets our customers choose advanced products that offer not only improved performance but also proven resource efficiency. This helps them save water or reduce their greenhouse gas emissions, thereby playing a key part in environmental protection and at the same time reducing costs.

"By providing our customers with 'Add Better' solutions, we are actively helping to reduce our industry's environmental footprint. For us, designing more efficient products means minimizing our customers' environmental impact and hence making a concrete contribution to achieving their sustainability goals."

Ilija Aprcovic, Division CEO Liquid & Powder Technologies

In the spirit of its corporate purpose "Engineering for a better world", GEA works every day to develop solutions that use less energy, water and raw materials, and produce less waste. "The ongoing rollout of the 'Add Better' portfolio is a central pillar in the transformation of our product portfolio into significantly more resource-efficient and environmentally friendly solutions for our customers. First, a reliable and trustworthy ecolabel is becoming increasingly relevant when it comes to providing information on ecological options. Second, innovative and sustainable solutions are crucial to achieving climate and water targets," says GEA's CEO Stefan Klebert.

A sign of greater sustainability

"Add Better" highlights innovative GEA solutions that are significantly more resource-efficient than their predecessors – from industrial machines through processes to digital solutions and entire plants. Each product awarded the "Add Better" label has undergone a rigorous assessment based on industry standards and concrete data, which is then validated by an independent body – this is a genuine sustainability indicator for customers. This makes it easier to identify our more ressource-efficient products while providing transparent access to the data behind the label for informed decision making.

Twenty products already carry the "Add Better" label and further solutions from all business areas are currently being validated by TÜV Rheinland, one of the world's leading independent validation organizations. They all enable resource savings in the food, pharmaceutical and beverage industries and are part of the "Add Better" family.

"Guided by Design for Sustainability, our development process ensures that resource efficiency is prioritized right from the start of product development at GEA," says Dr. Nadine Sterley, Chief Sustainability Officer. Design for Sustainability means that we design products to enable retrofits and maintenance in order to maximize operational life and minimize the total cost of ownership. That is why our development strategy is based on modular, configurable solutions that reduce resource consumption and increase productivity.

Significant resource savings

The first "Add Better" products include the AddCool spray dryer and a marine separator. The spray dryer with AddCool technology can reduce a system's primary energy consumption by up to 49 percent compared to the previous model. This corresponds to the average annual electricity consumption of more than 8,500 two-person households.

Used to clean lubricating oil and treat bilge water on board ships, the marine separator saves 2,800 kilowatt hours of energy per year compared with its predecessor model. In addition, its maintenance interval was doubled to 16,000 hours and the cleaning effort was reduced by 95 percent.

The GEA Water Saving Unit cuts cooling water consumption by 100 percent compared with conventional cooling by recirculating the cooling water in separators. That means an annual saving of more than 1.3 million liters of water per separator.

GEA ECOSpin2 Zero for wet sterilization when filling PET bottles consumes 91 percent less water as a new machine than its predecessor. As a retrofit package for existing systems, the water saving is 83 percent.

1) The "Add Better" label refers to the GEA Centrifuge Water Saving Unit series product that was launched on the market in September 2022.
2) The "Add Better" label refers to the 1947899 series product that was launched on the market in November 2022. The comparison refers to its predecessor model.
3) The "Add Better" label refers to the water rinsing unit that was launched on the market in September 2014.
4) The "Add Better" label refers to the GEA marine separator that was launched on the market in September 2018. The comparison refers to its predecessor model, GEA OSE Separator.
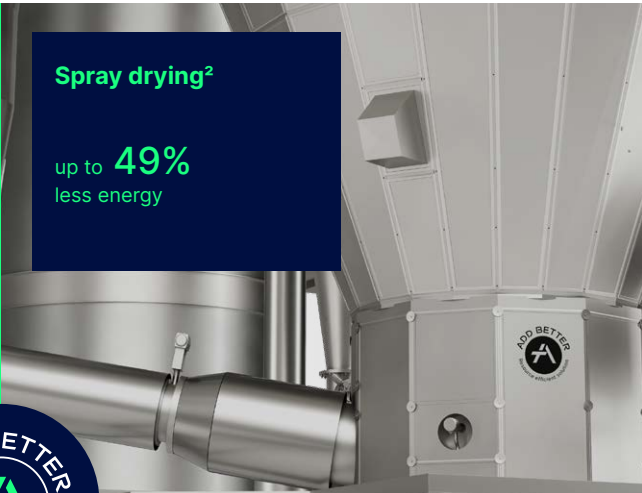
EXAMPLES

Centrifuge cooling[1]

up to **100%**
less water

Spray drying[2]

up to **49%**
less energy

ADD BETTER
Resource efficient solution

Aseptic filling[3]

up to **91%**
less water

Marine separator[4]

up to **9%**
less energy

Highlights GEA solutions that are significantly better than their predecessors

Savings in the consumption of resources for example energy, water, waste

ADD BETTER
Resource efficient solution

Independently validated by TÜV Rheinland

In line with ISO 14021

"We have made a commitment to our customers to be transparent and see this as genuine added value, as it allows them to invest in future-proof sustainable solutions."

Dr. Barbara Bricoli, Research & Development
Liquid & Powder Technologies ,
Powder & Thermal Separation Technologies

More transparency thanks to TÜV validation
The "Add Better" label and the underlying evaluation process – from data collection to calculation and documentation – complies with the strict and transparent requirements for ecolabels in the ISO 14021:2016 standard. In addition, every "Add Better" label awarded is validated by TÜV Rheinland. This is crucial for reliable and trustworthy labeling. Voluntary validation underscores our aim to set an industry benchmark with "Add Better". It empowers our customers to make informed decisions and progress toward a greener future.

Using engineering skills to build a better world.

Shaping a future worth living in is no longer conceivable without a more sustainable way of doing business. As a bridge between numerous industries, mechanical engineering is one of the keys to that better world. Machines from GEA influence virtually all walks of life. That is why we need to make an active contribution to a sustainable future.

As a leading global technology group and pioneer in the field of sustainability in mechanical and plant engineering, we already offer a wide range of sustainable products and solutions that enable our customers to achieve their sustainability goals. Solutions from GEA help make customers' production processes worldwide more sustainable and more efficient. This is in keeping with our corporate purpose of "Engineering for a better world".

The sustainability aspects of our products are increasingly becoming a decisive factor for customers when they select their suppliers. Nowadays, customers expect our plants, machinery and components to help them enhance their own sustainability performance. This is why all GEA solutions are becoming steadily more environmentally friendly. They are getting more resource-friendly and energy-efficient, ensuring that the ecological footprint grows ever smaller. We support our customers with end-to-end solutions that reduce energy consumption and greenhouse gas emissions along the entire process chain. Additionally, GEA has extensive experience in the responsible use of water. Due to the growing water scarcity, GEA is committed to offering technologies that further reduce the extraction of fresh water until 2030.

GEA's sustainability targets

As part of the "Mission 26" strategy, GEA defined the following sustainability targets for product development and recorded initial results in 2023:

- **By 2030**, plans are to reduce **Scope 3 greenhouse gas emissions by 27.5 percent** compared with the base year 2019. One of the contributing factors is the GEA AddCool heat pump technology that reduces both primary energy consumption and CO_2 emissions by up to 49 percent.
- **By 2030**, GEA will offer its customers the **option of operating plant and machinery with zero fresh water consumption**. EcoSpin technology, for instance, is already reducing water consumption thanks to an improved nozzle design that enables shorter rinsing times while maintaining the same high disinfection performance.
- **By 2030**, relevant GEA products will process **sustainable packaging materials**. The Liquid & Filling Technologies business unit has come up with a packaging strategy to convert the entire machine portfolio to sustainable packaging.
- **By 2026**, **spare parts and packaging materials for GEA products must meet one of the "five Rs" of the circular economy**. For example, the Pharma business unit developed a damping element for the NextGen tablet press that is made from used car tires.

41.5%

Sustainable solutions accounted for 41.5 percent of our total revenue in 2023

GEA launched the first "Add Better" solutions on the market in the year under review (see also ⊘ "Add Better" cover story) and will continue to add more solutions to the "Add Better" portfolio and the range of sustainable solutions.

How will we achieve this? In 2023, we started to take measures and launch initiatives to introduce a new way of thinking into our organization. The main focus here is on fostering innovation. We are striving to transform both our product innovations and our business model. To do this, we are encouraging the development of sustainable and disruptive innovations (see ⊘ Sustainathons), masterminding new service offerings to extend life cycles (see ⊘ Hero for Hero) and devising digital solutions that support machine use and efficiency. Sustainability criteria were also integrated into the product development process during the reporting period. This also involves inspiring customers to adopt a sustainability-oriented mindset so that they continue to evolve with us. In recent years, we have made it our mission to join with our customers in developing more sustainable solutions for the process industry. This approach will be further strengthened with "Add Better Consulting". "Add Better Consulting" complements a traditional energy audit with GEA's expertise in heating, cooling and process technology. With this combined 360-degree approach and integration experience, GEA delivers a technical solution for decarbonization in addition to analyzing the actual situation, thus closing the gap that a simple energy audit often leaves. We are similarly introducing a strategic advisory service for our customer segments that need help in defining climate targets. By jointly devising climate strategies, we can support them in securing their future business and guide them toward net-zero activities.

Our sustainable solutions: Alongside the "Add Better" solutions, GEA offers products that do not currently bear an "Add Better" label but nevertheless contribute to greater resource efficiency. These are disruptive solutions replacing those systems that are responsible for customers' significantly higher greenhouse gas emissions or water consumption. Colloquially, these products are also referred to as Scope 4 products. Scope 4 includes emissions avoided when one product is used as a substitute for another that fulfills the same functions but with a lower carbon intensity. For example, our industrial heat pumps provide energy for production processes or district heating applications. This removes the need for additional primary energy, which in turn reduces overall emissions.

Engineering for
a better world
in figures.

The "Add Better" solutions sold in 2023, as well as disruptive solutions such as Scope 4 products, will save a total of **4,979,030 tons of CO_2 emissions over their life cycle and save 16.4 million cubic meters of water** at customers' premises.

4,979,030 tons of CO_2 emissions are roughly equivalent to 3,723 Airbus A380 flights from London to Sydney and back. Or to put it another way, our savings offset the annual emissions of around 600,000 people living in Germany. And **16.4 million cubic meters of water** is roughly the same as the amount of water in 6,544 Olympic-sized swimming pools.

In addition to the two product groups, there are others that are classified as sustainable in accordance with the regulatory requirements of the European Union (EU) (classification system of the European Commission)[1]. **All beforementioned sustainable solutions accounted for 41.5 percent of our total revenue in 2023.**
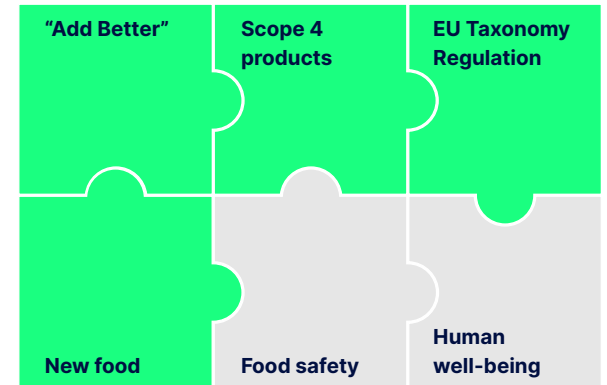
1) Further detailed information on products covered by the EU Taxonomy Regulation and the share of revenue generated with these products is provided in the Consolidated Non-financial Statement of the 2023 Annual Report.

Our sustainable solutions are aligned with the UN Sustainable Development Goals

Current sustainability landscape

Pollution prevention

Resource efficiency

Circular economy

SDG 8

Food safety

New food

SDG 3

Waste

Water

Health

Animal welfare

Climate change mitigation

Digitalization

Biodiversity

Our definition of sustainable solutions

"Add Better"	Scope 4 products	EU Taxonomy Regulation
New food	Food safety	Human well-being

■ Basis for calculating the share of sustainable revenue

■ Not part of the calculation of the share of sustainable revenue

"Add Better"

Definition: Solutions, from machines through processes to entire plants, that are significantly more resource-efficient than their predecessors, are termed "Add Better" solutions by GEA and are awarded the "Add Better" ecolabel. Each individual "Add Better" label is validated independently by TÜV Rheinland on behalf of GEA.

"Add Better" products contribute to SDGs 3, 6, 12, 13 and 15.

Manufacturing bottles and filling them aseptically in a machine

The GEA ABF 2.0 blow molding machine comprising an aseptic blow molding module as well as an aseptic filling and capping unit sterilizes bottles and caps using dry hydrogen peroxide. It is also suitable for extremely sensitive beverages with high and low acidity. The bottles, known as preforms, are heated in the oven and sterilized with hydrogen peroxide directly at the oven outlet. This minimizes energy consumption and the amount of sterilization solution required. The preforms are then blown with sterile air in an aseptic environment. This ensures that sterility is maintained throughout the filling and capping process. The machine, which can fill up to 60,000 bottles per hour, is designed to use very few chemicals and no water during production. The special air recovery system of the GEA ABF 2.0 consumes up to 31 percent less energy during bottling than its predecessor. It compresses the air required for the blowing process and cap sterilization.

Scope 4 products

Disruptive solutions that enable significant resource optimization at our customers

Definition: GEA products and technologies that help our customers reach their climate targets by replacing systems responsible for substantially higher greenhouse gas emissions or water consumption.

We apply the concept of avoided emissions to measure this contribution to reducing greenhouse gases, in line with established standards such as the Avoided Emissions Framework. This framework is adapted to calculate the potential water savings. The savings result from the effect of a product on greenhouse gas emissions or water consumption compared with the baseline situation without that product.

These products contribute to SDGs 6, 12, 13 and 15.

Turning wastewater into district heating

An energy supplier for the city of Malmö in Sweden recognized that GEA's ammonia heat pumps constituted an ideal opportunity for district heating so as to reduce greenhouse gas emissions from heating. Wastewater from a water treatment plant was identified as the best source for heating residential buildings. Four heat pumps with a heating capacity of ten megawatts each were installed to supply eight percent of the total energy needed for approximately 100,000 households. This helps save around 50,000 tons of CO_2 each year – equivalent to the amount emitted by 7,000 passenger cars on a round-the-world trip.

EU Taxonomy Regulation

The EU Taxonomy Regulation

Definition: GEA products and technologies that are considered ecologically sustainable according to the EU classification system.

The European Green Deal aims to achieve carbon neutrality in the European Union by 2050. To achieve this goal, the European Commission developed the Action Plan on Sustainable Finance. The EU Taxonomy Regulation is one of the measures in this action plan that aims to promote investment in sustainable economic activities. It sets out that an activity can only be considered environmentally sustainable if it makes a substantial contribution to at least one of the six environmental objectives defined, causes "no significant harm" to any of the other environmental objectives and complies with the minimum safeguards requirements among others in the areas of business conduct, human rights and labor standards. The six environmental objectives are:
1. Climate change mitigation
2. Climate change adaptation
3. Sustainable use and protection of water and marine resources
4. Transition to a circular economy
5. Pollution prevention and control
6. Protection and restoration of biodiversity and ecosystems

A range of GEA products are declared to be sustainable in accordance with the EU Taxonomy Regulation. More information can be found in the 2023 Annual Report.

Taxonomy-eligible or taxonomy-aligned products contribute to SDGs 2, 6, 12, 13 and 15.

Every drop counts

The demand for water is constantly growing – in municipalities, industry and agriculture. This is being driven by megatrends such as the growing world population as well as urbanization. But fresh water is a scarce resource on our planet: Only around one percent is directly available. More efficient water management is needed to meet this demand sustainably going forward. This applies to wastewater and sewage sludge treatment in municipal and industrial water treatment plants as well as in agriculture.

GEA offers a solution to these challenges with the resource-friendly decanter. It sustainably treats industrial and municipal wastewater, which is then returned clean to the water circulation system. At the same time, the decanter provides an energy-saving and resource-friendly way of producing recyclable biomass from sewage sludge, liquid manure and fermentation residues for use as agricultural fertilizer.

GEA has also launched a pilot project in which the water consumption of separators at customers' sites is measured in order to develop continuous water monitoring with optimization of water consumption accompanying production.
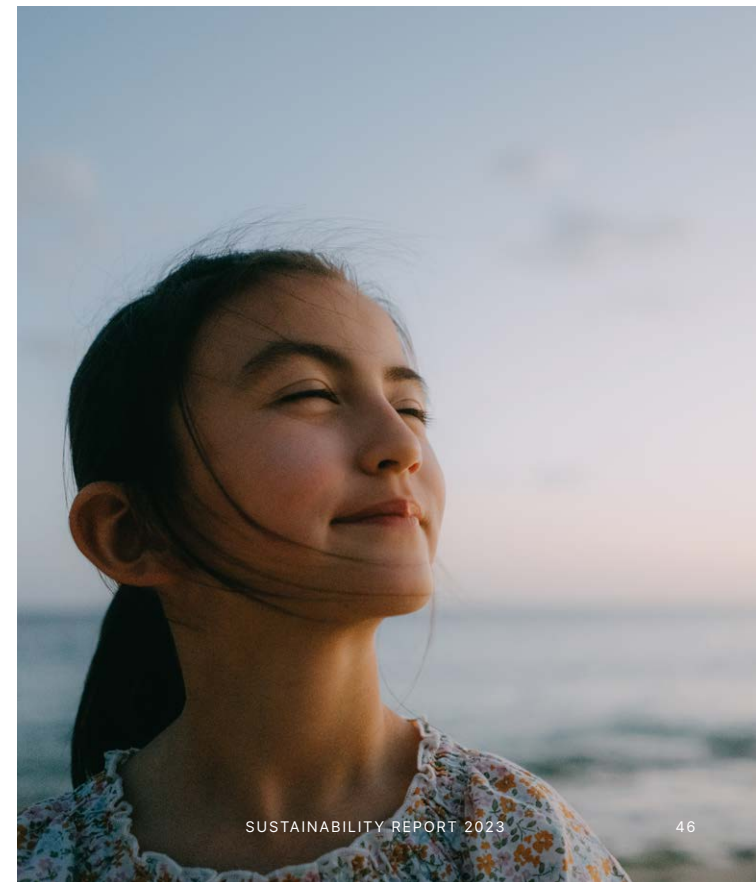
New food

Definition: Plants, technological solutions or software for the production of plant-based alternatives to dairy products and meat as well as the production of insect proteins, precision-fermented proteins and cell-based meat.

GEA's expertise in the new food segment can help guarantee food security for the world's population and provide everyone with nutrition that is healthy and balanced as well as end all forms of malnutrition. In other words, we comply with SDG 2. In addition, the production of meat and dairy substitutes helps protect the climate, so we are also complying with SDG 13.

Cultivating the earth's smallest plant

Algae are an important raw material for numerous products in the pharmaceutical, chemical and food industries. Dutch company Duplaco cultivates chlorella microalgae with help from GEA. Not only is it the smallest plant on earth, it also has a high protein content and contains a considerable quantity of vitamins, minerals, antioxidants, unsaturated fatty acids and fiber. GEA's sales and engineering experts are supporting our customer with expertise and the right equipment, such as fermenters, centrifuges and spray dryers, to ensure that the algae products are of high quality and maximum consistency while minimizing energy costs and the environmental footprint of producing them.

Food safety

Food safety

Definition: Devices, technological solutions or software designed to prevent food damage, either by direct protection against negative impacts (e.g. contamination, oxidation) or by ensuring high quality by means of additional measures (e.g. testing).

Freezer control systems such as Callifreeze from GEA contribute to SDGs 2 and 12.

Checking the level of frozenness of products without direct contact

Callifreeze is a sensor-based freezer control system GEA developed for its own food freezers. The ability to continuously monitor the level of frozenness of the products without direct contact and to adjust the freezer conditions accordingly ensures that the products leave the freezer in optimum condition. The system demonstrably reduces energy consumption while improving freezing efficiency. In tests, production capacity was increased by up to 20 percent and energy consumption was reduced by up to ten percent.
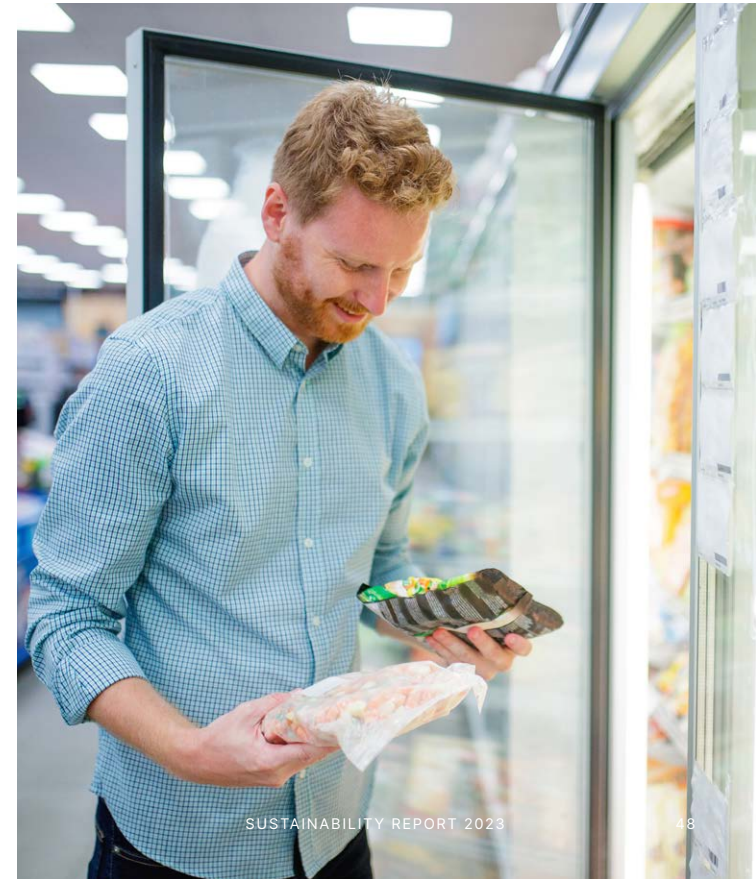
Human well-being

Human well-being

Definition: Devices, technological solutions or software designed for producing goods (or treatments) for restoring, maintaining or improving human health by means of pharmaceutical products or food supplements.

GEA's expertise in pharmaceutical and food technology is helping to ensure the health of people all around the world. One example is our NexGen Press tableting system series. It enables us to comply with SDG 3.

Blending the best of tradition and innovation

With the NexGen Press 30, GEA has set a new benchmark for the pharmaceutical compression market. The tableting system for pharmaceuticals and food supplements is a combination of modular design, digitalization, safety, user-friendliness and ergonomic functionality. For example, a "double barrier" with reduced volume and an insulated product contact surface enhances safety. Simpler and faster cleaning means shorter production changeovers and less downtime. The self-contained rotating head enables replacement in less than an hour. And in an increasingly networked working environment, the press is Industry 4.0-compatible and digitalized. The NexGen Press 30 has also been awarded the "Add Better" label for maximum resource efficiency.

End-to-end sustainable product stewardship.

GEA is comitted to apply the highest standards on its own product stewardship. We believe it is important for our products to make a sustainable contribution to future generations. That is why we systematically scrutinize and minimize the impact of our products on the environment as well as on occupational health and safety.

Yet our efforts go far beyond the actual product. We focus on an end-to-end sustainable approach so that we can live up to our product stewardship along the entire value chain. Starting with the purchase of our raw materials through product development and the utilization phase all the way to recycling of the product at the end of its life cycle, we work continuously to ensure that our activities are environmentally friendly and in line with end-to-end product stewardship, while always enhancing customer satisfaction.

GEA strives to continuously expand this approach and apply it systematically to all stages of the value chain.

Customer satisfaction

GEA regularly conducts customer satisfaction surveys worldwide that are generally implemented immediately after various customer contacts such as a business transaction or the delivery of spare parts. A standardized reporting dashboard used throughout the company makes it possible to measure and analyze customer satisfaction both globally and regionally for the group as a whole and for the individual divisions. This allows prompt responses to customer feedback and pinpointing room for improvement. In the period under review, customer satisfaction in the new machinery business decreased slightly year on year – the corresponding Customer Satisfaction Score (CSS) for this business was 78 percent (2022: 80 percent). The Customer Satisfaction Score indicates a customer's level of satisfaction with a product or service. The CSS for global customer satisfaction with our services in 2023 was 78 percent (2022: 79 percent). The decline in 2023 is explained by the fact that there were fewer responses in 2023 than in 2022. The proportion of critics/detractors stayed the same, but the proportion of ambassadors/promoters has decreased.

Nowadays, customers expect not only that plants, machinery and components enable economical production over the entire life cycle, but also that they help improve their own sustainability performance, reduce their environmental footprint and achieve their climate targets.

Product development

Sustainability aspects, alongside product functionality and cost-effectiveness, are key considerations in product and process development. That is because decisions taken in the development phase have a long-term impact outside the company and must hence be scrutinized critically to ensure that sustainability criteria are met.

All research and development activities at GEA, including product development, are combined under "Innovation and Digitalization". This area, one of the seven success-critical levers for achieving the group's targets, is divided into the following four key growth drivers, which reflect GEA's thematic development priorities and into which sustainability aspects are tightly integrated.

GEA always takes sustainability criteria such as resource and energy efficiency into account when developing components, machines and systems. We call this commitment to fundamental sustainability principles "Design for Sustainability".

Since 2023, the product development process has been significantly revised as part of a sustainability framework. This framework, which will apply to all GEA business units in the future, imposes uniform standards for calculating the sustainability performance of our machines and systems. Looking ahead, GEA products will always follow this development pattern. This means that each step of the product development process will be implemented using the three elements "recognized methodology", "available tools" and "documentation".

Environmental Sustainability	New Food	Digital Solutions	Modularization & Configuration

Design to Sustainability –
GEA products are becoming more sustainable

GEA's goal is to subject the entire product development process to the "Design to Sustainability" requirements. The early stages in particular have a critical influence here. The extent of any efficiency gain for a product primarily depends on the requirements of a customer looking to achieve their own sustainability goals with our machines. This first step of customer involvement (sustainability needs) is followed by consideration of which circular business models are possible for a machine (circular business). In other words, how can a machine be refurbished at the end of its life cycle, for example, and deployed again as good as new for another life cycle? Or will it be dismantled and perhaps used as a parts carrier for repairs? Or will the materials be recycled? That is why it is important to consider right from the design stage what will happen to the machine later on. The next step is to estimate the sustainability performance that can be expected from the new machine (sustainability forecast).

Only now does the actual development process begin. The design strategy determines what the product architecture will look like, taking into account the business models described. This is when, for instance, decisions are made about which materials to use so that they can be readily recycled. Our plans are for this design strategy to be based on the future ISO 45560 standard. The next step in the process is the design check, which examines whether the various requirements are met. This also includes costs, for example. In parallel, we check whether the product can be classified in one of the six categories of the EU Taxonomy Regulation, in our "Add Better" portfolio or in the portfolio of "Scope 4" products (financial sustainability impact).

Going forward, end-to-end life cycle assessments in accordance with ISO standard 14067 are to ensure that a new machine design leaves the smallest possible environmental footprint over its entire life cycle. In accordance with ISO standards 14040 and 14021, we additionally analyze the efficiency gains that a machine achieves during the use phase at the customer (use phase sustainability impact).

GEA's commitment to sustainability principles applies not only to the product portfolio of machines and systems but also to the service parts. This includes spare parts as well as the packaging materials for our products.

The overarching product development process focuses on selected sustainability criteria that are already reflected in the requirements and design phase: the circular economy and improved resource efficiency for the criteria of energy, water, greenhouse gas emissions and material consumption.

For GEA, the circular economy is a relevant lever for implementing targeted sustainability activities. This is why we created a methodological basis that takes the circular economy into account from the very start of product development. From 2024, the product development process is to be based on the future ISO standard 45560 that will allow us to measure circular product design during development.

Where required, we use a trend scouting process based on "search – evaluate – observe" to zone in on these sustainability subcategories. This process results in a trend radar for sustainable technologies and market or customer trends that the divisions and businesses can use to specifically develop sustainable solutions.

The intended sustainability effects are measured by key performance indicator systems that record the sustainability parameters during product development and facilitate strategic monitoring. In addition to resource efficiency, machine safety to ensure user health and safety throughout the entire life cycle is also a fixed development criterion. This means that all product safety requirements form an integral and mandatory part of every single GEA product development process.

Success in reducing the raw materials consumption, emissions and water consumption using GEA products also involves the company's supply chain partners, which is why GEA maintains a permanent dialog with its suppliers. A detailed description of our sustainable activities in our supply chain can be found in the ⤢ "Sustainable Supply Chain" chapter.
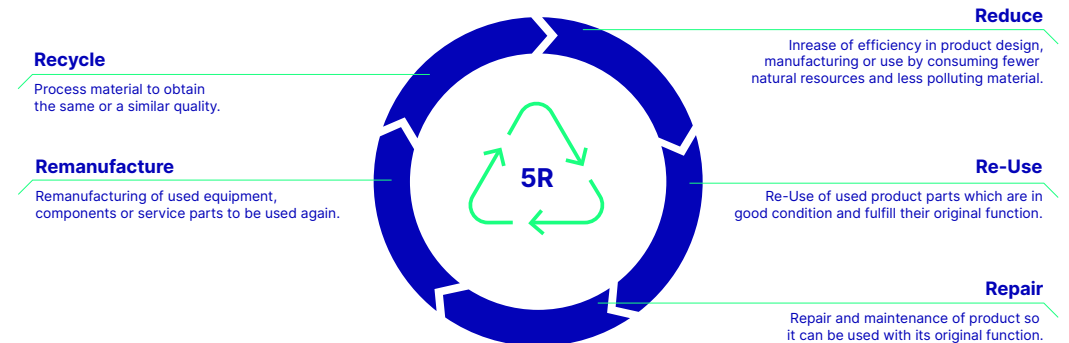
Circular economy

GEA is promoting the circular economy approach to overcome the major environmental challenges and reduce resource waste. This sustainable transformation is shifting from a linear production model to a circular process that revolves around the "5 Rs" of the circular economy – from product design through customer service throughout the product use cycle all the way to refurbishment and, where appropriate, reuse.

The "5 Rs" stand for Reduce, Reuse, Repair, Remanufacture and Recycle. Together, they form the R strategy adopted by GEA to implement the circular economy. This strategy is a model for production and consumption in which existing materials and products are reduced, reused, repaired, remanufactured or recycled for as long as possible. In this way, product life cycles can be extended and resources conserved. For example, GEA consistently strives to integrate mono-materials into the product development process to enable subsequent recycling.

In 2022, the Separation business unit developed a process for introducing the circular economy, which already applies to 90 percent of its service parts. The process was rolled out across all divisions in the reporting year. By 2026, all other business units will introduce circular economy principles for spare parts and packaging materials. GEA has thus taken a leading role in the mechanical and plant engineering sector.

Circular economy approach runs five R's

Recycle
Process material to obtain the same or a similar quality.

Remanufacture
Remanufacturing of used equipment, components or service parts to be used again.

5R

Reduce
Inrease of efficiency in product design, manufacturing or use by consuming fewer natural resources and less polluting material.

Re-Use
Re-Use of used product parts which are in good condition and fulfill their original function.

Repair
Repair and maintenance of product so it can be used with its original function.

As a machinery and plant manufacturer, GEA understands the need to decouple economic growth from the associated consumption of resources. The circular economy and its applications – such as the use of remanufactured parts, modular design, performance-based machinery and plant operation as well as component remanufacturing – can make a major contribution to extending machinery life cycles and thus considerably reduce their environmental footprint.

To this end, GEA will develop machinery and plant concepts that extend life cycles and facilitate continuous innovation with regard to the most relevant machine components.

"The 5 R approach calls for a new way of thinking. This means we need to find solutions so that we can make do with fewer resources throughout the life cycle, use products longer or reuse them."

Stefan Pecoroni,
Head of Sustainability for Separation & Flow Technologies

Mono-materials are the basis for successful recycling

GEA's products such as separators are made from 70 percent stainless steel (by weight), a valuable material that enables comprehensive recycling throughout the entire product life cycle. Both swarf and material residues from the manufacture of centrifuges are recycled in a structured process at our own production facilities and at our suppliers. During the product service life of the centrifuges, which is generally 20 to 25 years, some of the replacement parts that accumulate during maintenance work are remanufactured and reused. Disassembled parts replaced by new ones are also recycled. At the end of the product's service life, the centrifuges are recycled, especially the parts made from stainless steel, such as drums. These often have a considerable material value as a salvage value, which justifies the strong economic interest in recycling. GEA often buys back old centrifuges when new machines are

installed and recycles them through its own channels. A similar process applies to the recycling of copper, which is contained to a considerable extent in the motors we use.

To facilitate this recycling process, mono-materials are preferred for components and assemblies in new designs. This practice has been well established for many years. Various approaches are also being pursued in ongoing development projects to replace critical processes such as hard chrome plating with sustainable alternatives and to thus improve recyclability.

Customers need new heroes

GEA has launched another promising project for the circular economy in the shape of its "Hero for Hero" campaign. The Separation & Flow Technologies division offers its customers the opportunity to sell back separators and decanters that are more than 20 years old and replace them with more efficient models. This is a real win-win situation, because everyone benefits from the deal: customers, GEA and especially the environment. Customers not only get a new, more efficient machine but, in line with the "5 R" strategy, GEA takes back the old machines and systematically analyzes what happens to them. We examine them to see if they can be returned to the market as remanufactured replacement or used machines, whether they should be dismantled and used as replacement parts, or whether they will be scrapped and the materials used for new production. Scrapping and materials recycling take place on site at the customer's premises and are monitored

by GEA, remanufacturing is carried out in Oelde, Germany. Third-party products may also be taken back in certain cases.

But no matter which route the old machine takes, there is always resource-friendly reuse. The exchange drive becomes even more sustainable when customers opt for new machines with condition monitoring. This control function ensures that the machines automatically indicate when service and maintenance work is due before wear and tear could lead to expensive, material-intensive repairs. "Hero for Hero" was launched in Spain and Portugal in 2022. The sustainability initiative was then rolled out in Germany and Poland in 2023. Other countries are in the pipeline. At the same time, we are exploring whether other machines are suitable for this exchange.

Digitalization
Additionally, we offer digital solutions that maximize a machine's productivity while minimizing its environmental footprint. This 360-degree approach accompanies the entire life cycle of a machine. Product life cycle management, which uses the "Digital Twin" and "Digital Product Passport" tools, will accelerate GEA's speed of innovation and help our customers ensure that their systems and machinery meet the latest technology and sustainability standards in a capital-efficient way.

GEA actively boosted its innovative strength in the reporting year through digital transformation. A cutting-edge, cloud-based infrastructure (GEA Cloud®) paves the way for the industrial networking of more than 6,000 smart machines and systems from GEA. Based on this, "GEA Digital" launched 13 new digital solutions on the market in the reporting period. They improve availability, productivity and sustainability during the use phase at the customer. The "Intellicant" digital solution for optimized decanter operation in wastewater treatment, for example, significantly reduces the amount of waste. And GEA OptiPartner SprayDrying and GEA Smart Filtration meet the strict criteria of the "Add Better" environmental label validated in accordance with ISO standard 14021. They will contribute significantly to lower resource consumption going forward.

Life cycle assessment
We use life cycle assessments to demonstrate how much we are improving the energy efficiency of our machinery and systems from generation to generation, thus conserving resources and reducing greenhouse gas emissions. CO_2 life cycle assessments in accordance with ISO 14040 are prepared for selected products to provide a reliable basis for planning and setting CO_2 target values. Life cycle assessments are also carried out regularly in accordance with ISO standards as part of the requirements of the EU Taxonomy Regulation. In the future, 360-degree LCAs will also be produced in accordance with ISO standard 14067. Within the portfolio analysis, an LCA can also be conducted for a technology if required. This involves determining the current life cycle phase of a technology with a view to initiating appropriate strategic technology development measures. We have been actively involved in a research initiative to develop specialized LCA software in order to better meet the diverse requirements of our customer-specific projects. The "Climate-neutral Business in OWL" initiative is part of the technology network "it's OWL" (Intelligent Technical Systems OstWestfalenLippe), in which around 200 companies, research institutions and organizations are masterminding solutions for the digital and sustainable transformation of SMEs.

Product safety

The product responsibility as well as the product safety lie within the divisions and business units. They manage the development and transformation of their product portfolios on the basis of the "Mission 26" group strategy. The potential risk posed by each plant, machine or component must be taken into account separately in the construction, testing and operation stages. Avoiding the risk of mechanical, biological, chemical, electrical and acoustic hazards is the central function of a standardized machine and plant safety risk analysis in accordance with ISO standard 12100. GEA products are designed in such a way that, for instance, potential noise emissions are already taken into account in the development phase. Corresponding noise measurements are carried out under operating conditions in accordance with ISO standard 3746. Risk assessment is conducted as part of the development and technical documentation processes using failure mode and effects analysis (FMEA). This method makes it possible to uncover potential weaknesses and errors in a machine or process, assess the associated risk as well as provide guidance on avoiding errors and minimizing damage.

Product safety committees (PSCs) in the divisions monitor and evaluate incidents involving GEA products that could lead or have led to either a risk to human life, harm to human health or property damage at customers. Three of the divisions have PSCs that operate across all business units, while two divisions have established a separate PSC for each business unit. Committee leadership is determined by the division or business unit management. Meeting once every quarter, the interdisciplinary PSCs fall under the technical direction of the QHSE department and regularly exchange information with each other via that department. The committees are tasked with monitoring product safety and the associated goals, taking appropriate action to prevent and remedy product safety defects as well as minimizing legal and financial risks for GEA. The PSCs collect and evaluate information about the use of a product during its life cycle. We also provide information in the operating manuals on how to dispose of critical components at the end of the product's life cycle.

GEA confirms statutory product conformity by means of labels, including the CE label, FDA approval or China Compulsory Certification (CCC). In addition, the user manuals furnish information on recycling and disposal of GEA products. We provide further information in specific cases via GEA's websites and social media channels. Internally, such information is shared via the intranet and the Viva Engage social media service.

Aside from the product safety officers, all other development, production and service employees receive in-depth product safety training once a year. Project-specific product training courses, which also include safety-related aspects, are held both for our employees and our customers. Additionally, GEA offers a service to customers to regularly check the condition of machinery and equipment in order to ensure disruption- and accident-free operation.

All components, machinery and equipment from GEA's production undergo specific product safety tests that follow defined procedures in accordance with ISO standards. Test protocols are created for aspects relevant to safety. Our service personnel monitor product safety during operation of the machinery and plants. Any incidents are systematically recorded and reported.

RESPONSIBLE OPERATIONS

OUR FIRST SOLAR PARK

GEA's Climate Transition Plan aims to reduce the company's greenhouse gas emissions to Net Zero at every link in the value chain by 2040. We are decarbonizing our sites worldwide to achieve this. All operations, processes and production facilities are undergoing far-reaching changes. In particular, we will be pressing ahead with the phase-out of fossil fuels in the coming years. While this will significantly reduce our direct greenhouse gas emissions, it will increase our electricity consumption due to the associated electrification measures.

"Our investments in solar parks and power purchase agreements not only help us become independent of external energy suppliers, they also provide us with a degree of security that makes us less susceptible to the constant fluctuations on the energy market. They are an important source of energy supply for our sustainable future."

David Kopatz, Vice President Sustainable Operations

Why are we building a solar park? We are implementing a clearly defined package of measures to make us less dependent on the electricity grid. Even if we assume that countries will meet their obligations under the 2015 Paris Climate Agreement and that many of them are already taking extensive measures to achieve zero emissions, national energy mixes continue to play a central role in achieving the target – something that GEA cannot influence. We have been sourcing 100 percent green electricity worldwide since 2022. However, with a view to becoming self-sufficient in energy, we are investing in our own electricity generation from renewable energy sources such as solar and wind. By 2030, the share of self-generated electricity is expected to cover a quarter of GEA's global electricity requirements.

Since 2022, we have been continuously expanding the share of on-site generation of electricity from photovoltaic (PV) systems. Yet individual PV systems on rooftops or parking lots, such as those in Oelde, Suzhou or Tianjin, are not sufficient to achieve our goals because of their low

capacities compared with the amount of electricity required. That is why GEA is financing the construction of a large, high-performance PV park on its own land in Hachen, Germany, by 2026. With an area of over seven hectares and 18,000 solar collectors, this farm could supply more than 2,000 four-person households with electricity. For GEA, this means that we can generate up to 18 percent of our electricity requirements in Germany ourselves with this solar park.

Other projects are planned for 2024, such as the preparation of power purchase agreements for renewable electricity for Germany and Europe.

25%

By 2030, the share of self-generated electricity is expected to cover a quarter of GEA's global electricity requirements.

Our environmental footprint is getting smaller.

Like the extinction of a species, climate change is one of the biggest risks to life on earth and hence ultimately also to our company. GEA is very much aware of its corporate responsibility and is committed to the 2015 Paris Climate Agreement. This comprehensive agreement limits the global temperature increase in the atmosphere to well below 2°C compared with pre-industrial levels and commits to making additional efforts to limit it to 1.5°C.

However, as the latest analyses by the Intergovernmental Panel on Climate Change (IPCC) have shown in 2023, current global efforts are no longer sufficient to achieve this target. GEA has responded by significantly increasing its own climate targets and preparing an ambitious, validated Climate Transition Plan 2040. It includes all measures to reduce greenhouse gas emissions to Net Zero along the entire value chain by 2040.

How companies are accepted by society now depends to a large extent on their commitment to climate and environmental protection. Climate change mitigation is a core value embodied by civil society and thus also companies' shareholders. Back in 2021, GEA committed to ambitious sustainability targets as part of its "Mission 26" group strategy, which are notably aligned with the United Nations' 17 Sustainable Development Goals (SDGs).
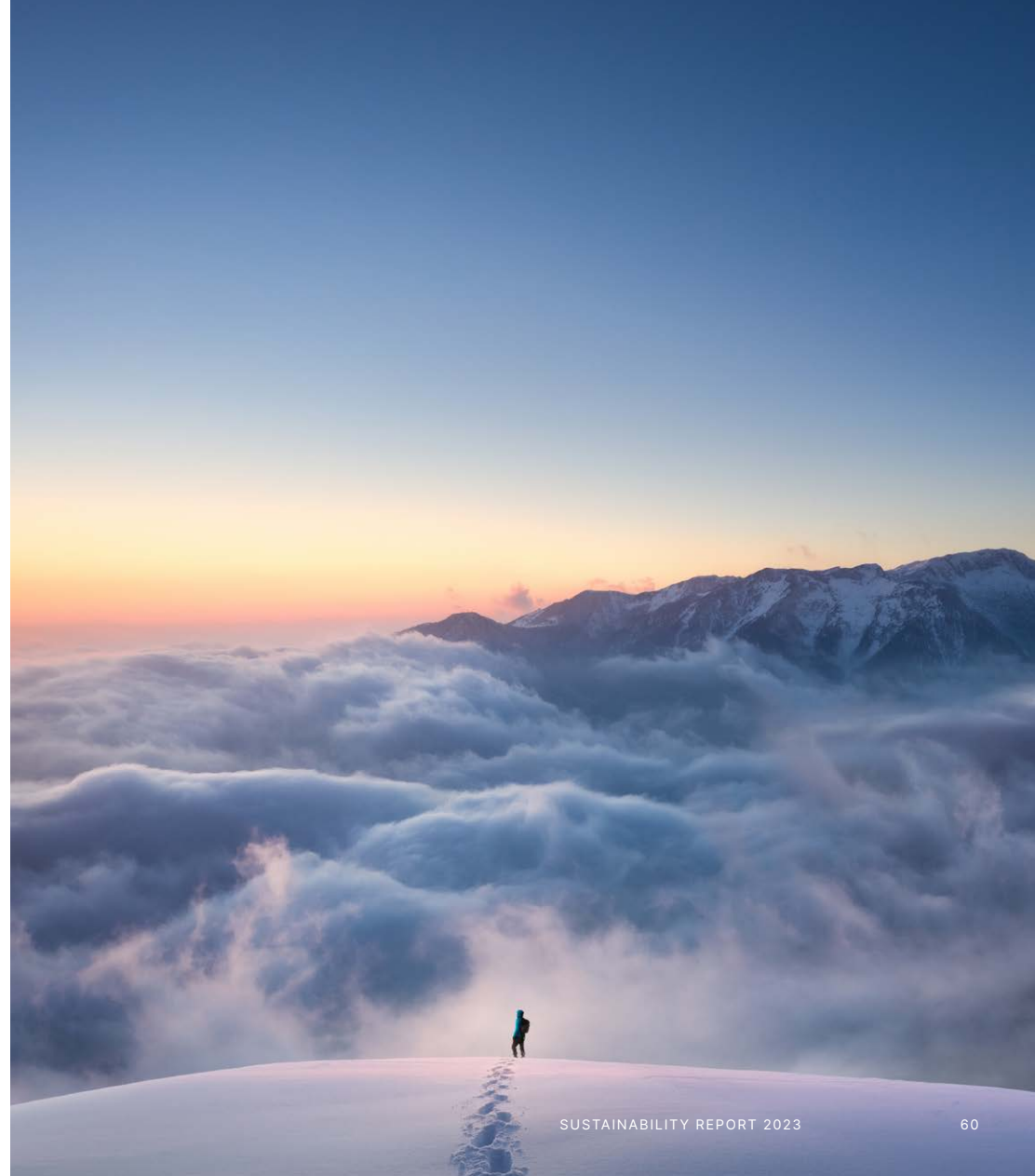
GEA's sustainability targets

- **By 2040,** GEA intends to reduce **greenhouse gas emissions to Net Zero at every link in the value chain**[1].
- **By 2026, greenhouse gas emissions from our own operations** (Scope 1 and 2) will be reduced by **60 percent** compared with the reference year 2019 and by **80 percent by 2030**. This also includes our goal of reducing energy consumption across the company by two percent per year.
- **By 2026**, half of our total energy needs will be covered by a **certified energy management system**.
- Sites in regions where water is scarce must **develop and implement a water strategy by 2026**. In addition, water consumption of employees is to be continuously reduced by 2.1 percent per person compared with the previous year and the water treatment rate is to be increased.
- **By 2026**, the **waste recycling rate is to be more than 98 percent**, and **100 percent by 2030**.
- **By 2026, all preferred suppliers will meet GEA's sustainability criteria.** In the reporting year, the target was extended to the group of A suppliers (80 percent of the purchasing volume). They must meet the sustainability criteria by 2030.
- GEA has set itself the goal of **conveying industry and function-specific knowledge to a total of 100,000 people through voluntary work by 2026**.
- GEA will **donate one percent** of its net profit **each year**.

[1] The long-term target as well as the mid-term target (80% reduction until 2030) were validated by the SBTi, further information can be found in the "Climate Strategy" and "Mission 26" chapters.

80%

We aim to cut our Scope 1 and 2 emissions by 80 percent by 2030.

Systematic energy and environmental management

GEA has enshrined environmental protection not only in its business strategy but also in our daily processes in dialog with our business partners and other stakeholders. Reporting directly to the Chief Operating Officer (COO), the central QHSE department is responsible for environmental protection. The environmental key performance indicators from all relevant GEA sites are collated and analyzed centrally. Results are regularly evaluated with those responsible at divisional and regional level and used to monitor target attainment. Environmental aspects are managed in accordance with the Environmental Responsibility Policy. This binding policy sets out how to identify the key environmental factors related to activities, products and services. Our energy management system is decentralized so that we can meet local legal requirements. The effectiveness of the existing management systems is confirmed annually by internal and external auditors.

External audits

In 2023, the validity of the environmental management system in accordance with ISO standard 14001 was again confirmed externally throughout the group by means of matrix certification[2]. Ten external audits were conducted as part of surveillance audits. In addition, eight initial certifications were carried out at GEA's production sites. We are planning the external ISO standard 14001 certification of all production sites by 2026. A total of 30 production sites are currently already certified, which corresponds to a coverage rate of 57.7 percent.

[2] GEA decided on matrix certification in 2016 and includes the global subsidiaries in the umbrella certification of GEA Group Aktiengesellschaft (headquarters). That means the integrated management system is based on uniform documentation. The advantage of matrix certification is that a company does not have to be audited every year. Sample-based auditing of selected sites is sufficient to obtain or maintain certification for all companies. This not only has financial advantages but also requires less work. All participants are audited an average of once per certification cycle.

ISO 50001 certification

By 2026, half of GEAs annual energy needs, generated from ten GEA sites, will be covered by a certified energy management system. The Oelde and Niederahr sites in Germany and Eastleigh and Warminster in the UK are already ISO 50001 certified. Certification for the remaining sites (including Berlin, Suzhou, Vadodara, Büchen, Drummondville and Kitzingen) will follow in the coming years (see overview of ⌒ certificates in the "Mission 26" chapter). In principle, the aim is to reduce energy consumption across the company by two percent per year, based on the introduction of a digital solution to show energy requirements transparently in real time. This is the precondition for continuously optimizing energy consumption and increasing efficiency.

HSE legal compliance audits

In the HSE legal compliance audits, GEA voluntarily engages an external service provider to verify compliance with legal requirements in a number of areas, such as "environmental protection" or "occupational safety" at site level. We implement this every three years across all production sites. In the reporting year, 18 audits were carried out on environmental protection, fire protection and occupational safety.

Internal sustainability audits

Using a questionnaire, compliance with internal and external processes and specifications related to the environment (emissions, water, waste, etc.) and the GEA standards is examined in the Environmental Excellence Audit. The internal sustainability audit, which is carried out at all 52 production sites on a rolling basis over three years, was implemented at 17 sites in the year under review.

Energy demand and greenhouse gas emissions

By 2030, we aim to cut greenhouse gas emissions in our own operations (Scope 1 and 2) by 80 percent compared with the reference year 2019 (mid-term target). We aim to achieve a reduction of 60 percent by 2026 (short-term target). The Science Based Targets initiative (SBTi) – a globally recognized, independent organization for auditing climate targets – validated our tightened reduction targets in 2023. This means the SBTi has confirmed that GEA's targets are in line with the latest climate research findings and will make an effective contribution to attaining the targets set by the Paris Climate Agreement.

Since 2017, GEA has been recording its Scope 1 and 2 greenhouse gas emissions by region, and since 2019 we have been reporting CO_2 equivalents (CO_2e) for those countries where energy suppliers are able to provide reliable information on the energy mix. This covers production facilities, service operations and administrative offices. Scope 3 emissions are recorded group-wide.

GEA sites report their energy consumption each month using the central Sphera (SoFi) performance reporting system. This calculates and verifies Scope 1 and 2 greenhouse gas emissions, which are published once a year in the sustainability report.

The energy-related key figures as well as the key figures for Scope 1 and Scope 2 emissions were also audited by the auditor with reasonable assurance (see tables ⊘ "Energy consumption", ⊘ "Direct greenhouse gas emissions [Scope 1]" including breakdown per division, ⊘ "Indirect greenhouse gas emissions [Scope 2]" including breakdown per division in the appendix).

- **Scope 1**: Direct greenhouse gas emissions, calculated from the combustion of mineral oil, various gases, wood pellets, diesel, kerosene and gasoline
- **Scope 2**: Indirect greenhouse gas emissions from the consumption of electricity, heat, steam and cooling

- **Scope 3**: Upstream and downstream greenhouse gas emissions
- **Scope 3.1**: Purchased goods and services
- **Scope 3.2**: Capital goods
- **Scope 3.3**: Fuel- and energy-related activities
- **Scope 3.4**: Upstream transportation and distribution
- **Scope 3.5**: Waste generated in operations
- **Scope 3.6**: Business travel
- **Scope 3.7**: Employee commuting
- **Scope 3.8–3.10**: Not relevant for GEA[1]
- **Scope 3.11:** Use of sold products
- **Scope 3.12–3.15**: Not relevant for GEA[1]

1) We periodically assess which Scope 3 categories are relevant to us and whether they should be calculated and managed. The Scope 3.8–3.10 and 3.12–3.15 categories are not relevant for GEA or are not calculated because of their minimal relevance to emissions.

Energy

Our total energy needs (Scope 1 and 2) in the reporting period amounted to 229,869 megawatt hours (MWh). This represents a 5.6 percent decrease compared with 2022 (see ⤢ "Energy consumption" table)[1]. Of our total energy needs, 36 percent (83,727 MWh) was electrical energy, 94.1 percent of which was obtained from renewable sources; the remaining 5.9 percent was generated by the company's own photovoltaic systems.

In 2023, Scope 1 and Scope 2 CO_2 emissions (market-based) were 31,725 tons, down 3.9 percent from the previous year (see ⤢ "Greenhouse gas emissions" table). This means GEA remains on track to achieve its target of reducing Scope 1 and 2 greenhouse gas emissions by 60 percent by 2026 and by 80 percent by 2030.

In addition, all GEA employees are still being encouraged to reduce the company's energy consumption, thereby not only saving costs but also acting in line with the group sustainability strategy. As part of the energy-saving campaign launched in 2022 and implemented globally in 2023, all employees were invited to contribute ideas for sustainable solutions. This resulted in 92 positively evaluated proposals, which will be followed up in the months ahead.

Increasing the amount of electricity generated in-house by a total of 2,111 MWh as a result of installing further photovoltaic systems in Germany, China and Italy in 2023 is reducing climate impact and will cut costs in the medium term, thereby safeguarding the company's competitiveness in the long term. A further expansion of photovoltaic capacity is planned for the coming years. By 2030, we aim to cover up to 25 percent of our electricity requirements with renewable electricity generated by our own systems.

1) 35.0 percent of total energy needs were supplied from the electricity grid (renewable sources, not self-produced).
2) This assumption is based on the average GEA net electricity price in 2024 and on the fact that we will have to purchase up to 1.5 million kWh less electricity at the site each year.

Energy-saving measures in Tianjin

At the facility in Tianjin, China, a photovoltaic system with an output of 2,000 MWh (equivalent to the annual consumption of around 500 four-person households) came into operation in 2023 and generates almost 60 percent of local electricity needs. This achieves a saving of around EUR 200,000 per year[2]. In addition, gas consumption was reduced by 29.4 percent as a result of measures such as shorter heating times, improved air circulation, targeted frost risk control, optimized coating processes, insulated offices as well as the use of waste heat from an air compressor.

Photovoltaic systems in Suzhou and Oelde

State-of-the-art photovoltaic systems were installed at both the Oelde site in Germany and the Suzhou site in China in 2023. In China, this will reduce conventional electricity consumption by around 40 percent each year, cutting annual CO_2 emissions by almost 1,100 tons. At the Oelde site, the new photovoltaic system of around 4,000 modules covering a total area of 8,500 square meters produces about 1.5 million kilowatt hours (KWh) of electricity each year, enough to supply around 400 four-person households with electricity for a year[1]. Covering some eight percent of the site's electricity needs, this rooftop system will be amortized after just five years.

Air emissions

Greenhouse gases and many other air pollutants often originate from the same sources. This highlights the need for a coordinated approach to reducing emissions. In the reporting year, we intensified the analysis of our air emissions to ensure comprehensive assessment of the impact of air pollution. To this end, we are working with the Stockholm Environment Institute (SEI) and the Climate & Clean Air Coalition (CCAC) to calculate air emissions using the "Practical Guide for Business: Air Pollutant Emission Assessment"[2].

Air pollutants are mainly produced by burning fossil fuels such as crude oil, natural gas and coal, but also biofuels such as biomass. In the reporting year, GEA compiled an initial detailed list of air emissions.

The following air pollutants are generated by GEA: nitrogen oxides (NO_x), sulfur oxides (SO_x), particulate matter (PM[3] 10 and PM 2.5), carbon monoxide (CO), soot (BC[3]) and volatile organic compounds (VOC)[4]. NO_x and SO_x are generated by burning fossil fuels; VOCs result from the evaporation of solvents during the product coating process as well as from the combustion of fuels by GEA's vehicle fleet. In the reporting year, NO_x emissions amounted to 210 tons (2022: 221 tons). The general goal is to reduce NO_x emissions by 1.5 percent each year. In the reporting year, SO_x emissions amounted to 134 tons (2022: 174 tons) and VOC emissions to 52 tons (2022: 44 tons).

In coordination with the Alliance for Clean Air initiative[5], GEA will set itself further specific targets. We are working to continuously monitor and document the progress we make.

The reduction in commuting by employees also contributes to lowering air emissions. To this end, the company is continuously implementing measures such as launching the "JobRad" bicycle leasing program and subsidizing the "Deutschlandticket" rail pass in addition to electrifying the company car fleet for executives.

Water

The responsible use of water is an integral part of the group-wide commitment to sustainability and is described in the company's Environmental Responsibility Policy. The Business Excellence and Performance Management department measures all water data that we can influence directly in a central process covering all locations. In 2023, the amount of water extracted from municipal networks and wells and wastewater volumes (a distinction is made between municipal wastewater and on-site treatment sites) were recorded at 83[6] (2022: 84[7]) sites (production facilities, service organizations, administrative offices) (see ↗ "Water" table).

1) Reference: Verbraucherzentrale online.
2) The "Practical Guide for Business: Air Pollutant Emission Assessment" was presented at the UN Climate Change Conference (COP 27) in 2022. Companies can use this guide as the basis for measuring air emissions along their entire value chain.
3) PM stands for particulate matter; BC stands for black carbon.
4) The following air pollutants are not recorded due to the small amounts emitted and the resulting lack of materiality for GEA: sulfates, phosphates, cadmium, nickel, lead, pesticides and benzene.
5) Information about the Alliance for Clean Air can be found in the "Mission 26" chapter.
6) All sites with water withdrawal agreements.
7) Decrease in the number of sites due to the sale of operations and site relocations.

6.2%

of wastewater treated by
GEA itself in 2023

Each year, two sites in India treat more than 17,105 m³ of wastewater themselves for use in cleaning processes or plant irrigation. The resulting water treatment rate is 6.2 percent. There are plans for other sites to similarly treat their own wastewater in the future. For many years, individual sites have been collecting rainwater to irrigate their green spaces. The wastewater from all sites is usually discharged into municipal sewage systems. That wastewater which cannot be discharged into municipal sewage systems is collected and treated by external disposal companies on behalf of GEA.

GEA aims to further reduce the local negative impacts of its own water consumption. Using a specially developed process, the company is able to identify regions at risk of water scarcity and determine potential impacts on GEA sites. Each year, sites in these regions are mapped in line with the classification used by the World Resources Institute (WRI) to produce the Aqueduct Water Risk Atlas. In 2023, GEA focused on its sites in regions with a high or extremely high water risk.

These sites must implement a water strategy by 2026. Each year, they must also provide information about the current status and actions taken as part of the water risk assessment. Of the 83 sites surveyed – including production facilities, service organizations and administrative offices – eight sites reported extremely high water stress and six high water stress. These 14 sites together accounted for 11.85 percent of GEA's total water consumption in 2023. That means the number of sites at extremely high risk has doubled due to global warming. In response, the company introduced the goal of developing a water strategy with a continuous reduction target for water consumption at the sites affected. At the

same time, we have launched a training campaign to raise awareness of water efficiency. Company-wide water consumption is relatively low at around 17 cubic meters (m³) per year and full-time employee. Total water consumption decreased by 9,061 m³ compared with the previous year due to numerous water-saving measures at our sites, in addition to the water risk sites that are particularly in focus.

Waste
GEA manages waste systematically to ensure that material consumption and disposal volumes are kept as low as possible. Contributory measures include waste separation, economical recycling processes and the increasing use of secondary raw materials. We are committed to and continue to promote our 2021 target of achieving a waste recycling rate of 95 percent by 2026. In fact, we have now raised that target to over 98 percent. The long-term target is 100 percent. In addition, we aim to reduce the amount of waste we generate by 2.1 percent per employee each year.

In 2023, the waste volume was recorded at 68[1] (2022: 72[2]) GEA sites, including production facilities, service organizations and administrative offices (see ⤢ "Waste" table). The waste volumes determined include municipal waste, hazardous waste and recyclable residual materials. The total volume of waste generated in the reporting period was 13,089 tons, representing an absolute decrease of 2.6 percent compared with the previous year. Of that waste, 896 tons comprised halogen-free machining emulsions and solutions as well as aqueous cleaning liquids. While these substances are classified as hazardous waste, they are necessary for certain production processes. In compliance with legal requirements, we regularly review whether it is possible to replace these substances. This involves analyzing whether the relevant substances can be replaced with less hazardous alternatives or whether it is possible to eliminate their use in whole or in part by modifying production processes. The goal is to reduce hazardous waste by 1.5 percent each year.

1) All sites with specific waste disposal agreements (private waste collection).
2) Decrease in the number of sites due to the sale of operations and site relocations.

Hazardous waste is collected and processed by authorized specialist companies on behalf of GEA. Within the European Union, these companies must comply with strict legal requirements. In Germany, regulations are based on the Circular Economy Act and are intended to ensure compliance with environmental protection and occupational health requirements.

Biodiversity
Alongside climate change, the loss of biodiversity is a growing economic risk for companies. Even though it may not be obvious at first glance, half of the world's economic output relies directly on an intact natural environment. How companies do business indirectly influences their own risk of biodiversity-related loss of value.

GEA is aware that its own business activities can have direct and indirect impacts on biodiversity along the product and value chains. We ensure a responsible approach to biodiversity by integrating a voluntary commitment to preserving biodiversity into our business activities. Set out in our Environmental Responsibility Policy and the GEA Declaration of Commitment to Protecting and Restoring Biodiversity, biodiversity principles are linked with our sustainability strategy.

In the reporting year, we performed a biodiversity risk assessment using the materiality screening tool of the Science Based Targets Network (SBTN) in order to identify the main impacts of our business activities on biodiversity as well as to define suitable mitigation strategies and biodiversity targets.

The first step was to identify the types of environmental impacts that can have a significant effect on our company and the industry. The scope of the assessment was extended beyond just biodiversity, embracing the broader spectrum of 'nature', in line with recommendations of both the Taskforce on Nature-related Financial Disclosures (TNFD) and the Science Based Targets Network (SBTN). The assessment was strategically designed and conducted using two principal tools: the WWF[1] Biodiversity Risk Filter (BRF) and ENCORE. The BRF fosters an understanding of both the physical and reputational risks, whereas the ENCORE tool delivers insights into different dependencies and the impacts on nature.

Combining these two tools provided GEA with a comprehensive and structured assessment of its risks imposing on nature and biodiversity and of the biodiversity- and nature-related risk to its business activities. This lets us make informed decisions, define sustainable business practices and find precise answers to tomorrow's global environmental challenges. Given that the threat to biodiversity is linked directly to climate change, GEA will be expanding its group climate strategy as regards biodiversity in 2024.

By the end of 2025, GEA will set clearly defined nature-based metrics and targets in line with TNFD and SBTN recommendations. Added to these will be a series of parameters with 2025 as the base year for monitoring performance in the nature-related issue area.

1) The WWF (World Wide Fund For Nature) is an international nature conservation and environmental protection organization.

Measures and initiatives to preserve biodiversity

Based on the activities already initiated by GEA, additional applicable and specific measures, initiatives and collaborations are currently being explored with a view to strengthening our future involvement in the area of biodiversity.

Integrating biodiversity criteria into the site assessment
In the course of the risk assessment performed at all sites during the reporting year, two sites with high biodiversity risk potential were identified. They have until the third quarter of 2024 to develop and implement a biodiversity strategy. We use remote sensing data as well as internationally recognized assessment methods and programs for this purpose. Likewise by the third quarter of 2024, the biodiversity risk assessment will be integrated into the review for new GEA sites. This site analysis will consider all potential challenges or threats to biodiversity.

Water conservation partnerships
With the aim of reducing water consumption using technologies such as resource-friendly decanters, we have already entered into water conservation partnerships with local communities in high-risk regions such as India and plan to extend these to other countries. A decanter is used to treat industrial and municipal wastewater, which is then returned clean to the water circulation system. At the same time, the decanter provides an energy-saving and resource-friendly way of producing recyclable biomass from sewage sludge, liquid manure and fermentation residues for use as agricultural fertilizer.

Reforestation initiatives
More than five years ago, the GEA forest was established in collaboration with Treedom, the international tree-planting platform. In that time, more than 4,700 trees – donated as gifts, for example, at trade shows, company events or holiday season parties – have already been planted. In addition to Treedom, GEA is currently testing MoreApp, an online application that offers a tree-planting subscription. In 2023, we contributed to planting 450 new tree seedlings.

Volunteering in nature and wildlife conservation projects
Two employee volunteering initiatives focusing on local biodiversity are to be launched by the third quarter of 2024. The company encourages its employees to participate in local nature conservation projects and the restoration of wild animal habitats, as well as in tree planting campaigns and local clean-up initiatives. One example is the annual "RhineCleanUp" campaign, during which many communities on the banks of Germany's River Rhine collect and dispose of waste and other waterborne debris. GEA employees were among those who took part in this campaign in 2023.

Involving employees and suppliers
By the first quarter of 2025, biodiversity content will be included in the compliance training for all compliance-relevant GEA employees. Additionally, the topic of biodiversity will be integrated into our supplier audits from the fourth quarter of 2024.

The long-term goal is to consolidate GEA's position as a responsible company that grasps the correlation between its business operations, environmental impact and social value.
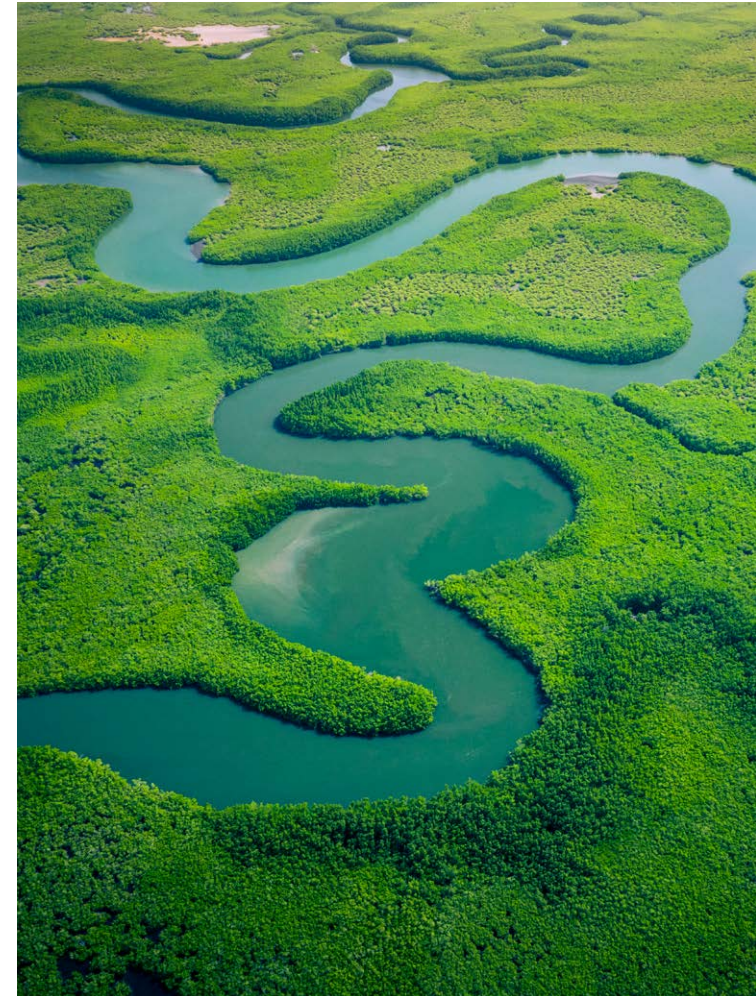
The path to a proactive safety culture.

GEA's employees are the company's most important asset. Their physical well-being and a safe workplace are key to coping with the physical and psychological stresses of a demanding job and sustaining professional performance. GEA has always made it a top priority to create a safe working environment for all employees, contractors and service providers. The aim is to avoid any accidents or illnesses from the outset. Ultimately, a strong occupational safety culture contributes to enhancing performance throughout the company.

"Every accident is one accident too many and, moreover, avoidable. That is why we strive for a proactive safety culture that everyone lives by every day. Reporting hazardous situations, practicing safe behavior and minimizing risks by complying with GEA's safety guidelines is something that all employees can do."

Johannes Giloth,
Chief Operating Officer

To achieve the goal of zero accidents, GEA protects all its employees and contractors wherever they work. Contracts with customers, suppliers and subcontractors are at all times subject to the respective safety standards of both parties. If a contractual partner's standards are more stringent than GEA's, these will also extend to our employees. Contracts contain provisions governing occupational health and safety as well as related procedures. Additionally, occupational health and safety is directly linked to the United Nations 2030 Agenda for Sustainable Development (SDG 3 "Good health and well-being" and SDG 8 "Decent work and economic growth").

Policies, rules and processes
By applying the systematic processes of its central occupational health and safety management system, which is certified in accordance with ISO 45001, GEA seeks to identify in good time the hazards and risks that could result in workplace accidents and work-related illnesses and to remedy these sustainably. The central Quality, Health, Safety and Environment (QHSE) organization is supported by decentralized QHSE units in the divisions, regions, countries and companies. The main objective is to ensure a safe and healthy working environment for all employees and to comply with legal requirements as well as GEA's own occupational safety standards. GEA has additionally established a central crisis management system. At the company's larger sites, several people are responsible for occupational health and safety. At all sites, those responsible for occupational health and safety are appointed by the local business units in accordance with the respective country's legal provisions and act as HSE (health, safety and environment) managers for the respective GEA companies. The QHSE department reports directly to COO Johannes Giloth and keeps the full Executive Board and the Supervisory Board regularly updated on health and safety risks.

Our occupational safety principles are contained in the new Occupational Health and Safety Policy, which came into force in 2023 and replaces the relevant provisions of the old QHSE Policy. Together with the GEA Safety Core Rules, these principles are central to the company's occupational safety standards.

Safety Core Rules

The ten GEA Safety Core Rules are at the heart of the company's occupational safety practice. They are available in the GEA Learning Center in the form of online training courses and videos in 14 languages. There is an interactive quiz on the company intranet for all GEA employees, enabling them to test their knowledge of the safety rules. Downloadable posters and booklets explaining the Safety Core Rules in an easy-to-grasp way are also available there.

Safety as a management responsibility

During the reporting year, we launched the "#SafetyByChoice" campaign to foster a corporate safety culture and significantly reduce the number of accidents. All employees are encouraged to integrate occupational safety aspects into their day-to-day work, to proactively report hazardous situations as well as to practice safe behavior and risk minimization by complying with GEA's safety guidelines. Introduced in 2023, the guideline on HSE responsibilities for GEA managers and employees governs all associated measures, such as regular occupational health and safety training and qualification courses or regular reviews of how effective the necessary safety and protective measures are.

GEA employees and managers are required by law and by the company to help avoid injuries, illnesses and negative impacts on the environment. In general, GEA managers have a duty to ensure the correct application of the relevant HSE legislation and to monitor compliance with the additional requirements defined by GEA. Managers are entitled to issue instructions as well as to receive and escalate technical support. These HSE responsibilities apply to all GEA companies, managers and employees worldwide. In the reporting year, a mandatory online training course for all managers was devised to provide them with an overview of leadership and responsibility, their rights and duties in relation to HSE and the three most important tools in connection with their management tasks.

Occupational safety management is reviewed by way of occupational safety audits as well as by regularly updating and amending the risk assessments. The Executive Board receives regular reports on the audit results. Occupational healthcare is provided in accordance with the respective national requirements. Health services are contracted locally and in compliance with the relevant legislation. In Germany, the occupational physician at a site is a member of the Occupational Health and Safety Committee (Arbeitsschutzausschuss – ASA). This provides a platform for planning, coordinating and evaluating measures to improve occupational health and safety at GEA. It is also an important forum for involving employees in the occupational health and safety organization. Similar committees have been set up in the respective countries in accordance with local requirements.

Training

GEA systematically records the primary causes of accidents, the types of injuries, the body parts affected and other accident-related data. This level of detail facilitates our analysis when it comes to identifying accident hotspots and causes. Employees and temporary workers are regularly instructed and trained in work-related health and safety aspects – for instance, as part of an occupational health and safety campaign.

Contractors are informed about the GEA standards and receive instruction before starting any activity. In accordance with the respective national regulations, country-specific training courses on occupational health and safety are provided for certain hazardous activities or equipment with risk potential, such as working at height or using forklift trucks. Such courses are the responsibility of the local managing directors and site managers. In this connection, more than 70 uniform minimum standards (Safe Systems of Work) must be considered by GEA companies worldwide. These apply to every GEA employee and to contract workers in all activities commissioned by GEA.

In the reporting year, GEA's Safe Systems of Work were revised in the context of the "#SafetybyChoice" campaign in order to address employees more effectively and raise their awareness of occupational health and safety. For example, new topics and additional language versions were added. Training posters were also created for the sites to communicate the rules in a clear and simple way. Centrally organized external and internal occupational safety audits are performed regularly

18

Number of external HSE compliance audits performed in 2023 at GEA production sites as well as at the major service workshops and test center locations.

at GEA companies to review their compliance with GEA's occupational health and safety standards and support the implementation of specific action plans.

External HSE compliance audits are carried out every three years at all GEA production sites as well as at the major repair workshops and test center locations – 18 were conducted in the reporting year. External audits of ISO 45001 occupational health and safety management systems take place at least every three years at certified sites (2023: 9). Compliance with GEA standards and ISO certification requirements is regularly reviewed by internal HSE Excellence Audits (2023: 17).
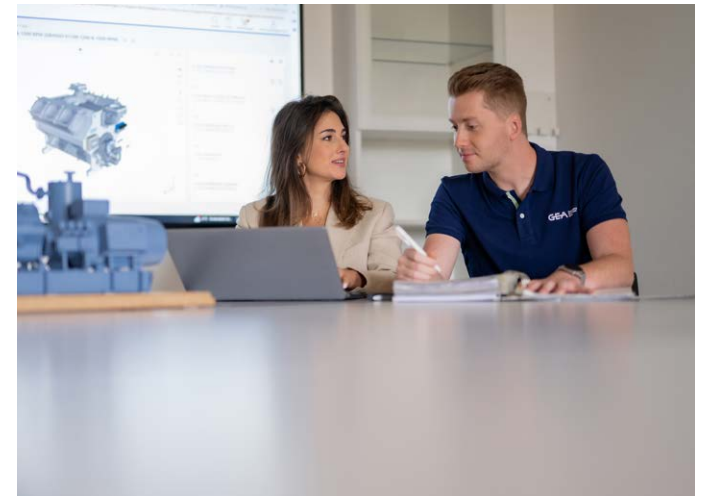
Worksite accidents by place of activity
(in %)

6
in projects

5
at offices

29
during service activities

60
in production
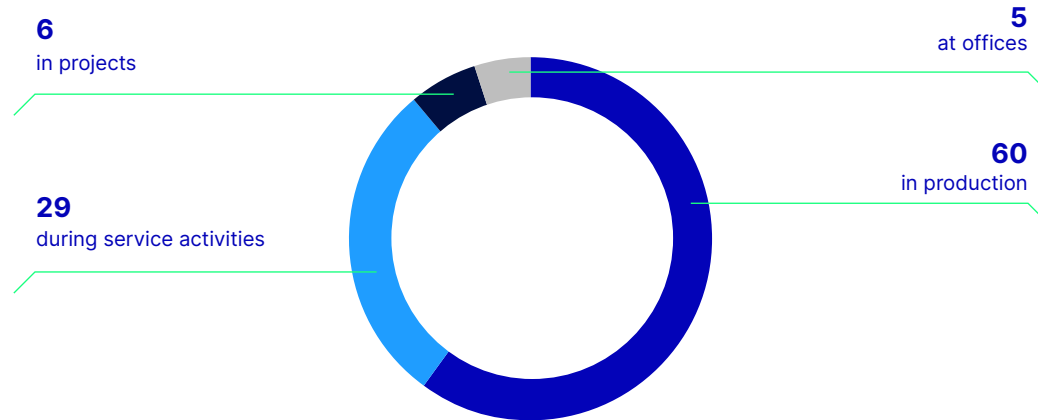
To achieve our long-term zero accident target, we apply a consistent precautionary approach to occupational health and safety. This means that, for the purpose of detecting potential risks and hazards early on as well as preventing any accidents, we also record near misses worldwide. Just like actual accidents, these incidents are systematically analyzed to initiate a follow-up process with defined responsibilities and a specific set of actions. This process is taken very seriously by our employees. Once again, more near misses and unsafe situations were reported compared with the previous year, an indication that risk awareness is growing. This way, hazards and risks reported can be eliminated before any personal injury or material damage occurs.

Serious Events Reporting System

The Serious Events Reporting System instantly reports harmful events such as fatal and serious accidents, fires, explosions or environmental and safety incidents to the Executive Board and divisional management. They include events involving contractors' employees working on behalf of GEA. The reporting system allows us to respond quickly to serious events, potentially minimize their impact and promptly initiate investigations into incidents. This is followed by a dedicated lessons-learned process with the aim of avoiding similar incidents in other areas, identifying measures for improvement and communicating them throughout the company. The Serious Events Reporting System likewise deals with incidents related to our products and plants, which are recorded and analyzed even if a GEA product or plant was not the cause of the incident. All GEA sites are required to develop their own contingency plans and regularly test their effectiveness.

The safety of our subcontractors is just as important as that of our own workforce. Occupational safety is not only an integral aspect of the terms and conditions specified in the Code of Conduct for Suppliers and Subcontractors but also a core element of our supplier assessments and a regular feature of sup-

plier audits. We have been recording serious accidents and other incidents affecting subcontractors' employees – for instance, on construction sites or at our plants – in the Serious Events Reporting System for many years. Since 2023, we have also been recording all accidents resulting in lost time involving subcontractors' employees and related to work on behalf of GEA in order to let us better assess subcontractors' occupational safety performance. Moreover, this allows us to ensure that subcontractors are complying with GEA's safety standards.

With effect from 2023, potential and actual hazardous situations at the workplace can be reported even more quickly and easily via cell phone using the Quentic QHSE software. Scanning a QR code generates a form that must be filled out and submitted together with a photo of the relevant hazard area, if available. The report is automatically forwarded to the submitting employee's line manager and the local HSE department to make sure the hazardous situation is eliminated as quickly as possible.

20%

The proactive incident rate[1] is to increase by 20 percent each year until 2026.

Lost time injury frequency rate
Accidents with period of absence per million hours worked

Year	Rate
2023	5.14
2022	4.98
2021	5.17

Occupational health and safety in 2023

Compared with the previous year, the number of accidents increased by 10.2 percent (see "Occupational health and safety" table). Over a slightly higher number of hours worked, we saw a minor rise in the lost time injury frequency rate in the year under review to 5.14 accidents per million hours worked (2022: 4.98) (see "Lost time injury frequency rate" graphic). A total of 217 accidents were reported (2022: 197). There were no accidents resulting in lost time at 221 sites, representing 75 percent (2022: 74 percent) of the GEA sites covered by the reporting system. Regrettably, one fatal accident at work occurred in 2023 – a traffic accident involving a GEA employee in China. No fatal accidents at work were reported by our subcontractors. In the year under review, the lost time injury severity rate[2] rose by 17 percent to 119 days lost after accidents per million hours worked (2022: 101). The rate of other incidents grew to 509 (2022: 317), representing an increase of 61 percent. This is positive because it means that measures to eliminate unsafe situations or actions can help prevent accidents. As in 2022, we expect GEA's average accident rate[3] to be significantly lower than that of the member

companies of the employers' liability insurance association for the wood and metal industry (BG Holz und Metall) (2022: 20.41) and that of all employers' liability insurance associations (2022: 12.26). The data from the employers' liability insurance associations will not be available until mid-2024.

Targets

We plan to reduce both the lost time injury frequency rate and the lost time injury severity rate by ten percent year on year by 2026. Reporting of other incidents such as unsafe situations, unsafe actions or near misses (proactive incident rate) is set to increase by 20 percent annually, particularly as a result of our increased focus on proactively eliminating risks and hazards. The target for the rate of other incidents (increase of 61 percent) was achieved in the reporting year.

The lost time injury frequency rate and the lost time injury severity rate were above the set targets. As a result, GEA's Executive Board is asking the entire workforce to participate in fine-tuning a proactive safety culture. Promising measures include reporting hazardous situations, practicing safe behaviors and minimizing risks by complying with GEA's safety guidelines. The primary long-term goal here is to achieve zero accidents. That is why a health and safety risk assessment is also performed as part of the due diligence processes relating to potential new businesses or projects. An additional target to be achieved by 2026 is to certify all 52 production sites using an ISO 45001 management system. At present, around 64 percent of the sites have such a management system in place.

1) Number of incidents (e.g. unsafe situations and actions, near misses) per million hours worked.
2) Number of lost days multiplied by one million and divided by the number of hours worked.
3) Reportable accidents at work per million hours worked.

The Year of Innovation in Sustainability at the Supplier Summit.

The fourth GEA Supplier Summit on September 14, 2023 focused on innovations in sustainability. While the first three Supplier Summits were about growing strategic partnerships as well as presenting GEA's sustainability strategy and targets, last year's event in Berlin saw engineers from the company's five divisions come together and engage in dialog with suppliers by way of themed round-table discussions and interactive presentations of innovations. Together, they came up with fresh ideas – for instance, to strengthen the circular economy with innovative services or implement the legal requirements of the EU taxonomy.

"This year, Procurement has specifically created a platform for direct dialog between the divisions and our suppliers," Johannes Giloth, Chief Operating Officer and host of the event, said at the time.

Alongside Giloth, senior management representatives at the summit included CEO Stefan Klebert, who provided insights into the company's sustainability activities in developing resource-friendly customer solutions, Dr. Nadine Sterley, the group's Chief Sustainability Officer, and Jean-Victor Panzani, Vice President Procurement Operations & Excellence.

With more than 220 participants, including GEA's 80 top suppliers, the 2023 summit was once again a resounding success. New on the agenda were the Supplier Awards with five categories honoring solutions, products and technologies from suppliers that make a significant contribution to the focus topics of sustainability, digitalization, innovation and value creation at GEA. The award in the fifth category – Supplier of the Year – was presented for the most outstanding overall performance by a supplier.

"The annual Supplier Summit has become one of GEA's most important events", says Jean-Victor Panzani. "First held in 2020 during the pandemic, the

Supplier Summit has evolved significantly over the past three years. In 2023, we were represented by a larger team of innovation leaders and engineers from across GEA's business activities. The Year of Innovation in Sustainability was the theme for all aspects of the agenda. With the launch of the Supplier Awards, we have created more scope for recognizing success and innovation. Overall, it was a fantastic event with very positive feedback from all participants."

Another topic discussed was expanding the sustainability program for suppliers, notably with reference to the application of sustainability criteria and requirements as well as to the training program. You can read more about this in the ⌐ "Sustainable supply chain" chapter.

The supply chain as the driving force for sustainable innovation.

When it comes to collaborating with other companies, GEA is looking not only at economic performance but also at strengthening the company's capacity to innovate, especially in the area of sustainability.

An open and collaborative partnership with suppliers can foster innovative ideas and best practices. Sustainable solutions can be developed by sharing knowledge and resources. That is why we have launched or joined strategic sustainability initiatives with a number of global suppliers. For instance, this is the second year that GEA has been a member of the Energy Efficiency Movement. This initiative launched by automation technology supplier ABB has the aim of connecting companies committed to more energy-efficient, renewable and adaptable industrial solutions, enabling them to leverage synergies and harness potential. Resultant joint projects are geared to reducing energy consumption and greenhouse gas emissions. In 2024, GEA also became a member of SteelZero, a joint initiative of the Climate Group and Responsible Steel, which brings together the processors of steel products to accelerate the transformation toward a decarbonized steel industry.
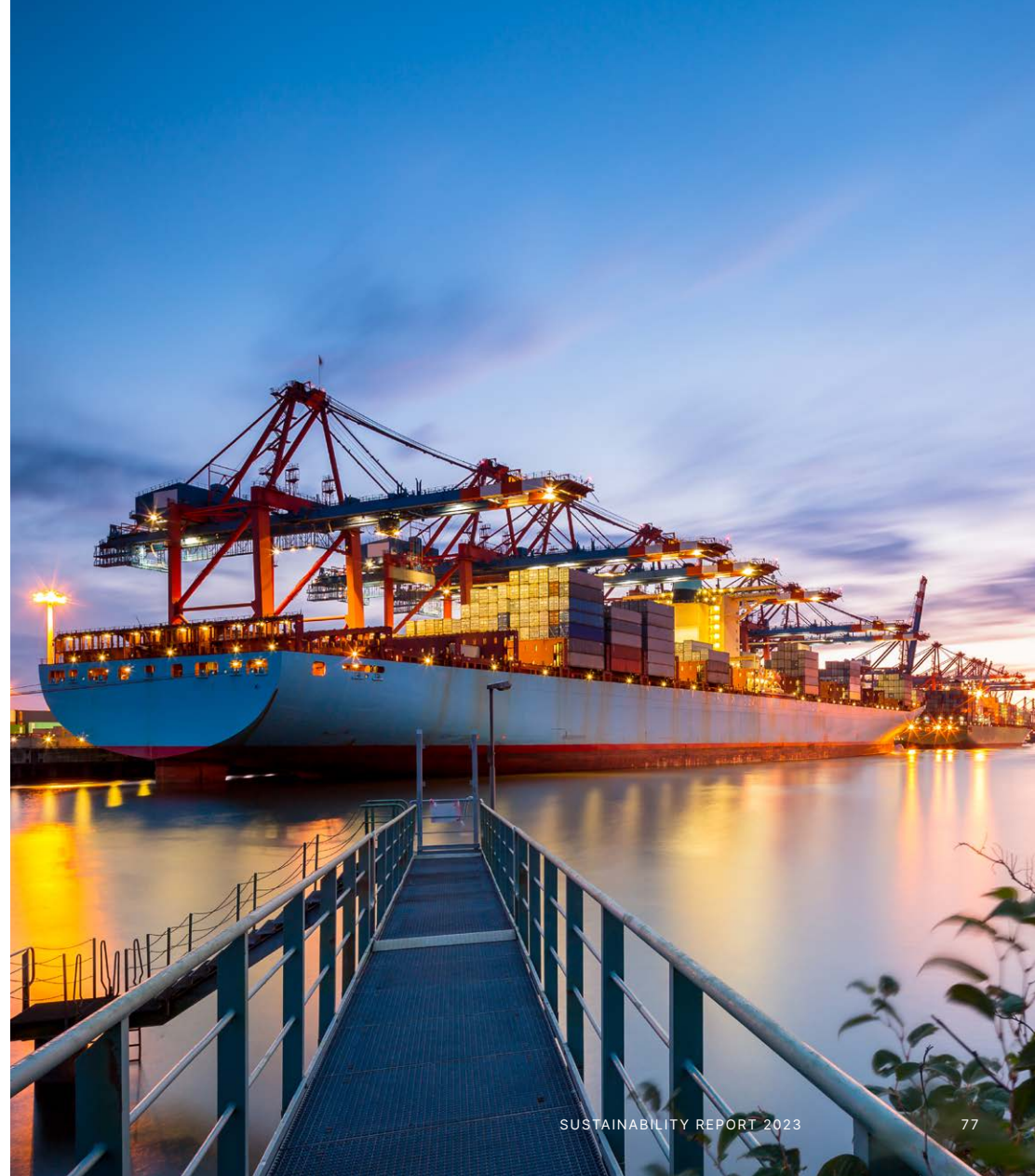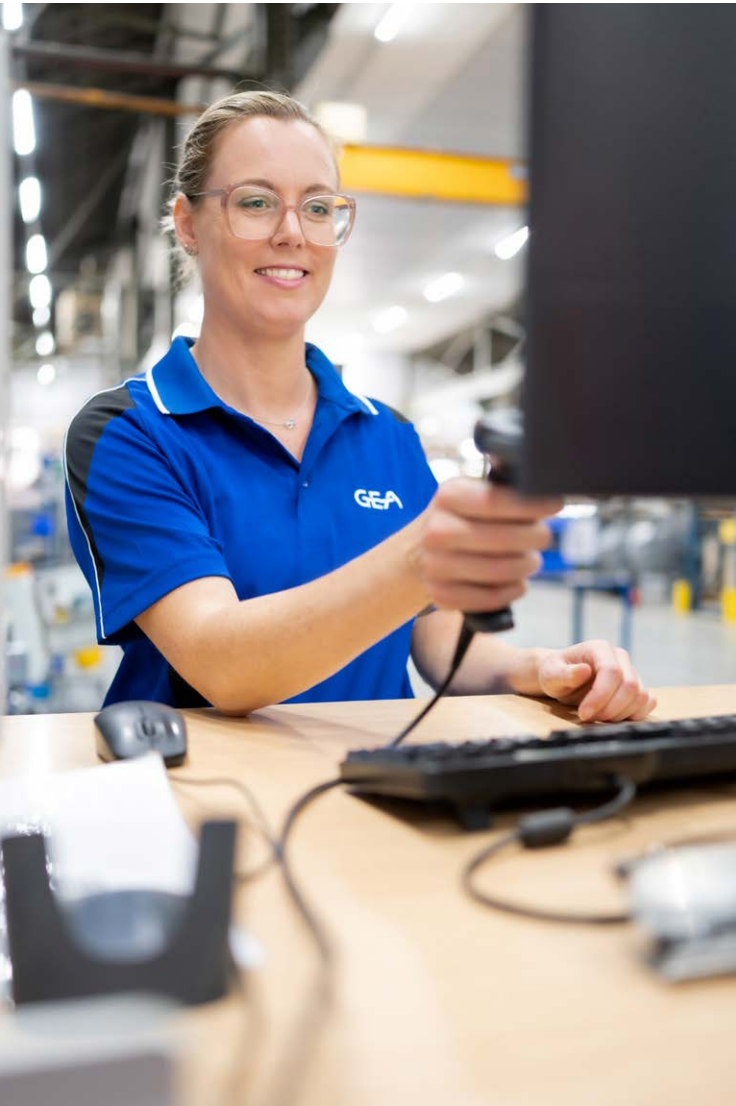
Since 2023, all sites have been required to complete a human rights self-assessment as part of the existing compliance evaluation.

The GEA Code of Conduct for Suppliers and Subcontractors explicitly requires compliance with the following environmental protection-related criteria:

- Promotion of technologies to limit greenhouse gas emissions and water consumption as well as to foster energy-saving solutions
- Avoidance of harmful soil changes, water and air pollution, noise emissions and excessive water consumption
- Holistic approach to product life cycles, from product development to disposal and recycling

Clearly formulating sustainability-related requirements helps ensure that preference is given to our suppliers who implement sustainable practices, thus creating incentives for innovation and partnerships for new ideas.

During the reporting period, we focused our activities more intensively on the circular economy and decarbonization. Starting in the product development phase, greater consideration is given to reducing emissions in connection with materials procurement, production, transportation, use by the customer as well as recovery and reuse or disposal. This means that the development process must already allow for circular strategies geared to extending product life cycles. At the same time, Procurement is devising strategies to purchase suitable raw materials and semi-finished products with the smallest possible carbon footprint.

In this connection, a project to develop emission reduction measures for the procurement categories with the highest greenhouse gas emissions was conducted in the reporting year and work began on implementing the resulting strategies. Interdisciplinary workshops were held for the employees responsible for purchasing the relevant categories and the engineers for the associated GEA products. This resulted in the development of measures such as the substitution of greenhouse gas-intensive materials or more climate-friendly logistics solutions. This form of collaboration to reduce emissions across the supply chain is to be intensified going forward and will at the same time involve suppliers more closely. In the year under review, GEA initiated a survey of the product carbon footprints and environmental product declarations of its suppliers' products, with systematic evaluation and comparison of this information.

Core values in the supply chain
Similar priority is given to our partnerships that contribute to greater sustainability in the value creation process in economic, ethical, social and environmental terms.

The human rights obligations imposed on our suppliers by the Code of Conduct are derived from the following:

- Respect for human rights, including non-discrimination, fair wages and working hours, freedom of association as well as occupational health and safety
- Recognition of the guidance on social responsibility in accordance with ISO 26000
- Application of an environmental management system certified to ISO 14001
- Conventions of the International Labour Organization (ILO)
- UK Modern Slavery Act 2015
- ILO Declaration on Fundamental Principles and Rights at Work
- United Nations (UN) Guiding Principles on Business and Human Rights
- Principles of the UN Global Compact
- Organization for Economic Cooperation and Development (OECD) Guidelines for Multi-national Enterprises
- UN Women's Empowerment Principles
- International Bill of Human Rights

Human rights due diligence – risk management for suppliers
Development of standard procedures for suppliers with focus on preventive action

1 Annual risk assessment
2 Prioritization of high or highest risks
3 Review of the EcoVadis (EV) scorecard
EV scorecard available
EV scorecard not available
4 Request Eco-Vadis scorecard
Supplier rejects request
Supplier accepts request
5 Supplier evaluation by EV
Review of supplier scorecard in EcoVadis
Partial and inadequate performance assessments

6 Code of Conduct for Suppliers and Subcontractors
7 Self-assessment questionnaire (minimum requirements)
8 Evaluation of suppliers' self-assessments
High and medium scores
Low scores
9 Supplier dialog/training
10 SMETA audit of selected suppliers
Possible remedial action, e.g. training
Develop further risk management activities based on the audit results as well as mitigation and remediation actions depending on supplier's outcome and size

Continuous/regular media monitoring

Global Compact

We comply with the principles
of the UN Global Compact

In 2023, GEA's Code of Conduct for Suppliers and Subcontractors was extended to include the requirements of Germany's Act on Corporate Due Diligence in Supply Chains (Lieferkettensorgfaltspflichtengesetz – LkSG) such as those relating to the deployment of private security firms, the use of mercury or whistleblower systems. The Code of Conduct was already a mandatory component of all contracts and agreements for the supply of goods or services to GEA before this extension; it also covers all purchases (direct and indirect expenditures). By signing a framework agreement or order confirmation, suppliers verify that they have understood the contents of the Code of Conduct and will implement them within their company. In the reporting year, work began to replace the previous Code of Conduct with the extended version in all contracts and agreements.

Even before the LkSG came into force, GEA ensured respect for human rights at every link in the supply chain in line with the company's core values (see also the ⊼ "Compliance and Governance" chapter). In the context of the supply chain, we focus in particular on learning about the conditions in which the raw materials required are obtained, services are provided and products are manufactured.

This responsibility is reflected in the unequivocal and binding requirements that set the benchmark not only for our own conduct but also for that of our business partners. One key aspect of due diligence is establishing a risk management system to identify, prevent or minimize the risks of human rights violations and environmental damage. The implementation of these requirements is described in more detail in the ⊼ "Compliance and Governance" chapter.

We expressly require our business partners to apply specific values and regulations regarding social responsibility and to implement ethical business practices. This includes the commitment to respecting human rights, to environmentally sound business practices and business integrity as well as to ensuring access to GEA's whistleblower system or to establishing a dedicated such system themselves. GEA practices a strict zero tolerance policy with regard to unethical behavior in business, notably the violation of human rights, but also bribery, corruption and money laundering. These requirements are likewise defined in our Code of Conduct for Suppliers and Subcontractors.

Sustainability in the supply chain

As a technology group with a high level of materials expertise, we are aware of our responsibility and source raw materials, commodities and services worldwide exclusively from verifiably qualified suppliers. We are convinced that responsible procurement enhances the company's reputation, its attractiveness as an employer and ultimately its own profitability.

For our manufacturing operations, we purchase raw materials, semi-finished and intermediate products as well as, most notably, components that are not based on our own core technologies. We also buy in plant components for the construction and delivery of process solutions for various applications and outsource work such as construction site and installation services to subcontractors. In the case of steel construction projects, the steel itself is often included in the subcontracting scope.

During the reporting period, GEA purchased commodities and services worth EUR 3.1 billion, equivalent to more than half of group revenues and therefore of considerable economic significance to the company's profitability. The Procurement and Supply Chain departments report directly to the Chief Operating Officer (COO, member of the Executive Board). The strategic direction of these departments is defined in close consultation with the COO and regularly adapted to changing external conditions. The COO, working closely with GEA's Chief Sustainability Officer (CSO), has overall responsibility for the company's sustainability program for suppliers.

GEA aims to reduce its own greenhouse gas emissions to Net Zero throughout the value chain by 2040. GEA commits to reduce absolute scope 3 greenhouse gas emissions by 27.5 percent by 2030 compared with the base year 2019. Alongside our efforts to produce responsibly, we are committed to making the greatest possible contribution to the UN Sustainable Development Goals (SDGs). We do this by defining sustainability criteria for the selection, evaluation and development of our suppliers.

To achieve the goals defined in our sustainability strategy, we need an in-depth understanding of key procurement megatrends. In light of the growing vulnerability of global supply chains and the requirement for product traceability, we are seeking to pool resources and make an impact in those areas that matter most to our company and its stakeholders.

At GEA, sustainability in procurement and the supply chain is supported by a group-wide team. This team specifies the requirements and targets of the Mission 26 group strategy in respect of sustainability for Procurement and manages the individual initiatives to attain these. The team's tasks include training the 750 employees in the Procurement organization to efficiently implement and coordinate the measures. The team members also serve as experts to answer questions. Their tasks include:

- Managing the sustainability program for suppliers, in particular introducing and monitoring compliance to sustainability criteria for suppliers
- Coordinating the reduction of greenhouse gas emissions in the upstream supply chain
- Taking responsibility for implementing regulatory requirements in the supply chain (e.g., LkSG)
- Developing and implementing concepts for continuous risk identification and prevention in the supply chain
- Developing and implementing internal and external training courses to increase expertise within our own organization and at suppliers

By 2026, all preferred suppliers must meet in full the sustainability criteria formulated by GEA on the basis of the Mission 26 group strategy. Preferred suppliers include those who are the most important to GEA strategically and the largest suppliers in terms of purchasing volume, also complying with GEA's requirements in terms of price, quality, cooperation and global or regional presence. In the reporting year, we extended the application of our sustainability criteria also to A suppliers. This group of some 2,100 suppliers, which accounts for 80 percent of the annual purchasing volume, must comply with the sustainability criteria by 2030. Looking ahead, the A suppliers will be the focus of the sustainability program for suppliers described above.

In the reporting year, GEA's local and regional purchasing employees received training to help drive the introduction of sustainability criteria by suppliers. The main topics of this training were human rights as well as social and environmental factors at every link in the supply chain.

Further information is available in the supplier section of GEA's website.

GEA's sustainability criteria for suppliers

In 2023, GEA reviewed the rollout and implementation of the following four sustainability criteria on a monthly basis. These are a central element of the sustainability program for suppliers and of the sustainable procurement and supply chain strategy.

1. **Suppliers must accept the contents of our extended Code of Conduct for Suppliers and Subcontractors.**
   The Code of Conduct describes the minimum requirements specified by GEA for suppliers in respect of human rights, fair working conditions, environmental protection, anticorruption and the fight against financial crime.
2. **Suppliers must undergo an annual sustainability assessment and share the results with GEA.**
   The assessment is performed by external rating organization EcoVadis which processes the findings obtained in a survey and makes them available to GEA. This transparency enables us to select and develop suppliers on the basis of their sustainability performance.
3. **Suppliers must set a science-based target for reducing greenhouse gas emissions that has been confirmed by the Science Based Targets Initiative (SBTi) and is therefore in line with the 1.5°C target of the Paris Climate Agreement.**
   Specifically, we expect suppliers to submit a declaration of intent to SBTi stating that they will define a target for 2030 (mid-term target).
4. **Suppliers must declare their willingness to share on request their greenhouse gas emissions data for those products and services shown by their own analyses to be the main drivers of emissions in the supply chain.**
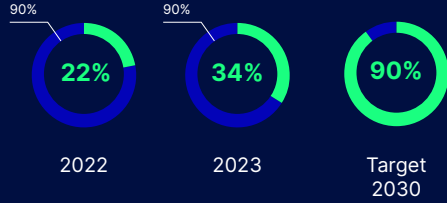   This data is crucial for our life cycle assessments.

Sustainability program targeted on GEA's A suppliers making 80% of GEA's global spend

Rollout of the updated Code of Conduct[1] for suppliers

90% · n/a[1] · 2022
90% · 22% · 2023
90% · Target 2030
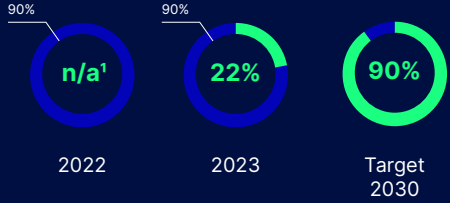
Sustainability assessment via EcoVadis

90% · 22% · 2022
90% · 34% · 2023
90% · Target 2030

Near-term science-based-target for CO_2-reduction

11% · 2022
17% · 2023
Target 2030[2]

On-site audits on sustainability

165 · 2021
299 · 2022
92 · 2023

1) Latest version of the CoCSS was released 01.01.2023 in compliance with the LkSG (German Supply Chain Act)
2) To be defined. SBTi-target for 2030 will be defined in 2024

■ A Supplier coverage [% of spend]

Number of suppliers audited

Sustainability assessment and auditing of suppliers
Sustainability assessment is increasingly informing our selection of suppliers. This means that – in addition to payment terms, the supplier's financial situation, quality as well as delivery terms and conditions – a supplier's sustainability rating is also a crucial factor when it comes to awarding contracts.

Each year, EcoVadis sends suppliers an extensive questionnaire on the topics of labor and human rights, the environment, ethics and sustainable procurement. The respective results are summarized in a comprehensive assessment. If deficiencies are identified, for instance, in human rights standards or environmental protection, GEA unequivocally demands that these be remedied. This, too, is verified by the sustainability assessment.

In the year under review, this assessment was carried out for 70 percent of the purchasing volume accounted for by preferred suppliers and 30 percent of the purchasing volume accounted for by GEA's A suppliers and the results made available to GEA.

Alongside the review of improvement measures by EcoVadis, GEA regularly carries out its own on-site supplier audits. At 92, the number of supplier audits in 2023 was lower than in the previous year (299). A total of 15 new suppliers were audited (2022: 103).

In the reporting year, GEA began revising its existing Supplier Audit Process with regard to sustainability aspects and the audit process.

Going forward, the results of the supplier risk assessment will be used to plan audits. Unsatisfactory results may lead to the exclusion of individual suppliers or reveal the need for an in-depth supplier audit.

Moreover, we have standardized the audit process and the questionnaire used by the group, adding sustainability as a module with questions about labor and human rights, the environment, ethics, sustainable procurement, GEA's whistleblower system and requirements of the EU Taxonomy Regulation concerning hazardous chemicals. All supplier audits are planned and documented using a software program that has been deployed worldwide.

The measures we have taken ensure the following:
1. On-site supplier audits are planned on the basis of GEA's sustainability criteria.
2. As a matter of principle, the sustainability module is part of every supplier audit. All suppliers audited by GEA are assessed in respect of their sustainability activities.
3. Results and improvements in the sustainability module are documented and reviewed regularly.

"By extending our sustainability program to A suppliers, we will cover 80 percent of GEA's total purchasing volume in the future. The program therefore represents a fundamental transition of our supplier base toward greater sustainability."

Sebastian Zingsheim,
Senior Director, Sustainable Procurement & Supply Chain

Quantifying ecological impacts in the supply chain
Each year, GEA analyzes sustainability impacts at all stages of its supply chain. This analysis includes the greenhouse gas and other air emissions, water consumption and waste generated by our suppliers and upstream suppliers, as well as the number of workdays lost due to work-related accidents. It enables GEA to identify the drivers of selected sustainability risks in the supply chain and work with suppliers to remedy or eliminate them.

Greenhouse gas emissions from the procurement and transportation of commodities, services and capital goods have been found to be 45 times higher than those from GEA's own business activities (Scope 1) and from the use of purchased energy (Scope 2). In 2023, we developed a range of decarbonization strategies for implementation from 2024 for procurement categories, services and capital goods, such as machinery and tools, which account for most of the emissions.

Conflict minerals
Various minerals and metals are indispensable in the manufacture of many products and components. However, the mining, trade and transportation of mineral ores and metals may have extremely negative impacts. Tin, tungsten, tantalum and gold, also known as the 3TGs or conflict minerals, are of particular relevance because, in the past, armed conflicts and associated human rights violations were financed directly or indirectly through the extraction, trade, handling and export of these minerals.

GEA procures only very small quantities of such conflict minerals. That means the company is not obliged to report these in accordance with the EU Conflict Minerals Regulation (Regulation (EU) 2017/821). Nor are we required to make disclosures to the U.S. Securities and Exchange Commission (SEC). This explains why we are not subject to reporting in accordance with Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act. However, due to the sensitivity of the matter in terms of environmental and human rights, GEA is committed to monitoring its compliance. In our Code of Conduct for Suppliers and Subcontractors, we commit to purchasing components and materials solely from those suppliers who fully share our values with regard to respect for human rights, integrity and environmental responsibility.

>500

More than 500 of the company's suppliers with the highest revenues in the relevant purchasing categories were asked to report their sources of conflict minerals.

Our Conflict Minerals Policy is consistent with the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, general global fair trade policy, the Ten Principles of the UN Global Compact and the ILO core labor standards. In addition, an extended review of GEA's procurement of such minerals was conducted in accordance with the relevant OECD guidelines. More than 500 of the company's suppliers with the highest revenues in the relevant purchasing categories were asked to report their sources of conflict minerals using the recognized Conflict Minerals Reporting Template (CMRT). They are also required to request their own suppliers to ensure full transparency at every stage of the supply chain.

In 2023, GEA extended this process from 71 to more than 500 suppliers. To this end, a risk-based management approach was introduced with the support of an external service provider. One goal of this new approach is to reliably identify risks such as inadequate safety standards in smelting plants. Another goal is to specifically reduce and/or eliminate risks or, alternatively, select new suppliers. Reducing and eliminating these risks is monitored as part of on-site supplier audits, as reported above.

More information about human rights can be found in the ⤢ "Compliance and Governance" chapter. GEA's handling and responsibility in connection with the use of hazardous chemicals under the EU Taxonomy Regulation can be found in the Annual Report 2023.

Supply chain management

Although GEA's central procurement and supply chain organization ensures a global focus on the company's supply chain, the local business units continue to act largely autonomously. As a result, close cooperation is necessary in order to identify opportunities for improvement and ensure the integration of the group-wide sustainability strategy into the supply chain. In the reporting year, the global transportation management system, the Global Packaging Policy and other instruments and initiatives were introduced to foster transparency, standardization and sustainability in GEA's day-to-day business.

Our supply chain management operates on three levels: divisions, regions and the multifunctional sites that serve more than one division. During the reporting period, around 1,050 employees with various qualifications from different parts of the company performed supply chain tasks for the group. These tasks can be assigned to the following areas: planning and scheduling, materials management, warehousing and distribution, transportation and customs clearance and Supply Chain Excellence – Analytics & Projects.

Distribution of transport volume in the year under review
(in %)

20
Courier services

15
Sea freight

43
Road transport

22
Air freight
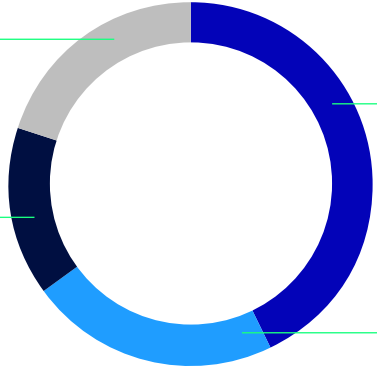
Transportation and logistics

Which means of transportation are used depends on various factors. In order to minimize its carbon footprint, GEA is reducing the number of transportation operations to the bare minimum. Wherever possible, we apply the "Local for Local" principle to support the economies of the communities close to our sites and to ensure shorter and more sustainable delivery routes with fewer emissions. GEA's Air Freight Policy stipulates that air shipments must be approved and that shipment by sea

should be given preference because of its more favorable carbon footprint. Logistics service providers are required to disclose the carbon emissions of air transportation to GEA. In 2023, GEA introduced a global transportation management system for transport planning and exe-cution, in which the amount of greenhouse gas emissions is an additional decision-making criterion in selecting the best possible route.

Also since 2023, GEA has required all logistics service providers to be certified with ecolabels from the Forest Stewardship Council (FCS) or the Programme for the Endorsement of Forest Certification Schemes (PEFC).

Working together
to make a difference.

As a multinational company and major local employer, GEA has the ability and the determination to contribute to a better world. That is why we encourage community engagement by our local business units and our employees. We also foster their active commitment with the goal of deploying our knowledge and core expertise to create sustainable value in respect of socially relevant issues.

GEA's sustainability targets

- Share industry und function-specific knowledge with at least 100,000 people via voluntary work by 2026
- Donate one percent of the company's profit each year[1]

The towns and communities close to our sites form the cornerstone of the respective production and sales operations. This is not least why we support projects and initiatives dedicated to charitable causes, both local to our sites as well as across the globe. Social responsibility is managed strategically by the Sustainability department in accordance with GEA's Community Engagement Policy. Applicable to all local business units worldwide, it is aimed at encouraging even more GEA employees to get involved in social engagement activities. All employees can take one day of paid leave each year for this purpose. In addition, all sites are required to act on their own initiative.

We foster community engagement
in the following areas:
- Acute disaster relief and aid for exceptional events
- Combating child poverty
- Promoting access to clean water, renewable energy and medical care
- Support for education, especially in IT, science, technology, engineering and mathematics (STEM)

1)   According to the Community Engagement Policy, GEA does not permit payments to politicians, political parties or any organizations associated with them.

Donations in 2023

Help for earthquake victims in Turkey and Syria
GEA supported the victims of the February 2023 earthquake with donations in kind worth a total of EUR 109,800. Aside from food and clothing, around 40 container houses were provided for people who had lost their homes.

New books for elementary school students
Severe water damage had destroyed most of the books at the Kartause-Hain elementary school in Düsseldorf, Germany. Employees from the GEA data protection team contributed to donating a total of 500 new and used books for children aged six to eleven.

Inspiring children's interest in technology
The annual tryout days in Oelde in Germany's Münsterland region give four- to six-year-old children play-based access to the fields of work of participating companies and institutions. The project was launched in 2009 by the town of Oelde, the "Landschaftsverband Westfalen-Lippe", the "Initiativkreis Wirtschaft Oelde" and the "Initiative Zukunft durch Innovation in NRW" in cooperation with the town's kindergartens. GEA has been a partner to the project from the outset.

The miracle of the Tanzanian fog catchers
For two years, GEA has been providing exclusive support to Viva con Agua, a non-profit organization that sponsors fog nets capable of collecting as much as 1,000 liters of water from the air on foggy days. The project aims to supply clean drinking water to eight schools in the northern Tanzanian region of Manyara by 2025. In 2023, eight test nets were used to determine potential yields. Three schools received the first fog catchers in early 2024. To date, GEA has donated EUR 500,000 to Viva con Agua and a further EUR 150,000 has already been pledged for 2024. In addition, GEA employees contribute their expertise to the collaboration with the Viva con Agua teams.

PEOPLE

SUSTAINATHONS – FOSTERING FORWARD-LOOKING INNOVATIONS

2023 was the Year of Innovation in Sustainability at GEA. Part of this, we launched the so-called Sustainathons. This series of collaborative workshops brought together colleagues from all five divisions to work on implementing sustainable GEA solutions. More than anything else, these called for a completely new way of thinking.

"We launched our Sustainathons to work on the next generation of sustainable products and to shape our company's future."

Laura Hietaranta,
Vice President Business Strategy & Planning

Sustainathons are events based on the hackathon principle in which interdisciplinary teams work in a short space of time to develop pioneering and disruptive innovations for sustainable solutions. The multi-stage workshops staged at five different sites were attended by 88 product developers, business development and sales employees as well as market and technology experts from all GEA divisions.

The series of events began with preparatory workshops in June and July. These were then followed by virtual meetings in August and September and ended in September and October with the actual Sustainathons – in-person events each lasting two-and-a-half days. They generated more than 60 ground-breaking ideas for innovations, the most interesting of which were presented to GEA's Global Executive Committee in November. These innovative ideas are now being fine-tuned.

Continuing to leverage synergy potential

"The Sustainathons are about synergies between our divisions and business units, which could be leveraged even more often on a day-to-day basis," explains Wolfgang Deis, Manager GEA Product Development Process. "Working on new approaches such as the electrification of heating and cooling systems has an impact on more than one business."

The ultimate aim is for GEA's customers to benefit from these innovative ideas and synergies in order to achieve their own sustainability goals. Deis is certain: "Our customers are increasingly demanding low-emission and resource-friendly products, so they will appreciate this."

Contributing to a better world every day.

GEA's entrepreneurial success is primarily due to our more than 18,000 highly skilled and committed employees worldwide. Each individual personally contributes to the company's bottom line and helps us become a little better every day.

Diversity and equal opportunities are not just core values for GEA as a global group. They are essential to our long-term success in an international environment. That is why the company has also set quantifiable targets for the Human Resources department as part of its "Mission 26" group strategy. These are intended to enhance GEA's attractiveness as an employer and to consolidate and strengthen our status on the labor market as an employer of choice.

Sustainability targets in Human Resources

- By 2026, we want at least **80 percent of our employees** to respond in the regular employee survey that they would **recommend GEA as a good place to work**. In the last survey, 78 percent already agreed with this statement. The findings of the latest survey will be available in May 2024.
- By 2026, we aim to **increase the female representation in the top three management levels to 21 percent**. To make this happen, we will appoint a woman to every third vacant position. In 2023, the figure was 21.1 percent (2022: 18.6 percent).
- **By 2026, we aim to fill 80 percent of vacant positions at all management levels with our own junior staff**. In 2023, the figure was 66 percent (2022: 59 percent). We also actively supported in 2023 employees' individual training and continuing education opportunities as well as the achievement of personal career goals within the company.
- By 2026, we aim to build a **diverse talent pool to further strengthen diversity at all management levels**.

As a fair and responsible employer, GEA takes responsibility for respecting, fulfilling and supporting human rights at all times and without limitation. We are also committed to respecting the generally accepted core working standards of the International Labour Organization (ILO) and fostering a culture of honesty, sincerity and loyalty. And we maintain a work environment that prioritizes occupational health and safety, with responsibility shared between all those involved.

Human resource management

GEA employees are the backbone of our company. This is why it is in our own best interest to ensure that the Human Resources (HR) department is optimally positioned for the future, given the skilled labor shortage, and that its managers have all the relevant expertise and support they need for their work.

At GEA, Human Resources is closely involved in the operating business through the HR Business Partners organization. HR is a global corporate center and reports directly to the CEO, who is also Chief Human Resources Officer. The latter has a permanent seat on the Global Executive Committee (GEC), an extended management body comprising the members of the Executive Board, the divisional and regional managers as well as GEA's Chief Sustainability Officer. The GEC meets monthly to discuss and take decisions on issues of fundamental importance to the group.

The HR business partners support the divisional and regional managers and are available to answer any questions related to human resource management. The internal HR operations teams at the Berlin, Bogotá and Kuala Lumpur sites provide state-of-the-art HR support services. In addition, the Centers of Expertise – including Employee Attraction & Engagement, People & Talent Development, Total Rewards & Mobility and Labor Relations/Labor Law – come up with new ideas on how to establish GEA as an employer of choice over the long term.

Total number and rate of new hires

- 12.6
- 11.2
- 2,374 (year 2022)
- 2,133 (year 2023)

Legend:
- Number
- Rate of new hires (in %)

2,133

people were hired by GEA worldwide in 2023.

Top employer awards in Germany and Europe

As in the previous year, the GEA Group has been named a top employer in 2023. Aside from the award in Germany, GEA was recognized for the first time in Belgium, Poland, Portugal and Spain and received an EU label from the European Union. To that end, the company had to undergo several validation processes. Each year, the independent Top Employers Institute honors those companies that provide an outstanding working environment for their employees in which to develop. This certification is one of many group-wide employer branding measures.
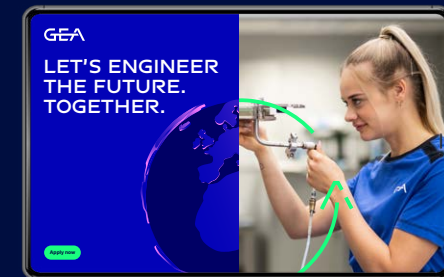
At the end of 2023, GEA launched a global talent acquisition campaign bannered "Let's engineer the future. Together". Its goal is to strengthen the perception of GEA as an attractive employer worldwide. The modular structure of the campaign facilitates uniform global branding for trade show materials, websites and print products.

Employment

The search for diverse and qualified employees is becoming increasingly challenging, above all due to demographic change and the fierce competition for talent on the labor market. Retaining employees long term is an important focus for GEA as a sustainable company. To make sure we are viewed as an attractive employer on the labor market and as well as to secure the company's future viability, we attach the utmost importance to a corporate culture that fosters diversity, equality and inclusion. Additionally, as part of "Mission 26", we actively encourage all employees to obtain specific further training and to achieve their medium- and long-term career goals. In 2023, we once again mainly focused on fine-tuning GEA's activities in the area of talent acquisition.

All teams in the HR organization have contributed to further improving talent acquisition. Corresponding measures notably include the intensified internal allocation of resources, more local contacts for the business units and a sharper delineation of roles and responsibilities. Among other key success factors are a clearer strategic focus and measures to

actively address potential talents. The speed and transparency of the application process and an overall positive experience for applicants are of primary importance.

We have additionally introduced a referral bonus for our employees at various sites, as we know they are our best and most authentic ambassadors. During the reporting period, we hired in all 2,133 (2022: 2,374) new employees worldwide. The total number of new hires as a percentage of the average headcount was 11.2 percent as of December 31, 2023 (2022: 12.6 percent).

4,029

The number of measures initiated in 2023 in response to the most recent employee survey.

Employee assessment of GEA

In its regular employee survey, GEA asks its employees for their assessment of the company and their direct line managers in terms of 13 different dimensions: engagement, hands-on management, growth opportunities, trust in leadership, employee communication, positive working environment, meaningful work, rewards and benefits, organization effectiveness, customer centricity, innovation, sustainability and diversity. The overriding objective is to maintain a culture of dialog and communication, to actively involve the workforce in the company's development and to respond specifically to the feedback provided after evaluating the survey findings. We also use the survey to gauge our employees' satisfaction, their identification with their work and their stress levels.

Since 2019, we have been working with an independent opinion research institute with the aim of professionalizing and standardizing the process. To optimize comparability, the standardized questions are always asked in the same form. Accompanied by extensive communication at all levels, the employee survey is intended to strengthen employees' trust in both the survey program and management. In addition, all GEA executives receive training to help them respond to and implement the survey findings, with a view to continuously improving our employer branding.

Eighty-two percent of all GEA employees participated in the most recent employee survey in October 2022. As a consequence of the survey, GEA strengthened the role of HR management in developing action plans in the reporting year and made it easier for managers to access the detailed results of the survey. In 2023, a total of some 4,029 initiatives were launched across the company in response to the feedback received, harnessing the survey's findings to optimize existing processes or introduce new ones.

In addition to being well received by the workforce, the employee survey is held in high regard. At the same time, it is fair to say that our employees know the survey results will be addressed and acted on. In order to ensure better integration into all HR processes, no employee survey was conducted in the reporting year but was postponed until the first quarter of 2024. The results will be published in May 2024.

Employees by age groups*
(in %)

Age group	%
> 50	35.2
30 – 50	55.5
< 30	9.3

*) Number of employees excluding apprentices and dormant employment contracts; excluding non-consolidated entities.

Diversity, inclusion and equal opportunities

GEA is forming diverse teams not just in HR but in all areas of the group. For us, "Engineering for a better world" also means creating a work environment where diversity, equal opportunities and the inclusion of all employees are encouraged and fostered. Diversity is a cornerstone of any ambitious company with a global presence. Not only does it enhance our attractiveness as an employer, it also sharpens the company's competitiveness, thus contributing to its success going forward.

The strategy of "sustainable value creation at GEA" includes the principle of diversity. By this we mean a workforce with a wide range of personality traits, individual abilities, knowledge and skills. These include gender and gender identity, age, ethnicity and nationality, physical and mental abilities, sexual orientation, religion and ideology as well as social background. At the same time, external and organizational aspects such as professional experience can influence diversity. We view inclusion as the empowerment and involvement of all employees regardless of their individuality,

including equal access to opportunities and resources for all. Managing diversity, inclusion and equal opportunities is the responsibility of HR.

Our diversity and inclusion strategy consists of a two-stage plan aimed at strengthening and growing both aspects by 2026 and based on three main pillars: establishing and maintaining an inclusive workplace, promoting a diverse workforce and attracting, developing and supporting diverse talent.
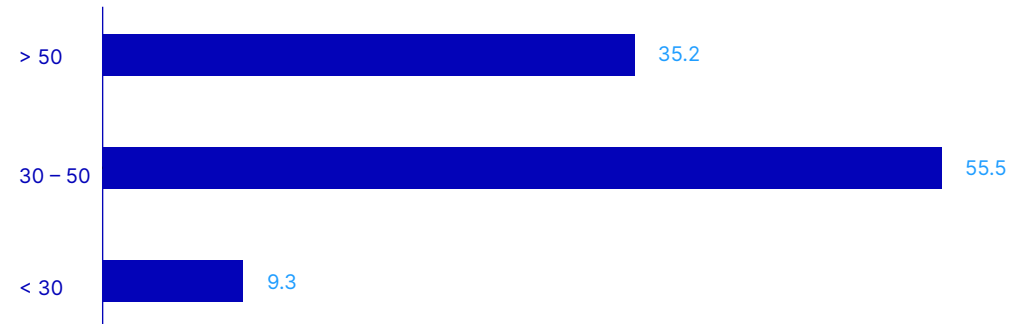
GEA employees worldwide

North and Central Europe
3,310

North America
1,776

DACH & Eastern Europe
7,258

Latin America
725

Asia Pacific
3,051

**Western Europe,
Middle East & Africa**
2,653

Total number of employees: 18,773

People from 107 nations work for GEA in 55 countries worldwide

107

nations are represented at GEA
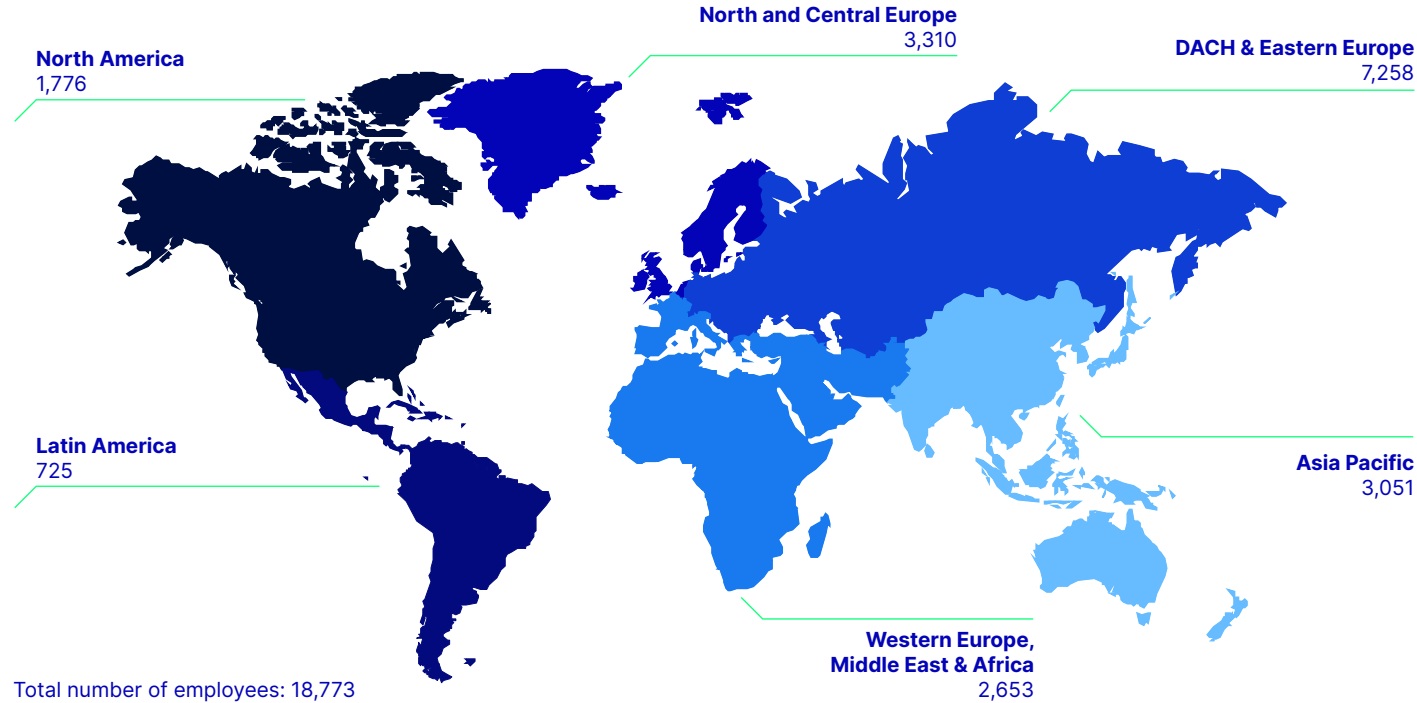
When implementing diversity and inclusion initiatives, GEA is guided by the "Charta der Vielfalt" (German Diversity Charter), a corporate initiative to promote diversity within companies and institutions. We are thus committed to the equality of all people within the group. In addition, together with more than 7,000 companies worldwide, we are committed to the United Nations Women's Empowerment Principles (WEPs). These provide guidance to companies on how to promote gender equality and

empower women in the workplace and society. Aligned with international labor and human rights standards, they are based on the recognition that companies have an interest in and responsibility for ensuring greater gender equality and strengthening the position of women in the workplace.

The WEPs are a primary tool for implementing the gender equality dimensions of the United Nations Agenda 2030 and Sustainable Development Goals (SDGs). We joined the WEP community in 2022, signaling our commitment to this agenda and to collaboration in multistakeholder networks aimed at promoting business practices that empower women. Aspects include equal pay for equal work, gender-sensitive supply chain practices and a zero tolerance approach to sexual

harassment in the workplace. GEA is also an active member of Germany's Rhine-Ruhr Diversity Network, under whose auspices it organizes an annual Diversity Day to which all employees are invited.

GEA employees have established a cross-site LGBT*IQ group. As a member of German organization "PROUT AT WORK", GEA supports all its employees who identify as LGBT*IQ. PROUT AT WORK provides individuals, networks, companies and organizations with strategic advice on workplace culture, educational offerings and awareness training for employees and managers.

We firmly believe that diversity in the workforce begins with shared understanding and actions based on common values. This is why we seek dialog focused not just on quotas or hiring, but also based on conduct and values. The Diversity & Inclusion Policy & Guideline provides the framework for the entire group. The purpose of this guideline is to establish a group-wide global standard on how to address diversity and inclusion by providing guidance to managers and employees on how to navigate the complex issues of diversity and inclusion in an organizational context. We want to do more than just comply with legal requirements – we want to encourage genuine commitment within the company. In addition, in the reporting year, the topics of inclusion and supplier diversity were anchored in the supply chain and the supplier selection process with the introduction of the company's new Procurement Policy. Also in the reporting year, global online training was introduced to prevent harassment and bullying in the workplace.

"When I was offered the position at GEA, I was worried whether I could handle it. But I was met with trust from the first day onward. I'm proud that GEA appreciates my work and my commitment."

Mateusz Markiewicz, Senior Service Sales Manager

Unlimited appreciation

For people in wheelchairs, everyday life often presents challenges. Among them is Mateusz Markiewicz from Warsaw, Poland. In 2009, the now 36-year-old Senior Service Sales Manager did not expect to be in a managerial role 14 years later. His responsibilities also include visiting customers. "I prepare customers for my visit and let them know that I'm a wheelchair user. This helps to avoid any unexpected difficulties," says Markiewicz. Initially, he saw the physical barriers as less of a challenge than the acceptance of his colleagues. However, this concern was entirely unfounded.

Outside the workplace, Markiewicz still experiences the uncertainty of others when dealing with disabled people. "I sometimes get the feeling that people aren't sure how to talk to me or behave around me." His six-year-old daughter doesn't see his disability as anything special. "Of course, she knows that I have some limitations, but it's completely normal for her," says Markiewicz, not without some pride. He is also proud of his work at GEA. "It wasn't easy and I've worked hard to develop in my leadership role," says Markiewicz. He feels that his role in sales suits his personality very well.

GEA apprentices lend a hand at a social facility in Beckum, Germany

Commercial kitchens in which several thousand meals are cooked on a daily basis are exposed to enormous stresses. The situation is no different at Werse-Technik PB Freckenhorster Werkstätten – a workshop for people with mental and intellectual disabilities in Beckum, Germany. Each day, around 1,600 meals are prepared at the social facility and then delivered to customers. To make day-to-day work in the kitchen easier, Freckenhorster Werkstätten asked GEA for help handling the heavy trolleys for the dishes. And GEA was glad to assist.

The company's apprentices at Germany's Oelde plant have optimized the access ramp for the trolleys and will also be eliminating problems with the access doors. The costs of these measures are being covered by the "Nothilfeverein GEA Westfalia Separator", an aid fund financed entirely by donations from the GEA workforce in Oelde.

With the Group Inclusion Agreement that came into force in 2023, GEA is reaffirming its intention to ensure the integration and professional inclusion of people with disabilities. It aims to provide equal opportunities for all people and to prevent the discrimination and social exclusion of people with disabilities. Through these efforts, we are attracting new groups of people as employees in response to the skilled labor shortage.

Our commitment to diversity should similarly be expressed in gender-sensitive language. To ensure that no one in our company is discriminated against by being addressed in the wrong way, we have produced a publication in German with advice for all GEA employees on gender-sensitive language for the German-speaking world. Language is an expression of our way of thinking and a reflection of social change, which is why it evolves. Consistent with our commitment to diversity, we seek to promote linguistic sensitivity in day-to-day use.

Diversity and equal opportunities are firmly enshrined in our HR processes. For example, they are integral to the works agreement concluded with the Group Works Council concerning the global executive selection procedure in the context of personnel development and succession planning for the GEA Group, which governs our recruitment process. Specific selection criteria that take diversity aspects into account apply when nominating candidates for leadership development programs. In this way, we aim to ensure that genders are fairly represented in leadership development and that we achieve the goal described in "Mission 26".

Percentage of employees under collective bargaining agreements
(in %)

53
collective bargaining
agreements do not apply

47
collective bargaining
agreements do apply
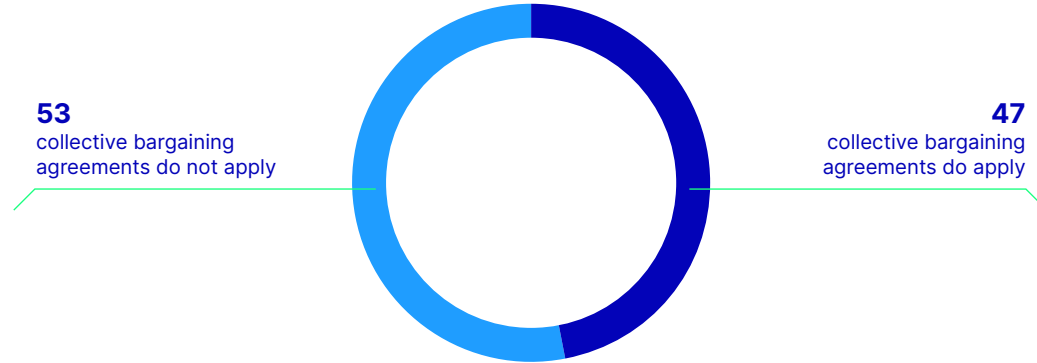
Labor/management relations and co-determination

GEA is proud that labor/management relations are characterized by long-standing, respectful dialog and interaction with employee representatives as well as equal co-determination on the company's Supervisory Board. One half of the Supervisory Board is composed of shareholder representatives and the other half of employee representatives. The employee representatives on the Supervisory Board are elected by the entire German workforce, but represent the interests of all employees.

We have a Group Works Council (GWC) established in accordance with the German Works Constitution Act, as well as numerous local and general works councils. At the corporate level, local issues are regulated by company agreements. At the European level, there is also a European Works Council (EWC), which has the statutory right to information from

and consultation by the company's management. It is in regular contact with the Executive Board and Human Resources. The activities of the EWC mainly focus on the cross-border impact of decisions and developments on employees in the EU member states, the countries of the European Economic Area and Switzerland. At the end of 2018, the foundations for the work of the EWC were framed in a new EWC agreement, jointly developed and adapted by GEA's Executive Board and the EWC with the assistance of the global trade union federation IndustriALL.

Collective bargaining agreements apply to 47 percent of our workforce worldwide (2022: about 48 percent). For all other employees, provisions are based on individual agreements.

50

A total of 50 high potentials
are participating in the
HiPo Pool 1 and 2 programs.

Fostering talent and training executives

Leadership development

Leadership development at GEA comprises numerous open leadership and management training courses offered in a variety of formats. They include classic offerings such as "GEA Management Essentials", "Leading Effective Teams" and "Making the Matrix Work". All training formats are built on the "GEA Signature for Leadership" model, which describes the key attitudes, skills and conduct expected of GEA managers worldwide on the basis of six dimensions. Moreover, by 2024, managers must have participated once in the live "Boost Your Dialog Skills" trainer-led webinar, which is geared to improving the quality of feedback.

Managers are given targeted support regarding their current and future tasks through two programs comprising several modules: "Learn to Lead" for individual contributors and first line managers and "Master to Lead" for more experienced managers. The program modules are supplemented by learning groups for the discussion of tasks as well as to ensure that individual learning goals are achieved. These programs underscore not only our commitment to developing individual managers but also our focus on long-term leadership development. In addition, managers can choose options from the development portfolio based on their individual needs. These include individual coaching, a 360-degree feedback tool, live trainer-supported webinars such as "Leading People through Change" and "Why Finance Matters" as well as a wide range of e-learning courses.

And there are still the leadership reviews, which provide an annual framework for identifying development needs, selecting talent and determining succession requirements. The goal is to cultivate a uniform leadership culture and to optimize the continued individual development of managers. GEA can attract and retain labor market talent only by offering exceptional leadership that can be experienced personally.

In addition to the needs-based training and continuing development of all employees, special development pools – such as the two High Potential Pools (HiPo Pools 1 and 2) and the Talent Pipeline – have been set up to ensure medium- and long-term succession planning for GEA's key positions. Employees nominated for them by their line managers undergo a demanding selection process to confirm they have the necessary potential, while also providing a starting point for selective personal professional development.

GEA's High Potential Pools are cross-organizational talent programs for identifying and developing candidates as successors for strategically relevant roles. The programs were set up to secure successors for roles at various levels of the company and to prepare talented employees for management positions at an early stage. Measures include identifying and developing managers in middle management into top management and executive positions.

A total of 50 high-potential employees are participating in the programs. Around one in three who started the program since 2022 has already been promoted internally.

Fostering and developing talent

GEA's talent development program is aimed at employees or recently appointed managers with outstanding potential. The goal is to identify, foster and develop our talents for the future. Up to a certain level, all employees can either be put forward by their line manager or nominate themselves. They go through a challenging selection process that checks their potential and, at the same time, serves as a starting point for their specific personal development. Those employees who are accepted into the Talent Pipeline start a two-year development program. Besides mapping out an individual career development plan, applying leadership fundamentals and enhancing internal visibility, this aims to build knowledge and skills specific to GEA and its strategic vision.

Learning and development

At GEA, training and education is of particular significance to personal development. In fact, we are convinced that it is essential to a fulfilling working life. With "Workday Learning", GEA has created a virtual learning platform and a central access point for everything related to learning.

We support and encourage all needs-based employee training measures which are required for employees to perform their jobs. The results of the employee survey have identified the need to continue improving employee career and development opportunities.

The Perform & Grow program applies for all GEA Group employees. It takes the form of various dialog sessions between a manager and an employee, conducted in three phases over the course of a year. The "Workday Learning" platform supports this annual process, giving managers and employees a better overview of the training and courses completed and making it easier to track development activities.

Training at GEA in 2023

- 20,256 employees made use of the training and learning opportunities
- 2,490 employees attended in-person training
- 1,313 employees participated in integrated training initiatives
- 10,786 employees participated in trainer-led webinars
- 89,423 e-learning courses were completed

Vocational training in Germany

In the year under review, GEA in Germany hired 101 new apprentices at 13 sites to train in 15 commercial, industrial and technical professions, focusing on different specialty areas depending on the product portfolio of the respective site. The Oelde site is the center for technical training, coordinating these activities in Germany. In addition, 14 combined vocational training and degree programs were offered in cooperation with polytechnics and universities. Over six semesters, these programs lead to bachelor's degrees with various specializations. GEA has lent a more international focus to the practical phases of these programs by offering projects at GEA companies outside Germany.

GEA provides training in the following professions:

Industrial professions:
- Plant mechanic (m/f/x)
- Electronics technician (m/f/x)
  - Industrial electronics technician (m/f/x)
  - Electronics technician for automation technology (m/f/x)
- Warehouse logistics expert (m/f/x)
- Warehouse clerk (m/f/x)
- Production mechanic (m/f/x)
- Industrial mechanic (m/f/x)
- Construction mechanic (m/f/x)
- Mechatronics engineer (m/f/x)
- Mechatronics engineer for refrigeration technology (m/f/x)

- Materials tester (m/f/x)
- Metal cutting mechanic (m/f/x)

Commercial and technical professions:
- Industrial clerk (m/f/x)
- Technical product designer (m/f/x)
- Computer science expert (m/f/x)

In 2023, GEA organized 14 combined vocational training and degree programs in the following subject areas:
- Bachelor of Arts (apprenticeship: industrial clerk (m/f/x); degree: business administration)
- Bachelor of Arts in business information systems (practical degree course)

- Bachelor of Engineering (apprenticeship: industrial mechanic (m/f/x); degree: mechanical engineering)
- Bachelor of Engineering (apprenticeship: industrial mechanic (m/f/x); degree: industrial engineering)
- Bachelor of Engineering (apprenticeship: mechatronics engineer (m/f/x); degree: mechatronics)
- Bachelor of Engineering (practical degree course, specializing in electrical and electronics engineering)
- Bachelor of Engineering (practical degree course, specializing in mechanical engineering)
- Bachelor of Engineering (practical degree course, specializing in mechanical process engineering)

- Bachelor of Engineering (practical degree course, specializing in digital technologies)
- Bachelor of Science (apprenticeship: electronics technician (m/f/x); degree: electrical and electronics engineering)
- Bachelor of Science (apprenticeship: computer science expert (m/f/x); degree: computer science)
- Bachelor of Science (practical degree course, specializing in process engineering)
- Bachelor of Science (practical degree course, specializing in industrial engineering)
- Bachelor of Science (practical degree course, specializing in software technology)

Not all new beginnings are hard

Anyone starting a new job is usually nervous and has lots of questions. We organize onboarding seminars for apprentices and students on combined vocational training and degree programs to make their start at GEA as pleasant and informative as possible. In these seminars, newcomers primarily get to know their site and "their product", but are also introduced to our company, its organizational structure, the entire product range as well as our mission and vision. A program of seminars, team-building measures and sporting activities aims to ensure close ties with the respective site and the company. Apprentices and their trainers or contact persons network in cross-site groups of varying composition. At the end of an onboarding seminar, which fortunately results in a high level of identification with GEA and the individual sites, participants are able to present a site, products or the entire company to a group of more than 100 people.

Award-winning vocational training company
In 2023, GEA was again judged to be one of the most popular companies providing vocational training in Germany. According to a representative survey by ServiceValue, GEA ranks among the 838 companies in Germany rated as being highly attractive for vocational training. This is the highest position a company can achieve in the ranking. In cooperation with German daily newspaper "Die Welt", analysis institute ServiceValue determined which companies among a cohort of almost 4,000 are considered particularly attractive to apprentices. In the 2023 survey, the companies were assigned to three business sectors (services, trade and industry) and given a cross-sector ranking according to their respective approval ratings. The analysis was based on some 700,000 responses obtained in a Germany-wide survey conducted without the involvement of the companies being evaluated.

Work-life balance

The only way for employees to realize their full potential is when they can balance their family life with their work. We have established a wide range of measures to support our employees with services differing from country to country. In principle, it is possible for GEA employees to take advantage of different types of flexible working arrangements – in consultation with their line managers – that best accommodate their individual circumstances. This could be for education purposes or for family or personal reasons. Options include the offer of various part-time working models. In Italy or France, for example, employees aged 60 and above can reduce their working hours to 90 percent while continuing to receive full pay.

Other working time models allow, for instance, full- or part-time working from home, working the full number of weekly hours on four days or customizing working times by starting work at midday and working into the evening to avoid rush hour traffic or to adapt to customer working hours in other time zones. Models also include working mainly in the office and doing some work from home, working at an alternative location or job sharing – where two part-time employees fill one full-time position.

There are experienced contact partners at various GEA sites who can answer any questions expectant mothers and fathers may have about flexible work arrangements. In Germany, we also provide support in finding childcare and, under certain conditions, pay tax-free allowances for places in daycare facilities. To help employees in Germany achieve a better work-life balance, GEA offers them five extra days of parental leave per child during the first three years of the child's life, in addition to statutory parental leave. In other countries, GEA offers 14 weeks of paid parental leave after the birth or adoption of a child for one parent and two weeks of paid parental leave for their partner. Employees can similarly apply for parental leave if they are not the biological parents. Moreover, at some sites in certain countries, GEA provides special rooms for nursing mothers.

As a way of visualizing the various options available, we produced special videos for managers whose employees face particular challenges in achieving a work-life balance due to the birth of a child or caring for a family member. GEA additionally partners with an external service provider in Germany to help employees find suitable options for their dependants in need of care. This service also includes free social counseling.

In Germany, GEA employees who are caregivers for dependants receive special support over and above the statutory requirements. For instance, they are given ten additional days of caregiver leave from the company per calendar year. It is also possible for employees to donate some of their vacation days to those who are caregivers for family members to ensure that care can always be provided.

Remuneration

GEA pays all employees in a way that is customary for the respective market or country. Collective bargaining agreements apply to about half of all employees worldwide. For the rest of the workforce, regulations based on international or local directives and agreements apply. As an employer in the engineering industry, we generally recruit highly qualified employees. Wherever they are in the world, their remuneration is based on objective criteria, notably their function, their individual performance and the company's success. The starting salaries for all employees are above the statutory minimum wage in their respective country and, generally, their target incomes are also above the living wage in their respective country.

All GEA employees are assigned to a job family. There are around 20 of these, each describing the main characteristics of the various roles and resulting in the transparent documentation of all roles at GEA around the world. The global structures spanning the individual job families are refined on an ongoing basis, enabling us to prepare annual market comparisons for all employees in 55 countries. This ensures that GEA pays its employees competitive salaries.

Each year, we review and raise the salaries of around half the employees in almost 60 countries who are not paid under collective agreements. The budgets for this are planned centrally on the basis of inflation data and market trends and are allocated to employees by our executives via our HR data processing program. Salary development and hence the costs within the group are managed centrally.

The same regulation applies to our variable remuneration models: the Mission 26 Incentive (for all 18,000 employees in 55 countries), the Uniform Bonus Plan (for around 6,000 employees) and the Sales Incentive Plan (for around 1,100 employees). The associated planning, key figures and target values are likewise defined centrally. They can be viewed by all employees in our HR data processing program, which is also used to determine target achievement and payouts.

For executives, experts and employees in key positions, remuneration includes variable performance-based salary components, which can amount to as much as 60 percent. The targets are set out in the group-wide GEA Uniform Bonus Plan, which supports attainment of the company's financial and strategic targets by incentivizing employees on the basis of company performance. This promotes GEA's profitability and development.

Specific incentive schemes are also in place, including the GEA Sales Incentive Plan. It creates a clear and objective framework for incentivizing employees to attain and surpass challenging sales performance targets. This plan fosters the company's overall success by aligning business and individual goals. The bonus payment notably depends on factors such as achieving key performance indicators, including order intake, gross margin on order intake and payment targets.

In addition to the short-term incentive schemes, a further incentive has been introduced for all employees worldwide to encourage high levels of performance in achieving the strategic "Mission 26" targets. Between 2022 and 2026, all GEA employees will receive additional annual remuneration if the "Mission 26" financial targets are met. These targets are linked to organic revenue growth and the EBITDA margin. Each year, the two specific target values for the GEA Group will be aligned with "Mission 26". If these targets are attained, all employees will receive an individual incentive payment based on the average purchasing power of their respective country.

In 2023, GEA introduced a new remuneration framework defining global standards and guidelines for remuneration management across the GEA Group. The goal is to offer attractive remuneration and ensure that everyone is treated fairly and equally. It is also intended to provide transparency and effectively contribute to controlling personnel expenses.

Our remuneration and benefits system for current and future executives must be attractive, simple, fair and futureproof. It must also reflect GEA's market position as well as its vision, strategic ambitions and desired conduct. Moreover, it should enable GEA to attract, develop, inspire and retain new specialists. To this end, the framework harmonizes the remuneration system and defines global rules for the annual review of salaries as well as for the bonus process.

An annual review of pay is conducted both at the collective level (comparison with other companies or on the basis of inflation) and at the individual level (based on factors such as an employee's performance, skills and/or potential). Overall, the goal is for the remuneration programs to strike the best possible

balance between cost efficiency and employer attractiveness. GEA also offers additional market-based remuneration components (benefit structures), such as company pension plan benefits, in all countries. These components are similarly subject to a regular review of their competitiveness, legal compliance and tax efficiency.

GEA is fully committed to equality, including equality in pay. To this end, we have implemented mechanisms in many countries to prevent wage differences between genders. These mechanisms allow us to perform sustainable analyses and fill any gaps. Some of the steps taken to make sure that jobs are comparable and offer fair pay include global job family structures and the grading of management positions.

Living wage analysis 2023

The income of 19,224 employees in 58 countries with GEA branches[1] was analyzed. This covered 97.2 percent of the company's total workforce. The report on the remaining four countries is planned and will also be available in the future. In all of the countries surveyed, GEA fulfills its obligation to pay appropriate salaries that enable employees to afford an adequate standard of living.

The target income for 19,221 employees (99.98 percent) is above the living wage shown. Only three employees (0.02 percent) have a target income that is just slightly lower, in other words by less than ten percent.

1) This includes consolidated and non-consolidated branches as of October 2023.

30%

Around 30 percent of executive company cars worldwide are fully electric vehicles.

Retirement provision

GEA's employees enjoy company pension benefits, for example, under defined contribution pension schemes in those countries where this is customary. This enables them to actively shape their pension plans in consultation with the company. Against the backdrop of demographic change, the company pension scheme gives GEA the opportunity to retain qualified specialists over the long term. That is why we work to continuously optimize existing communication and administrative processes as well as global pension-related service structures to improve both the transparency and economic efficiency of the pension plans. In doing so, the company ensures that the pension plans fully comply with all statutory and regulatory requirements.

Mobility

Despite advances in digital technologies and the possibilities they offer, such as working from home and video conferencing, GEA is dependent on the mobility of its employees. As it is important to the company to keep the environmental footprint of work-related travel as small as possible, various initiatives have been launched. In Belgium, Germany and the Netherlands, for instance, there is a company car policy for exe-

cutives which stipulates that only fully electric vehicles may be purchased. There are plans to introduce this type of policy in all other countries with their own vehicle fleets in the years ahead. Additionally, employees have a greater incentive to use more environmentally responsible modes of transport to get to work, which is why GEA subsidizes local public mass transit passes.

We work with a central service provider to ensure the efficient, climate-friendly booking of travel for essential long-distance business trips. To meet market demands and ensure that the company remains competitive over the long term, it is important to retain our ability to deploy the knowledge and expertise of GEA's employees worldwide.

Sustainable and healthy mobility with "JobRad"

GEA has concluded a works agreement for leasing bicycles from "JobRad". All employees can apply for a JobRad bike and benefit from the associated deferred compensation. With this model, we aim to actively contribute to promoting sustainable and healthy mobility for our employees and to increase our attractiveness as an employer.

GEA Care

"GEA Care" combines all occupational health management activities under one umbrella.

Occupational health management

Employees can only perform at their best if they are healthy and feel good. GEA's various health promotion measures extend well beyond legal requirements, since investment in the health and well-being of our employees is an investment in the future.

The company's decentralized occupational health management (OHM) system is run either by the divisions and regions or the respective GEA sites. Our "GEA Care" health management program, which centralizes health management, is integrated into the "Mission 26" group strategy. It optimizes existing local offerings and creates new global, digital services for the entire GEA workforce.

General health, individual precautionary measures and prevention are at least as important as protection against accidents and hazards in the workplace. Protecting and promoting health is not only a natural social obligation and an expression of GEA's corporate culture but also a component of the "Mission 26" group strategy.

The group's local-level health management system often exceeds statutory healthcare as well as established occupational safety and health requirements. It includes additional benefits and various initiatives such as health days, nutrition counseling and programs to combat mental overload. At the same time, employees have access to a health portal provided by an external service provider.

Increasing mobility in the neck, shoulders and back

Health management at GEA is an established component of healthcare at many sites. Activities that took place in the year under review included the "GEA Care" days which were again organized at several German sites, including Bönen, Oelde, Ettlingen, Karlsruhe and at group headquarters in Düsseldorf. In addition, all employees at the German sites were offered the opportunity to participate in a year-round weekly online exercise program for the neck, shoulders and back. This has been a great success and many of the sites will now offer the program regularly. That is why we are already planning to extend the program and implement a version in English.

Health management at GEA

Prevention   Seminars   Guidance   Operational integration management   Courses   Health focus week   Mental health   Measures & physical activity
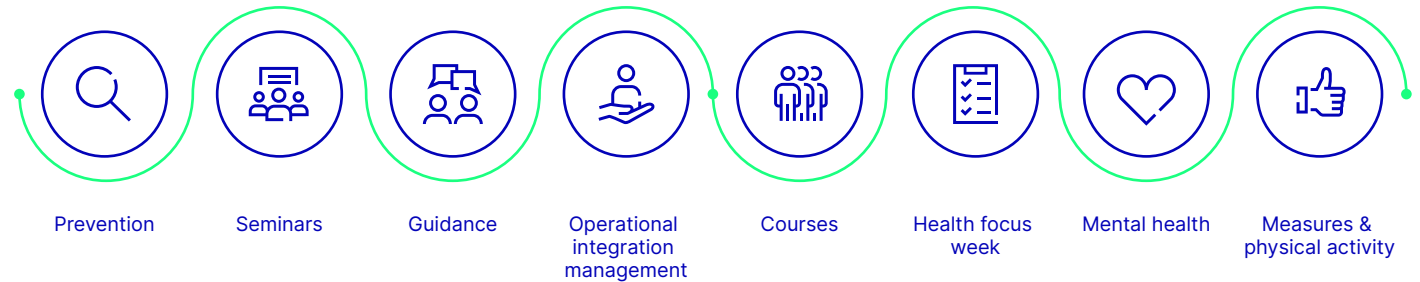
We have combined all OHM activities under the global "GEA Care" umbrella. Alongside the health days, this includes mandatory occupational medical examinations or flu vaccinations, as well as psychosocial support and stress management coupled with other face-to-face and online offerings.

The goal is to establish services and procedures that reflect demand and the specific situation at each site. Cultural, religious and local factors must also be taken into account. Only in-depth cooperation with healthcare providers, health insurance companies and medical officers, coupled with the exchange of information between the HR department and the works council as well as registering the needs of the workforce, can deliver sustainable success and allow a future-proof health management system to emerge. The model for this ambitious goal is the wealth of

experience, in some cases gained over many years, at German sites such as Oelde, Bönen and Düsseldorf, which already offer very successful and in part highly comprehensive, sustainable OHM programs in various forms.

The framework is provided by the global GEA Care Policy, which promotes networking among experts at GEA sites worldwide. Their varying experiences and needs are shared through regular dialog and meetings. The long-term aim is to build a knowledge base of all the activities and ideas necessary for a successful OHM, enabling us to avoid any duplication of effort as well as to identify and leverage potential synergies.

COMPLIANCE AND GOVERNANCE

RESPECT FOR HUMAN RIGHTS

GEA considers respect for human rights to be an integral element of the company's DNA. We can only make an effective contribution to our goal of "Engineering for a better world" if everyone who comes into contact with our company respects human rights. This applies as much to each of our employees as it does to all of our subcontractor employees, all suppliers and all customers. In specific terms, this means rejecting child and forced labor and human trafficking, complying with the applicable safeguards for young workers, combating all forms of violence and discrimination, recognizing the right to fair working conditions and a living wage, observing working hours and rest periods as well as providing a safe workplace for all employees. GEA also considers freedom of association, the protection of indigenous and local communities and a clean environment to be fundamental human rights.

GEA works hand in hand with the Group Works Council and the European Works Council to ensure that human rights are respected. In 2023, the company took a number of important steps in this regard. We fully revised our Group Human Rights Policy, adding far-reaching measures to identify and investigate potential human rights violations. At the same time, we intensified cooperation with our suppliers in respect of human rights compliance. Last but not least, we appointed a Group Human Rights Officer in Personal Union of the function of GEAs Chief Sustainability Officer in 2023 who is a member of GEA's extended management circle and investigates all reports of potential human rights violations.

Anyone – whether they work for GEA or not – should immediately report a human rights violation they observe or suspect. GEA appeals to each and every individual not to look the other way, but either to submit a report anonymously via our whistleblower system or to contact their line manager, the local management team or GEA's Human Rights Officer directly. "We use the various channels to ensure that human rights violations can be reported worldwide, all human rights violations are investigated and remedial action is taken if violations are identified," says GEA's Human Rights Officer Dr. Nadine Sterley.

To this end, the existing whistleblower system has been greatly expanded to include several more categories. For example, there is now a separate category for reporting potential human rights violations anonymously via a certified reporting system on the GEA website – a more specific process than previously thanks to classification as a separate category. In addition, reports can be submitted anonymously and in confidence via a telephone hotline available in 19 languages. The hotline can be accessed using one of 55 national telephone numbers. A voice control function guides the caller through the reporting process in their respective national language or in English. Any violation or risk of violation will be examined by a human rights investigator appointed by GEA's Human Rights Officer in line with the Group Human Rights Policy. The findings and any remedial action are presented to the company's Human Rights Committee, chaired by the Human Rights Officer, which decides on the implementation of the proposed measures.

Raising employee awareness through mandatory training
To ensure that all GEA employees are adequately aware of human rights, the company's training program has been expanded to include a mandatory training course for existing and new employees alike. Compliance with human rights can be ensured by requiring all employees to take an annual human rights course so that they know what human rights are and how they are protected. The course is available in 19 languages on GEA's Workday Learning platform. It explains not only what human rights are and what measures and initiatives the company is taking to ensure that they are respected, but also how violations can be identified and reported.

Whistleblower system

With 55 national telephone numbers and a voice control function, the whistleblower system makes it possible to report potential human rights violations anonymously in 19 languages via a telephone hotline or the GEA website.

"At GEA, we walk our talk. We cannot and will not tolerate human rights violations, either within our company or anywhere in our value chain."

Stefan Klebert,
Chief Executive Officer

Human rights due diligence – risk management in operations
Development of standard procedures for our own sites with a focus on preventive action

1 Annual risk assessment → Priority level based on annual risk assessment → Low | Medium | High | Very high

2 Annual assessment of human rights compliance via the human rights self-assessment for all sites

Results of self-assessment[1]

Satisfactory results | Acceptable results | Poor results

3 Interviews with individuals responsible for central functions

4 Audit

Monitoring follow-up action

Development of action to prevent, mitigate and remedy risks based on the results of the questionnaires and interviews to assess the human rights situation

Development of corrective action plans

1) See human rights self-assessment for thresholds for awarding points.

Human rights risk analysis

In 2022, GEA prepared for the entry into force of Germany's Act on Corporate Due Diligence in Supply Chains (LkSG) by initiating and implementing various measures. As a result of these preparations, the company was, for instance, able to ensure compliance with the LkSG in 2023. GEA harnessed its own management process to analyze the risks of human rights violations in its own business operations and in its supply chain. We assigned all of our business activities in 55 countries to four categories and performed a risk assessment which combines the probability of a human rights violation occurring with its consequences. The probability rating results from the industry and country in which an activity is being conducted. The impact assessment considers the severity and extent of a potential incident and whether it is reversible.

This risk assessment has been performed for all local business units. All GEA sites are the subject of a gross risk analysis and are asked about their preventive and mitigation action in order to arrive at a net risk assessment.

A risk profile is prepared for suppliers based on their revenue with GEA and their EcoVadis IQ screening result which considers the risks specific to a given sector, industry, country and commodity as well as any negative media coverage. The result of this analysis is a risk indicator ranging from "low" to "critical". It initially assesses solely the risk to which a site or supplier is exposed due to its country or industry and is then used to prioritize subsequent steps. In the reporting year, around 0.5 percent of the purchasing volume was accounted for by suppliers with a "critical" risk profile.

Sites with an elevated risk and suppliers with a relevant revenue from GEA undergo a detailed analysis in order to assess the actual (net) risk. A self-assessment was obtained from the company's own sites with an elevated risk (medium or higher). If the self-assessment reveals an elevated risk, the next step is to plan interviews or audits by external certifiers. Since 2023, GEA has been working with an external partner to assess its suppliers. In addition to recognizing the Code of Conduct for Suppliers and Subcontractors, each supplier is requested to submit a detailed self-assessment of their risk prevention measures and to provide verification in support of this information. If the self-assessment reveals substantiated findings of deficiencies or deviations from GEA's standards, the risks or deviations identified must be remedied. Interviews

are conducted in the event of unresolved questions connected with the self-assessment. Lastly, suppliers may be required to undergo on-site audits carried out by a certified auditor in order to verify the implementation of corrective action. In 2023, 83 sites and 221 suppliers were requested to provide a self-assessment. The findings of compliance risk analyses and internal audits are similarly taken into account. Additionally, questions relating to human rights are an integral aspect of the audits performed by Internal Audit.

Through the risk management approach we have applied to our supply chain and our own businesses since 2022, we have increased the options currently available to us for preventing violations of human and environmental rights, such as the use of mercury (see also the ⌝ "Sustainable supply chain" chapter).

<u>Compliance</u>

Acting responsibly is about more than just complying with the law.

GEA is committed to responsible and sustainable corporate governance in order to avoid potential harm to the company, its employees, business partners, shareholders and other stakeholders. That is why fairness, integrity and compliance have a high priority group-wide. The special importance of integrity is further underscored by the fact that it is the core element both in our corporate values and for GEA in general. By acting ethically and considering the interests of all stakeholders when dealing with employees, business partners and the public, we also protect our good reputation as a reliable business partner.

In the reporting year, GEA became a member of the World Economic Forum's Partnering Against Corruption Initiative (PACI) under its commitment to adopting a zero tolerance approach to bribery and corruption. This CEO-led anti-corruption initiative works with international organizations and government agencies to create and grow trust in companies and institutions. GEA has the opportunity to contribute to this best practice initiative in the future and to help drive forward developments in the field of anti-corruption.

Employees

Investors

Managers

Stakeholders

Society

Customers

Creditors

Government

Suppliers
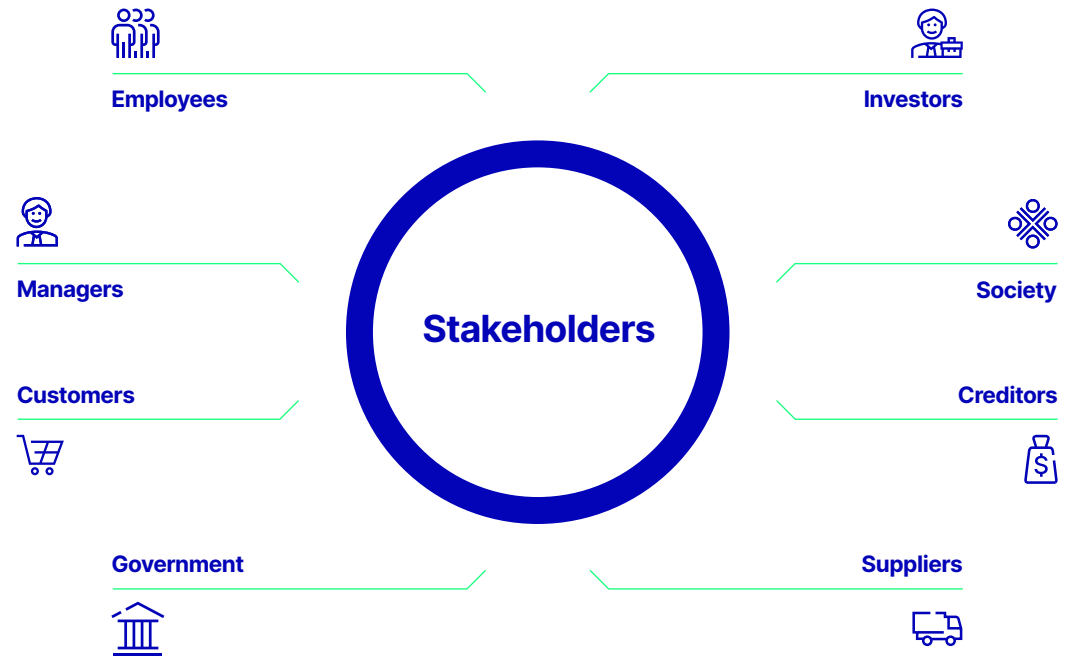
It is extremely important for GEA to be notified at an early stage about any serious violations of laws or its internal policies. This is why we attach utmost importance to an open corporate culture as well as encourage all employees and external third parties to reach out in confidence to the designated contacts within the company if they become aware of compliance risks. Use is also made of the various reporting channels, which helps us eliminate compliance risks and violations.

Compliance management

Compliance is defined as a group-wide principle established to ensure adherence to the rule of law as well as internal corporate policies. All GEA employees have a duty to ensure that no compliance violations are committed in their respective areas of responsibility. They are briefed about the applicable GEA policies by the compliance managers every six months. A detailed description of our compliance management system can be found in the Corporate Governance Statement in the 2023 Annual Report and on the group's website at www.gea.com.

New compliance targets are defined and existing ones reviewed as part of a rolling three-year plan. This means that issues remaining unresolved in the year in question are rolled over to one of the following years and the subsequent planning adjusted accordingly. Planning is also adapted and developed during each year. A wide range of insights obtained in the course of each year flows into the three-year plan. This includes, for example, the results of risk assessments and internal audits, legislative initiatives and feedback from within the company, including its divisions and regions, as well as from third parties. Planning is carried out at group level by the Compliance team. Its content and the progress of implementation are reported regularly to the Executive Board, Supervisory Board as well as the Audit and Cybersecurity Committee.

Certified compliance management system

GEA counters serious consequences arising from potential compliance violations with its Compliance Management System (CMS), which is used to analyze, inform and clarify as well as for control purposes, to define processes and monitor the applicable compliance rules. It is structured in such a way that measures are developed centrally by a Compliance team at headquarters and then implemented across the company. Additionally, the Compliance team monitors application of the measures in the relevant local business units. The appropriateness and implementation of the CMS are audited and certified in accordance with IDW PS 980. This notably includes the sub-areas of anti-corruption and antitrust law, covering ethical areas such as corporate culture. For the purpose of testing effectiveness, ten selected local business units were reviewed with the help of interviews and sample audits. Based on the results, an assessment was made to establish whether the globally specified compliance measures had been effectively implemented and executed at the local business units. We received an unqualified audit opinion for the third and highest level of certification by an external auditing firm.

Compliance Handbook

A Code of Conduct, related compliance policies and the GEA Human Rights Policy apply to all GEA employees worldwide. The compliance policies include an integrity policy, a third-party policy and a competition policy, which govern anti-corruption and anti-money laundering, conflicts of interest as well as antitrust and competition law within the company. The Code and the policies are summarized in a Compliance Handbook, which is available to all employees worldwide in 19 languages.

The integrity, third-party and competition policies have been adapted to reflect legal and strategic developments. Integrated into the Code of Conduct – and thus also the Compliance Handbook – are the principles of corporate responsibility with the issues of human and employee rights, diversity and inclusion, action against discrimination and harassment as well as human development and training. When signing their employment contract, all GEA employees confirm that they have taken note of and accept the references to the group policies contained therein, including the Code of Conduct.

Other compliance-related topics, such as quality, health, safety and environment (QHSE), tax compliance, export control and human rights are dealt with by the relevant departments and are covered by the corresponding policies. If necessary, appropriate training is offered by the specialist departments.

Whistleblower system and alternative reporting channels

All GEA employees and external individuals can report violations via various channels. The central pillar of the reporting system is the electronic whistleblower channel which complies with the requirements of Germany's Act on Corporate Due Diligence in Supply Chains that have applied to GEA since 2023 as well as with the European Union's Whistleblower Directive and the corresponding German implementing law.

The certified whistleblower channel allows compliance-relevant violations to be reported in 19 languages, both anonymously and under the individual's own name. Additionally, in cooperation with an external law firm, the whistleblower system includes a telephone reporting channel. The system can be used, for instance, to report corruption offenses that violate the Code of Conduct as well as violations of antitrust and data protection laws (including anticompetitive practices), export control violations, information security violations and potential human rights violations. The latter may also be reported by voice message via 55 national telephone numbers. Available for download from the GEA website and intranet, the new Whistleblower Policy describes the key principles of the whistleblower system.

The number of reports submitted via the whistleblower system in 2023 increased compared with the previous year. This was due to the improved differentiation and fine-tuning of the reporting categories. For example, specific reporting categories were created for safety and business continuity management, consumer protection, public health and human rights violations. Moreover, raising our employees' awareness through training is paying off. It has resulted in the better identification of alleged violations and broader knowledge of the reporting channels. A communications campaign was also conducted to increase employee awareness of the platform. There were no reports of human rights violations, explicitly including those relating to the issue of child labor. In 2023, a total of 26 reports on core compliance topics[1] such as corruption and conflicts of interest were submitted via the whistleblower system or alternative channels in the Business Keeper Monitoring System (BKMS). The Compliance Committee took decisions on whether or not to apply sanctions in respect of these reports. There were no compliance risks of material importance to the group. The alternative channels include, for instance, reports submitted directly to the Compliance team, the Executive Board or the management of the divisions or local business units.

19

The GEA Compliance Handbook is available in 19 languages.

Category	Number of reports 2023	Number of reports 2022	Number of reports 2021
Compliance	21	18	21
Export controls	2	–	–
Data protection	2	1	–
Purchasing	–	–	–
Sustainability	–	–	–
QHSE	2	2	–
HR	11	4	2
Information security	–	1	–
Human rights	–	–	–

1) In addition to these 26 reports, the table below also includes reports via alternative whistleblowing channels.

Dealing with potential compliance violations

GEA practices a strict zero tolerance policy with regard to unethical behavior in business, especially bribery, corruption, money laundering as well as child and forced labor. We respect human rights and ensure their observance to the extent that we are able to exert influence at regional level and in our dealings with business partners. We take action against any form of violence and discrimination – if necessary by legal means. This includes gender-based violence and harassment in the workplace.

Violations of group-wide compliance rules are met with sanctions appropriate to the degree of fault and severity of the misconduct. Sanctions range from reprimand through warning letters and reduced bonus payments to (extraordinary) termination of employment. In particularly serious cases, GEA reserves the right to sue the individuals concerned for damages or to report the violation to the responsible authorities.

As a basic principle, we expect all employees to report any indications of compliance violations. Managers must ensure that serious misconduct, notably in the areas of corruption, competition law and data protection, is reported to the Compliance team without undue delay.

In the reporting period, a total of 26 compliance investigations were conducted – all in the areas of anti-corruption and conflicts of interest or violations of internal compliance requirements. No sanctions were imposed on GEA in the reporting period for violations of anti-corruption or money laundering regulations, antitrust law or data protection. Similarly to the past four fiscal years, GEA was not required to pay any significant fines (EUR 10,000 or more) for non-compliance with laws or regulations governing economic, ecological and social matters or in connection with environmental aspects.

Preventive processes

Processes designed to prevent compliance violations play a major role in GEA's compliance management system. Third parties in close contact with customers (sales agents) must undergo a strict risk vetting process for anti-corruption purposes prior to entering into a contract with GEA. Every contract with a sales agent must be reviewed and approved by the Compliance team before it enters into force. The sales agents must likewise complete compliance training before starting work for the company.

Other selected business partners in the procurement area are reviewed as part of an analysis by EcoVadis, including with regard to compliance issues. Risk indicators (red flags) are identified in a structured and documented review process that also covers the expertise and integrity – including corruption prevention – of business partners (see also the ↗ "Sustainable supply chain" chapter).

Numerous matters such as contracts carrying antitrust risks, invitations, gifts and conflicts of interest are similarly subject to strict internal approval and reporting requirements. We have introduced various IT tools to meet the approval and reporting obligations as well as to document the relevant issues in an audit-compliant format.

100%

In 2023, the participation rate for e-learning and in-person training on compliance topics was 100 percent.

Training on compliance topics in 2023

Compliance training: These are comprehensive group training courses, in particular on the topics of compliance management, Code of Conduct, anti-corruption, money laundering prevention, conflicts of interest and competition law as well as an overview of the internal control system and other ethics-related issues. A total of more than 9,600 employees received compliance training in the form of e-learning and over 7,600 employees attended in-person training sessions on compliance topics. The participation rate was 100 percent.

Human rights training: Mandatory human rights training delivered via GEA's Workday Learning platform for all active employees, including part-time employees, among the staff of approximately 18,000.

Relevance of the training: Since 2023, any employee who refuses to complete the mandatory training faces disciplinary action. This underscores the importance of compliance-related matters for GEA.

Training and consulting

More than 10,000 employees across the group are considered to be compliance-relevant. These include all managers, sales and procurement staff as well as all other employees with decision-making authority and direct contact with customers or suppliers. As part of a training plan, they are regularly schooled on compliance issues including antitrust law, associations, industry bodies, meetings and cooperation with competitors. Every year, compliance-relevant employees alternate between in-person training and a series of three e-learning courses on anti-corruption, antitrust law and money laundering. Since 2023, temporary and part-time GEA employees are similarly required to complete this training if their roles are compliance-relevant.

In addition, other communications measures to raise employee awareness were conducted in the reporting period. They include short videos in which GEA's Chief Compliance Officer speaks with relevant executives about important compliance topics such as money laundering prevention or forms of sexual harassment in the workplace, outlining the rules for their prevention and detection. These Compliance Talks are available to all employees as a video on the intranet. A new measure introduced in 2023 is the "Did you know …?" format, which can be used to disseminate brief messages about data protection and compliance topics in the style of a social media post.

Drawing employees' attention to the reporting system for human rights violations, the global launch of the company's human rights training was flanked by a communications campaign that included in-house articles, an intranet page and an appeal for zero tolerance for all compliance-related violations. This ensures the active engagement of all employees.

Internal Audit

Internal Audit examines compliance aspects as part of its standard and special audits. As an independent control function in the "three-line" model of integrated corporate governance, risk and compliance, Internal Audit performs audits and offers advice on behalf of the Executive Board. It delivers quarterly reports to the Executive Board, the extended management circle and the Audit and Cybersecurity Committee of the GEA Supervisory Board. In addition, the function is in regular dialog with the group's divisions, regions and central functions as well as with the group auditor. The independent, objective auditing and consulting services are designed to add value and improve business processes.

To this end, binding action is agreed with the audited units and their timely implementation is monitored. Internal Audit supports GEA in achieving its corporate objectives by applying a systematic, focused approach to evaluating the effectiveness of risk management, controls and the management and monitoring pro-cesses as well as to helping improve them. Internal Audit's activities extend to all of the company's legal entities, business processes, functions and employees. It has unrestricted audit rights in fulfilling its tasks and responsibilities combined with full and unlimited access to all operating and business facilities as well as to all information and systems.

Internal Audit is in regular dialog with the group's central functions, taking into account information from Corporate Finance (financial data management), Corporate Accounting (enterprise risk management, internal control system), Corporate Tax (customs and export control), Compliance & Principle Legal Matters (compliance-related investigations and activities, also in respect of human rights) as well as the Sustainability department and the divisions and regions (coordination of audit activities).

200

In the reporting year, all of our approximately 200 business units were audited, with interviews conducted at ten.

Aside from safeguarding assets and examining the efficiency and regularity of processes, the tasks of Internal Audit include verifying that documentation is complete. This additionally includes compliance investigations, either of a general nature or driven by a specific event, audits of export controls, sustainability, human rights and all of the group's central functions. The area of internal procurement was audited in the reporting period. A total of 47 audits were carried out at GEA entities worldwide, some of them as remote audits. Forty of these audits were completed by the end of December 2023 with the publication of a final report.

Compliance audits

Across the group, all contracts entered into with sales agents were reviewed with regard to the compliance guidelines in force at GEA – 203 of them in the reporting period. It goes without saying that this will be done also for future contracts. Sales agents are not GEA employees, but rather external individuals working for our company on a commission basis. A third-party tool was used to examine and assess all contracts with regard to risk criteria. If the outcome of the assessment was positive, a new contract with updated compliance requirements was drafted.

A further check to reduce compliance risks is carried out – for example, before travel expense claims are approved as well as for invitations and gifts. If the costs are above the thresholds applicable at GEA, they will only be reimbursed if the expenses have been approved in advance via the "Compliance Approval Tool", a platform for compliance-relevant approval processes. If potential conflicts of interest are identified, a check must also be carried out in the Compliance Approval Tool – for instance, before a contract is concluded.

Compliance risk analyses are conducted annually in the local business units. For these analyses, between four and ten interviews are conducted with randomly selected local business units. Software is used to analyze and document the statements made and assess the compliance risks. All local business units that are not interviewed perform self-assessments. The aim is to identify whether the compliance measures taken are fit for purpose and risk-appropriate or whether they need adjusting. Additional compliance measures are conducted at numerous local business units depending on the audit findings. In the reporting year, all of our approximately 200 operational local business units were audited, with interviews conducted at ten. Observance of compliance requirements is likewise verified by means of extensive random checks and a rolling system is applied to ensure that all companies are checked every three years.

Protection of personal data

For an innovative global company like GEA, information and its use are of significant importance in accomplishing our corporate goals. Protecting the privacy of everyone whose personal data we process is of at least equal importance. This includes our workforce as well as customers, suppliers, other contracting partners and job applicants, and applies to all GEA companies and specialist departments that handle personal data.

The EU General Data Protection Regulation (GDPR) and the local laws based on it, as well as foreign legal standards, form the basis for the company's data protection activities. Violations of the GDPR can result in fines of up to EUR 20 million or four percent of group revenue and exclusion from public contracts. Data privacy violations can also cause lasting damage to the company's reputation. As digitalization advances, responsible and compliant data handling

represents a crucial aspect of GEA's responsibility. This is why the group requires adherence to data protection regulations and reserves the right to take action against anyone who fails to comply with data protection laws. Such actions may, for example, include disciplinary measures but also the assertion of claims for damages.

GEA's Data Protection Policy sets forth guidelines and conduct recommendations for all of our employees, enabling them to avoid data privacy incidents or violations. It forms part of the global compliance principles and is supplemented by in-person training for employees working in sensitive areas as well as e-learning for all employees with a user account. In addition, the corresponding data protection management system covers all organizational aspects, i.e. roles, tasks and responsibilities involved in processing personal data. The system was audited in accordance with the IDW PS 980 audit standard in 2021.

An important topic in the reporting period was continuing strategic collaboration with areas of Procurement, IT, Business Process Management and Information Security to further align data protection processes with processes in these business areas and integrate the data protection management system into these specialist departments' systems. At the same time, the data protection risk assessment logic in our data protection management system was fine-tuned and automated. As a result, risks can be identified more quickly, consistently and reliably.

In the reporting year, GEA continued to track the implementation of new foreign data protection laws and integrated any resulting legal requirements into the data protection management system. Since developments in China represent a particular challenge, a project was initiated to meet the extremely strict requirements of the new Chinese data protection law (Personal Information Protection Law, PIPL).

We also conducted a project to devise solutions for the automated deletion of data in SAP systems for more than 130 GEA companies. Technical implementation is scheduled to begin in 2024.

GEA recorded a lower but still high number of notifications and requests for advice in the reporting period, in some cases several per day. This is a very welcome development as it shows that employee awareness of the issue of data protection has increased worldwide. It can similarly be taken as an indication that the quality of monitoring is growing.

Compliance with data protection requirements and applicable data protection laws is monitored regularly. These reviews are performed by the relevant company data protection officers and other business units that perform audits, or by external auditors. Alongside the company data protection officers, GEA employs a Group Data Protection Officer who coordinates and supports data protection initiatives across the group as a whole. The Group Data Protection Officer reports directly to the Executive Board, the Supervisory Board as well as the Audit and Cyber Security Committee.

Third-party suppliers are audited by means of supplier self-declarations, audits and certifications. By December 31, 2023, more than 180 relationships with suppliers and subcontractors were reviewed for data protection compliance. Where necessary, the relevant contracts were amended or concluded to ensure compliance with data protection requirements. Compared with the previous year, there was a sharp decline in the number of suppliers to be audited. This is testament to the progress of our third-party supplier management project. There are also automated consent processes for customers – for instance, in the global customer management system.

Information Security Governance

- Requirements management
- Strategy development & steering

- Assets, classification & risk management
- Awareness & training

- KPIs & reporting
- Audit & nonconformity management

- Identity and access management
- Security incident management
- Business continuity management, emergency, & crisis management

Requirements, risk levels, standards

ISMS

Second line of defense

First line of defense

IT Security	OT Security	Product Security	Digital Media Security	Physical Security	Supplier Security	HR Security
Secure information in office IT network & systems	Secure information in production & engineering network & systems	Secure GEA digital products and customer information	Secure GEA's information in web & social media presence	Secure information in sites, buildings, & offices	Secure information in the procurement & supply chain	Secure information in people's minds and prevent oversight & insider threats

Information security, business continuity and crisis management

Demand for information security is constantly increasing – especially in light of the advancing digital transformation and growth in remote working. At GEA, information security is one of our main strategic priorities. Value creation processes are designed and optimized to ensure that information is always handled securely. To this end, we are continuously improving our security measures and invested some EUR 14 million in information security in fiscal year 2023. The Global Security Program was established in 2020 and further accelerated in 2023 with a view to strengthening the group's information and cyber security.

The overarching goal of information security is to protect company-relevant information – both our own information and that of our customers and partners. Here, it is essential to ensure the confidentiality, integrity and availability of this information at all times. Confidentiality means preventing unauthorized access to information. Integrity guarantees the reliability and accuracy of information. And availability means authorized individuals and systems having timely and uninterrupted access to data, objects, processes and resources.

The protection of information is governed by GEA's Information Security Policy as well as subordinate policies, procedures, processes and other implementation documents. All information security documents containing instructions were updated as part of the annual review. Business interruption insurance provides coverage in the event of an emergency.

GEA's Information Security Management System (ISMS) addresses growing security threats by protecting sensitive information of all types from, among others, theft, loss, unauthorized disclosure, unlawful access, misuse, alteration or destruction. There are two lines of defense available within the ISMS to protect against significant security risks. The first line of defense consists of seven focus areas. It combats risks (vulnerabilities and threats) where they occur (see graphic).

The Information Security, Business Continuity and Crisis Management team led by the Chief Information Security Officer (CISO) is the second line of defense. GEA's CISO is responsible for information security management as well as business continuity and crisis management. The CISO reports regularly to the Executive Board and the Supervisory Board's Audit and Cyber Security Committee. Formerly called the Audit Committee, this body was renamed in 2023 to emphasize the importance of information and cyber security. Within the global ISMS, all legal entity representatives are responsible for making sure that their company has an appropriate information security management system in place. Our employees also play a key role in implementing the ISMS. Each year, all employees receive mandatory information security training. In addition, a global communications campaign on information security fosters greater awareness and sensitivity around the subject.

GEA uses training, phishing simulations and communications campaigns to inform and educate its employees about current methods used by cyber criminals, as well as how employees can best protect themselves and GEA. In addition, GEA produces explanatory videos – for instance, covering e-mail fraud prevention and correct visitor management procedures. This guidance not only helps ensure prevention, but also provides tips on how to proceed in the event of security incidents.

In any such event, the Executive Board, the Chief Compliance Officer or the CISO can order an information security investigation. When it comes to investigating in-house, the compliance policy for internal investigations applies – with the difference that the CISO, rather than the Chief Compliance Officer, appoints the members of the investigation team from the information security organization, rather than the compliance organization. Disciplinary measures are decided by the Information Security Compliance Committee.

No complaints related to a breach of protection or loss of customer data were identified at GEA in 2023.
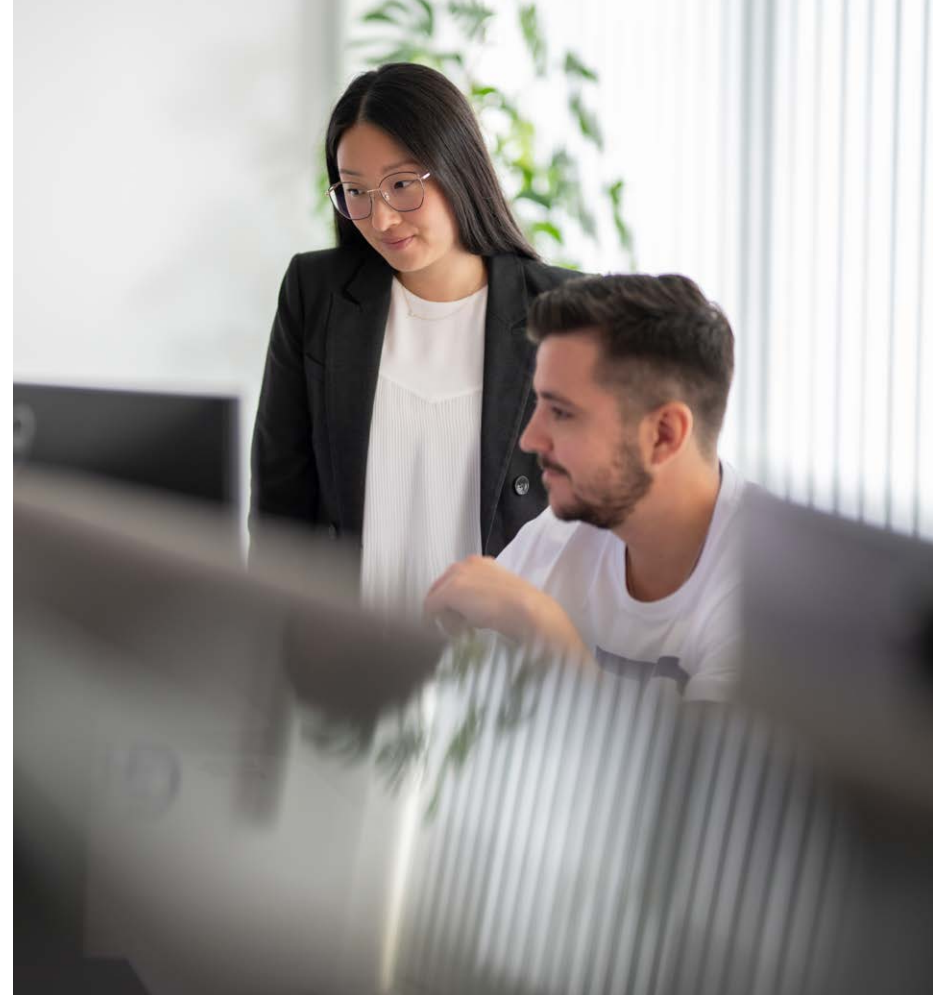
Global Security Program

The total number of cyber attacks rose again sharply as a result of the growth in security risks. Government institutions, agencies and companies increasingly require their suppliers – including GEA – to apply appropriate security measures and to demonstrate that they have market-specific certifications in addition to ISO 27001 certification. 25 GEA sites (approx. 9 percent) and 19 GEA companies have a security certification, covering around 19 percent of GEA employees.

We established the initial framework of the Global Security Program, with around 80 projects, to meet this requirement and protect our company. The resulting global concepts and security measures were successfully piloted at the certification sites. Starting in 2024, the Global Security Program will move into the next phase, with a focus on the global rollout of those security measures to all relevant GEA sites and companies worldwide. This cross-divisional security program enhances the global ISMS, which helps the Executive Board, management and employees to protect sensitive information. Preventive security measures minimize risks, while detective, reactive and corrective measures make it possible to identify and respond to attacks at an early stage.

Successful certifications in 2023

The long-term goal of all certifications and security measures is to make GEA as secure as possible worldwide.

ISO/IEC 27001: global certifications

GEA's ISMS is based on the globally recognized ISO/IEC 27001 standard. Taking industry-specific requirements into account, it is continuously updated by the CISO and approved by the Executive Board. The most significant measures completed under the Global Security Program in 2023 included the certifications of the GEA companies and sites in Niederahr and Hamburg (Germany), Alcobendas (Spain), Columbia and Northvale (United States of America), Vadodara (India), Singapore (Singapore), Melbourne and Sydney (Australia) and Hamilton (New Zealand).

IEC 62443 2-1 and IEC 62443 4-1: certifications in Oelde and Niederahr, Germany

In addition to GEA production at the Oelde location, which was already certified under the IEC 62443 2-1 standard, Security Level 3, in 2022, production at the Niederahr location in Germany was certified in 2023. Furthermore, secure product development at the Alcobendas location in Spain was prepared for certification under the IEC 62443 4-1 standard and will soon be on a par with the already certified Oelde location.

Cyber Essentials Plus certification in the UK

In 2023, the information security processes of GEA Mechanical Equipment UK Limited in Milton Keynes, UK, were again reviewed according to the "Cyber Essentials" certification, which is required by the British government and overseen by the National Cyber Security Centre (NCSC). The successful recertification, together with the additional Cyber Essentials Plus certification received this year, demonstrates to customers that GEA is able to adequately protect its own data and that of others. UK Cyber Essentials certification is relevant across industries, but especially to the shipping industry, which has strong ties to the UK's Royal Navy.

MLPS 2.0 compliance in China

The Chinese government is reinforcing cyber security in the country through numerous cyber security laws. In 2023, GEA reviewed the maturity of the security measures at its own Chinese sites and companies in accordance with the Multi-Level Protection Scheme (MLPS) 2.0 and implemented any necessary measures. Corresponding assessments submitted to the relevant Chinese authorities ensured compliance.

ITAR compliance in the United States of America

The International Traffic in Arms Regulations (ITAR) provide the framework for direct suppliers or contractors to ensure secure execution of orders for the US Department of Defense. ITAR compliance makes it possible for GEA to securely and reliably process the corresponding customer orders for marine separators.

"Implementing technical measures to help avoid human error as well as raising awareness and training employees on information and cyber security is a priority at GEA."

Iskro Mollov, Chief Information Security Officer

Information Security, Business Continuity and Crisis Management Team
The central Information Security, Business Continuity and Crisis Management team covers an extensive range of security topics. These include, for instance, information security governance, information security compliance management, information security and data protection audit management, identity and access management, security incident management, physical security, product security, operational technology (OT) security and business continuity as well as crisis management. The team receives regular intensive training and is sensitized by visits to different GEA sites and customers so that they are prepared for their responsibilities at all times. Worldwide, the network of Local Information Security Officers (LISO) ensures local implementation of the ISMS as well as support for all security and business continuity topics. The LISO are closely linked to the central team through the Regional Information Security Officers and Business Information Security Officers (RISO/BISO).

Raising awareness of cyber crime
Financially motivated – frequently state-supported – cyber criminals exploit new technologies such as quantum computers and artificial intelligence to manipulate people and engage in fraudulent activities.

In 2023, we launched a global awareness campaign covering twelve topics. Through video tips and intranet posts, we showed how cyber criminals operate and provided recommended courses of action. The twelve topics included the safe use of QR codes as well as tips on how to recognize and prevent CEO fraud or other social engineering methods. To increase vigilance and train employees to recognize phishing e-mails, we conducted group-wide phishing simulations and provided practical tips, such as how to report suspicious e-mails. The campaign comprised posters, lock screen images, information screens for all GEA locations and new intranet pages in the Information Security Portal. It also provided information about the new Security Incident Reporting Portal, which simplifies security incident reporting and offers effective expert assistance.

The extended training offering in 2023 primarily covered mandatory information security and business continuity management training for specific target groups. Employees were taught about risks, safe behaviors and secure IT use in relation to their specific tasks through e-learning and in-person training sessions. Training was provided to the Executive Board and Supervisory Board, the IT department, external IT service providers, sales managers, production employees and the LISO.

All information, training materials and explanations of current security risks can be found in the Information Security Portal on the GEA intranet. Frequently used applications include the "Password Checker" for verifying the security of passwords and the "Digital Classification Wheel" for correctly classifying documents and e-mails. The Serious Game, which uses gamification to improve security knowledge and awareness, can also be found on the GEA intranet.

MyAccess

Holders of information and
resource permissions
grant access and ensure
correct allocation.

Enhanced security measures

Enhanced security measures, including multi-factor authentication (MFA), single sign-on and biometric facial recognition, aim to help minimize the security risks associated with passwords. Mobile devices with access to the GEA network are protected by technical solutions, including antivirus, VPN and web filters to ensure that they are as secure as GEA computers. Employees are regularly asked to update their mobile devices. Failure to do so may result in network access being denied.

The newly introduced "MyAccess" identity and access management system grants or withdraws employees' access rights to GEA systems on a position- or task-specific basis. Privileged access management enables secure password management for sensitive access, as well as secure remote access, and controls permissions for administrator accounts with privileged access rights. Through these measures, information is more efficiently protected and processing times are shortened.

In addition, we placed greater emphasis on internal audits, technical IT system audits, penetration tests (simulated hacker attacks) and supplier audits in 2023. These audits enable GEA to check whether and how effectively the implemented information security and business continuity measures are working and whether they are consistent with the defined targets.

Crisis Management Team

Core Team

Crisis Management Team Leader

Support Functions

Situation Monitoring CMT Coordination

Documentation — Infrastructure and Supplies

| Communication | HR | Security | Finance | Legal/ Compliance | IT | QHSE |

Extended Crisis Management Team (requirement-specific)

Incident-specific extension

Location-specific extension
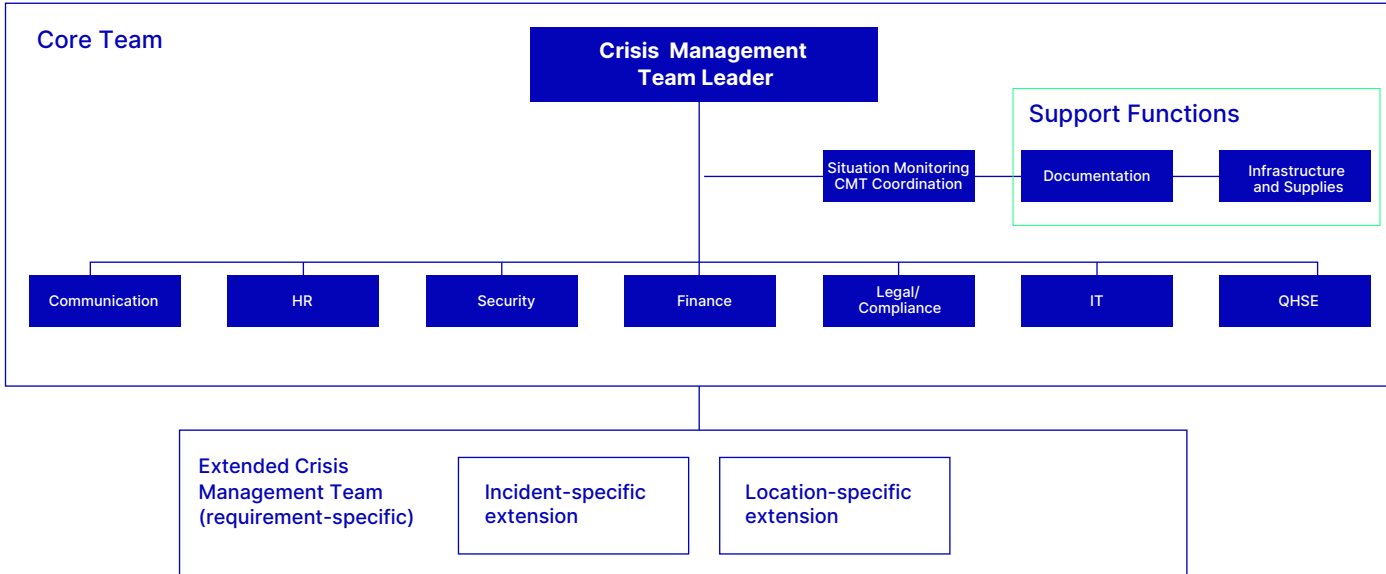
Business continuity and crisis management

Location-based business impact analyses and business continuity plans are key aspects of business continuity management. They serve as preparatory measures for business interruptions, emergencies and crises. These measures are supplemented by a global Crisis Management team, which can draw on prepared scenario-based playbooks in the event of a crisis. The business continuity plans and crisis management playbooks are subject to regular review, validation and practical testing. Our preventive measures enable us to appropriately respond to evolving geopolitical risks and other unforeseen events as well as to keep our business activities as stable as possible.

Led by the CISO, the Crisis Management team is tasked with the systematic and efficient handling of corporate risks that could result from legal, security, IT, occupational safety or other events and incidents. The team members come from a range of business areas, including Communications, HR, Security, Finance, Legal/Compliance, IT and QHSE.

Efficient management is ensured through the allocation of clear-cut responsibilities.

Responsible corporate governance geared to sustainable value creation is the benchmark for the actions of the Executive Board and Supervisory Board.

Sustainability management

Since 2021, all sustainability-related activities have been consolidated in a single Sustainability department with a company-wide remit. This department acts as an interface with each of our business units and functions that shape the strategic backbone of all our sustainability-relevant activities. In this way, we ensure a professional and consistent approach to the increasingly complex requirements of sustainability management across the group.

Headed by GEA's Chief Sustainability Officer (CSO), the Sustainability department reports directly to the CEO. GEA's CSO has overall responsibility for sustainability topics, including the climate strategy as well as the associated qualitative and quantitative sustainability targets, their attainment and reporting. To ensure that sustainability aspects are factored into all of the company's decision making, GEA's CSO was appointed to the Global Executive Committee (GEC) in 2023.

Global Executive Committee (GEC)
The GEC is GEA's extended management body, which comprises the Executive Board members, the CEOs of the divisions and sales regions, the head of Human Resources and – since 2023 – GEA's Chief Sustainability Officer. The decision to expand the GEC to include the CSO underscores the strategic significance of sustainability for the company. Each month, the GEC addresses strategic and operational matters, including topics related to sustainability, and takes decisions with group-wide relevance.

The Sustainability team was expanded in the reporting year to further bolster GEA's sustainability activities. This decision will accelerate GEA's sustainability impact and reflects the company-wide sustainability targets at organizational level. The team was expanded to include technical specialists, a Head of Sustainability for each division and a sustainability officer for the Executive Board's procurement, production, logistics and QHSE function:

- The divisional Heads of Sustainability report to the relevant division manager and, for technical purposes, to GEA's CSO. They ensure that sustainability aspects are taken into account in all divisional decisions. In addition, they translate the global sustainability targets into distinct tasks that are appropriate for the relevant business area, and are responsible for ensuring implementation.

- The specialists in the Sustainability team report directly to GEA's CSO. They focus on various company-wide sustainability aspects, including sustainable risk and opportunity management, supporting ESG rating agencies, communications around sustainability and reporting on sustainability performance, sustainable financial topics and key figures, social responsibility and the transition to a sustainable product portfolio. They also lead global projects for GEA's transformation, such as converting the fleet to all-electric vehicles.

- In the reporting year, the central Sustainable Operations department was established within the Executive Board's procurement, production, logistics and QHSE function. The Head of Sustainable Operations reports directly to the Group Executive Board's Chief Operating Officer (COO) and works closely with GEA's CSO. In particular, Sustainable Operations is advancing the decarbonization of all locations and developing an integrated, coordinated strategy to ensure a sustainable supply chain as well as sustainable logistics and distribution.

Sustainability Committee

The cross-functional Sustainability Committee actively involves the global functions and the operating business units in implementing sustainability measures. The Committee, which is instructed by the Executive Board, acts as a central body for all sustainability-related issues in every business area. As such, it represents an interface between the global functions, the divisions and the Executive Board. This ensures a coordinated and efficient approach at all levels. Chaired by GEA's CSO, the Sustainability Committee is made up of representatives from different areas, including the Divisional Heads of Sustainability, the Head of Sustainable Operations, Human Resources representatives, as well as employees from the Finance, Investor Relations and IT departments. Where necessary, other specialist departments are consulted. This ensures that operational decisions are coordinated across the various divisions and functions.

The Committee holds regular quarterly meetings, as well as convening to address specific matters, and essentially fulfills the following core tasks: reviewing and, where necessary, approving any changes to the sustainability management system (processes, structure, content, policies), including amendments to the list of sustainability indicators. In addition, the Committee finalizes initiatives and specific instructions for the relevant global functions, departments and senior management to achieve the sustainability targets, which are then forwarded to the Executive Board and extended management circle for approval. It also prioritizes sustainability initiatives, defines budgets and continuously reviews the progress made.

Remuneration linked to sustainability target attainment

We can only achieve our targets with the support of our more than 18,000 employees. However, successful implementation of the company's transformation is the responsibility of our management members. They are role models for our employees. In addition to the Executive Board, they include the GEC and around 150 senior managers.

To demonstrate the Executive Board's commitment to GEA's climate strategy, the reduction of Scope 1 and Scope 2 emissions has been one of the Executive Board's long-term variable remuneration components since 2022 (Long-term Incentive, LTI). Starting in 2024, the reduction of Scope 3 emissions will also be included as an LTI component. The topic of sustainable product innovation is similarly linked to remuneration.

In addition, social aspects are taken into account in the Executive Board's annual bonus (Short-term Incentive, STI). In 2023, one of the three criteria-based modifier targets was the creation of greater transparency regarding employee turnover in order to improve employee retention. This target was refined in 2024 to include increasing employee reten-

tion and reducing staff turnover. Another goal is to improve occupational safety.

However, it is not just Executive Board remuneration that is linked to the successful implementation of our sustainability strategy. We went a step further in the reporting year to factor the reduction of greenhouse gas emissions along the entire value chain (Scopes 1 to 3) into the long-term remuneration also of the other GEC members (excluding the Executive Board). Additionally, our 150 top senior managers were incentivized based on the number of "Add Better" products (see also the ⌐ Sustainable Solutions chapter) in 2023. Starting from 2024, we will also reward revenue generated from the sale of "Add Better" products.

Alongside financial incentives, we focus on sharing knowledge about climate-related matters as well as honing the associated skills and expertise. In the year under review, the entire management team participated in an intensive two-day training course on sustainability.

Reduction of greenhouse gas emissions from own business processes (Scope 1 & 2, LTI)

Reduction of greenhouse gas emissions from the product portfolio (Scope 3, LTI)

Reduction of greenhouse gas emissions from own business processes (Scope 1 & 2, LTI)

Reduction of greenhouse gas emissions from the product portfolio (Scope 3, LTI)

Number of Add Better products

Revenue from Add Better products (special bonus)

2022　　2023　　2024　　…

■ Executive Board　　■ Global Executive Commitee[1]　　■ Top leadership team[2]

1) The Global Executive Committee (GEC) is the management body comprising the divisional and regional CEOs, Chief Sustainability Officer and the Chief Human Resources Officer, alongside the members of the Executive Board. The members of the GEC are involved in all strategic and operational matters and report to the CEO.
2) Comprises around 150 top managers.

The performance-related Executive Board remuneration components comprise a bonus or Short-term Incentive (STI) and a Long-term Incentive (LTI).

Short-term Incentive (STI)

The STI is a target bonus measured over a one-year performance period. Its purpose is to incentivize the Executive Board members to increase the financial value of the company as well as to implement the operational and strategic goals, which are redefined by the Supervisory Board each year. The STI therefore largely aligns with the "Pay for Performance" principle. The amount of the bonus awarded is initially based on the degree of attainment of the two equally weighted financial performance criteria EBITDA (earnings before interest, taxes, depreciation and amortization and impairment losses/reversals of impairment losses) and ROCE (return on capital employed), each adjusted for restructuring expenses and acquisition effects. In a second step, the amount calculated in this way is then multiplied by a criteria-based modifier. Depending on the level of target attainment, this ranges between 0.8 and 1.2, meaning that it can influence the bonus amount. The modifier is made up of several equally weighted criteria, which are also redefined each year by the Supervisory Board. This enables the latter to place an emphasis on the operational and strategic goals significant to the company, alongside the achievement of financial targets. Here, sustainability aspects play an important role for the Supervisory Board.

The Supervisory Board had set the following modifier targets for the 2023 STI:
- M1: Innovation – Milestones in the creation of a comprehensive innovation measurement system
- M2: GEA Digital – Successful market launch and scaling of digital services
- M3: Employee turnover/retention – Creating transparency and developing measures

The Supervisory Board has set the following modifier targets for the Executive Board for the 2024 STI:
- M1: Improvement of occupational safety
- M2: Increase in employee retention
- M3: Cash-Conversion-Rate (CCR)

Long-term Incentive (LTI)

The LTI is structured as a performance share plan with a four-year performance period. It incentivizes the Executive Board to take into account the company's long-term performance as early as in the current fiscal year. Together with the performance criteria relevant to the LTI, this means that the LTI particularly reflects the remuneration principle of "Sustainability and the long-term performance", i.e. that it is geared toward promoting the company's performance and increasing its value over the long term. In line with GEA's mission statement, ESG* aspects also play a central role here.

The amount paid out under the LTI depends on GEA's share price performance and the development of certain financial targets during the performance period. The structure of the financial targets reflects the particular significance of ESG-related aspects within GEA's strategic mission statement:

- 60 percent of the financial targets are determined from the development of the relative total shareholder return (relative TSR), whereby the TSR performance of the GEA share price is compared with the TSR performance of the DAX 50 ESG to determine target achievement. Using the DAX 50 ESG as a benchmark demonstrates GEA's desire to align itself with other companies that also prioritize the area of ESG.

- 40 percent of the financial targets are based on specific strategic goals. These are redefined by the Supervisory Board for each tranche awarded to the Executive Board for a fiscal year. These targets generally also comprise ESG targets to further demonstrate the importance of the sustainability strategy. Accordingly, the targets for the fiscal year 2022 and 2023 tranches include the following components:
  - 20 percent based on organic revenue growth.
  - 20 percent based on the reduction of Scope 1 and 2 greenhouse gas emissions.

The strategic targets for 2024 include the following components:
  - 20 percent based on sustainable product innovations.
  - 10 percent based on the reduction of Scope 1 and 2 greenhouse gas emissions.
  - 10 percent based on the reduction of Scope 3 greenhouse gas emissions.

Further information on this subject can be found in the GEA Remuneration Report 2023.

*) ESG stands for Environmental, Social and Governance

"Sustainability is crucial to our company's future viability and competitiveness. Every division and specialist department has a part to play. That makes it essential for the Supervisory Board to also address the multiple facets of sustainability. We take an integrated approach by assigning sustainability issues to the Supervisory Board committees based on their expertise."

Prof. Hans Dieter Kempf,
Chairman of the Supervisory Board of GEA Group Aktiengesellschaft

Sustainability on the Supervisory Board

According to the German Corporate Governance Code (GCGC), the Supervisory Board's skills and expertise profile shall also comprise expertise on sustainability issues of importance to GEA.

In accordance with the guiding principles of the German Stock Corporation Act, the Executive Board is responsible for drawing up the climate strategy and designing and developing the Climate Transition Plan as part of its original management duties. The Supervisory Board supports the Executive Board in an advisory capacity and considers sustainability issues an important aspect of its oversight function. Against this backdrop, the key elements of the Climate Transition Plan 2040, which was developed under the leadership of the Executive Board, were presented to the Presiding and Sustainability Committee as well as the full Supervisory Board, discussed with these bodies and, with Supervisory Board approval, resolved.

Given the broad scope of the topic of sustainability and its impact on a wide array of issues and areas, the Supervisory Board has consciously selected an integrated approach to ensure it is able to optimally perform its advisory and oversight function. Consequently, responsibilities for sustainability issues are divided within the Supervisory Board and its committees according to their respective competencies, instead of bundling the topic of sustainability in a separate sustainability committee.

In light of this, the full Supervisory Board regularly addresses key sustainability issues. Examples include the impact of climate change on the organization and its business model as well as GEA's Climate Transition Plan 2040. The Presiding and Sustainability Committee is generally responsible for more specific monitoring of and advice on the sustainability strategy, as well as fundamental environmental, social and corporate governance issues. Technical and product sustainability is assigned to the Innovation and Product Sustainability Committee. The Audit and Cybersecurity Committee is responsible for the areas of the Taxonomy Regulation and annual sustainability reporting. To ensure proper performance of the oversight function, the relevant specialist departments at GEA regularly report to the respective committees on current developments in the areas for which they are responsible.

In addition, the Supervisory Board members receive annual training on sustainability topics. In the reporting year, the Supervisory Board received risk management training, which covered climate risks and the introduction of the TCFD standard, among other subjects (see the Appendix for more detailed information on the TCFD). This topic was addressed in greater depth in February 2024. During a half-day training session, representatives from econsense and GEA's Chief Sustainability Officer informed the Supervisory Board about the existing and future requirements that a risk management approach needs to satisfy from a sustainability perspective. Regulatory matters such as the EU Taxonomy and the Corporate Sustainability Reporting Directive (CSRD), including the European Sustainability Reporting Standards (ESRS), were also covered. However, the main focus of the training was biodiversity and human rights – both in the supply chain and in our own operations.

APPENDIX
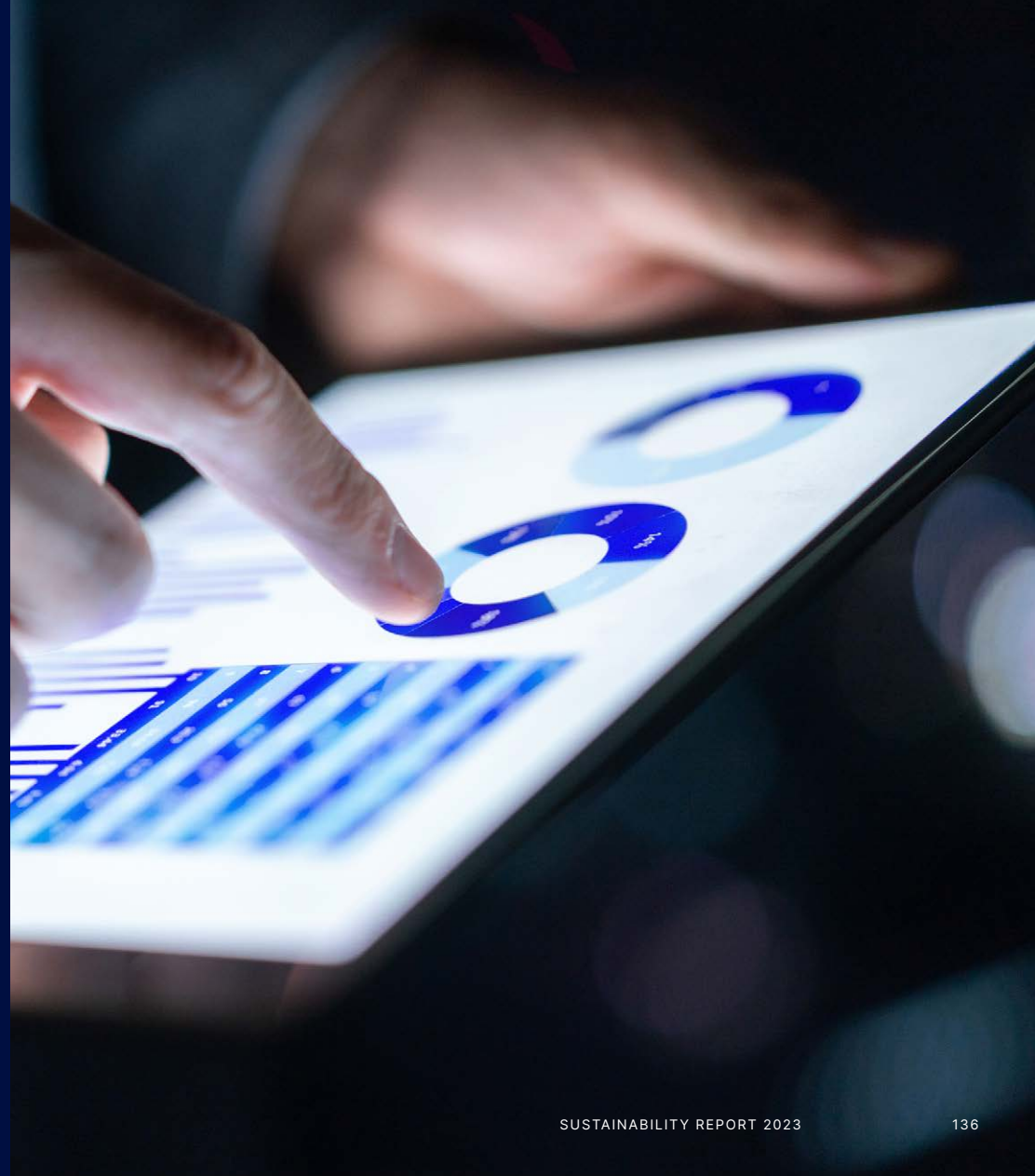
Reporting profile

With its Sustainability Report, GEA informs investors, customers, employees as well as independent institutions such as non-governmental organizations (NGOs) and all other interested parties annually about the implementation of sustainability as part of the corporate strategy with regard to ecology and social responsibility. Economic development is presented in detail in the current Annual Report. The Sustainability Report was prepared in accordance with the standards of the Global Reporting Initiative (GRI). The facts and figures presented in this Sustainability Report relate to fiscal year 2023 (January 1 to December 31). Unless otherwise indicated, the disclosures generally cover the global activities of the entire group, i.e. GEA Group Aktiengesellschaft and all companies over which GEA has control or can exercise significant influence.

Subsidiaries, associates and joint ventures that meet this definition are included in the list of investments in the notes to the consolidated financial statements in section 13.4 of the 2023 Annual Report. In addition to this Sustainability Report, we have published a non-financial statement in our 2023 Annual Report that meets the reporting requirements of the CSR-Richtlinie-Umsetzungsgesetz (CSR Directive Implementation Act) (section 315 in conjunction with sections 289c to 289e of the Handelsgesetzbuch [German Commercial Code]).

The Sustainability Report also serves as a progress report for the United Nations Global Compact. Further information on the topics presented in the Sustainability Report is available on the Internet at www.gea.com. The previous Sustainability Report was published in March 2023 and is still available on the Internet.

Facts and figures

Sustainability at GEA

Management systems

	Coverage rate 2023 (in %)	Number of certified Production sites 2023	Number of Production sites total*
DIN EN ISO 9001:2015	71	37	52
DIN EN ISO 14001:2015	58	30	52
DIN EN ISO 45001:2018	64	33	52
DIN EN ISO 50001:2018	8	4	52

*) Compared to the previous year, the number of production sites has decreased from 58 to 52: Two locations were sold (Quinto di Treviso, Italy and Klimovsk, Russia), one location (Romeoville, IL, USA) is no production site any longer, one site will not be certified until 2024 due to a relocation (Tianjin, China) and two locations are currently not certified by TÜV due to Russia's war of aggression.

ISO **9001** is the standard that specifies requirements for a quality management system. Organizations use the standard to demonstrate their ability to consistently provide products and services that meet customer and regulatory requirements. The standard also helps organizations to continually improve their quality management system.

ISO **14001** is the international standard that specifies requirements for an effective environmental management system (EMS). It is part of the ISO 14000 family of standards on environmental management.

ISO **45001** specifies requirements for an occupational health and safety (OH&S) management system and gives guidance for its use. It was published by the International Organization for Standardization in March 2018.

ISO **50001** specifies requirements for establishing an energy management system. The intended outcome is to allow an organization to continually improve its energy performance.

Employees[1]

Employees by contract type and gender

	Total employees		thereof permanent		thereof temporary	
	Number	in %	Number	in %	Number	in %
Male	15,003	79.9	14,201	75.6	802	4.3
Female	3,770	20.1	3,587	19.1	183	1.0
GEA total	**18,773**	**100.0**	**17,788**	**94.8**	**985**	**5.2**

Employees by contract type and region

	Total employees	thereof permanent		thereof temporary	
	Number	Number	in %	Number	in %
Germany, Austria, Switzerland	6,425	6,227	96.9	197	3.1
thereof Germany	6,250	6,054	96.9	196	3.1
Eastern Europe	833	737	88.4	97	11.6
Western Europe, Middle East & Africa	2,653	2,615	98.6	38	1.4
Northern and Central Europe	3,310	3,198	96.6	112	3.4
Asia-Pacific	3,051	2,466	80.8	584	19.2
North America	1,776	1,775	99.9	1	0.1
Latin America	725	725	100.0	–	0.0
Total	**18,773**	**17,743**	**94.5**	**1,030**	**5.5**

Employees by employment type and gender

	Total employees		thereof male		thereof female	
	Number	in %	Number	in %	Number	in %
Full-time	15,003	79.9	14,605	77.8	398	2.1
Part-time	3,770	20.1	3,100	16.5	670	3.6
Total	**18,773**	**100.0**	**17,705**	**94.3**	**1,068**	**5.7**

1) Full-time equivalents excluding apprentices and dormant employment relationships; excluding unconsolidated entities

Total workforce[1]

	12/31/2023	in %	12/31/2022	in %	Change absolut
GEA employees	**18,773**	**96.0**	**18,236**	**94.7**	**536**
external employees	789	4.0	1,018	5.3	-229
thereof contingent workers	714	90.5	915	89.8	-200
of which independent contractors	75	9.5	104	10.2	-29
Total	**19,562**	**100.0**	**19,255**	**100.0**	**307**

1) Figures based on full-time equivalents; rounding differences +/- 1 are possible
   Total employee capacity excluding apprentices and dormant employment contracts; excluding unconsolidated entities

Members of the governing bodies and employees by gender

	December 31, 2023	
in %	thereof male	thereof female
Supervisory Board	58.3	41.7
Executive Board	100.0	0.0
Top Management (reporting line 1 to 3)*	78.9	21.1
Middle Management (reporting line 4 and 5)*	83.9	16.1
Lower/Junior Management (reporting line 6 and 7)*	91.4	8.6
Management total (reporting line 1 to 7)*	83.6	16.4
Total employees	**79.9**	**20.1**

*) Reporting line to the Executive Board

Apprenticeships in Germany

	GEA 12/31/2023	GEA 12/31/2022
Apprentices	367	362
Apprenticeship rate (in %)	5.9	5.7

Total number and rate of new hires by region, age group and gender

December 31, 2023	Age <30			Age 30 – 50			Age > 50			GEA total		
	Male	Female	**Total**	Male	Female	**Total**	Male	Female	**Total**	Male	Female	**Total**
Germany, Austria, Switzerland												
Total number of new hires	101	33	**134**	35	11	**46**	235	77	**311**	370	121	**491**
Rate of new hires (%)	18.2	21.8	**18.9**	1.4	1.7	**1.4**	10.7	12.9	**11.2**	7.0	8.5	**7.4**
Eastern Europe												
Total number of new hires	29	14	**43**	10	5	**14**	58	27	**85**	97	45	**142**
Rate of new hires (%)	58.0	106.9	**68.0**	2.1	3.9	**2.5**	34.9	63.8	**40.8**	14.4	26.2	**16.8**
Western Europe, Middle East & Africa												
Total number of new hires	59	17	**76**	14	4	**18**	127	37	**164**	199	58	**257**
Rate of new hires (%)	30.2	33.6	**30.9**	1.1	1.2	**1.1**	18.4	20.4	**18.8**	9.2	10.2	**9.4**
Northern and Central Europe												
Total number of new hires	88	31	**119**	57	20	**77**	166	58	**225**	312	109	**421**
Rate of new hires (%)	40.8	60.7	**44.6**	4.5	6.7	**4.9**	13.5	20.1	**14.8**	11.5	17.0	**12.5**
Asia-Pacific												
Total number of new hires	84	25	**109**	5	1	**6**	159	47	**206**	248	73	**321**
Rate of new hires (%)	42.6	54.9	**44.9**	0.2	0.3	**0.3**	41.9	53.9	**44.1**	10.0	12.8	**10.5**
North America												
Total number of new hires	55	16	**71**	44	12	**57**	144	40	**184**	244	68	**312**
Rate of new hires (%)	85.2	111.9	**89.9**	6.9	9.1	**7.3**	19.7	25.8	**20.7**	17.0	22.2	**17.9**
Latin America												
Total number of new hires	46	30	**77**	4	2	**6**	64	42	**106**	114	75	**189**
Rate of new hires (%)	67.8	133.4	**84.1**	1.0	2.1	**1.3**	75.2	151.6	**93.9**	22.5	44.8	**28.0**
Total												
Total number of new hires	462	165	**628**	168	56	**224**	953	329	**1,281**	1,583	550	**2,133**
Rate of new hires (%)	34.3	47.6	**37.1**	2.0	2.6	**2.1**	17.4	23.8	**18.7**	10.4	14.3	**11.2**

Total number and rate of employee departures by region, age group and gender

December 31, 2023	Age <30			Age 30 – 50			Age > 50			GEA total		
	Male	Female	**Total**	Male	Female	**Total**	Male	Female	**Total**	Male	Female	**Total**
Germany, Austria, Switzerland												
Number of departures	48	12	**60**	109	28	**137**	140	36	**176**	297	76	**373**
Departure rate (in %)	8.6	8.1	**8.5**	4.3	4.1	**4.3**	6.4	6.1	**6.4**	5.7	5.4	**5.6**
Eastern Europe												
Number of departures	6	3	**9**	51	28	**79**	20	11	**32**	77	43	**120**
Departure rate (in %)	12.2	26.4	**15.1**	11.1	23.8	**13.7**	12.2	26.3	**15.1**	11.5	24.6	**14.2**
Western Europe, Middle East & Africa												
Number of departures	23	8	**31**	112	37	**149**	75	25	**99**	210	69	**279**
Departure rate (in %)	12.0	15.2	**12.7**	8.7	11.0	**9.2**	10.8	13.7	**11.4**	9.7	12.2	**10.2**
Northern and Central Europe												
Number of departures	44	15	**59**	124	41	**165**	110	36	**146**	278	92	**370**
Departure rate (in %)	20.5	28.7	**22.1**	9.7	13.6	**10.5**	8.9	12.5	**9.6**	10.2	14.3	**11.0**
Asia-Pacific												
Number of departures	37	7	**44**	194	38	**232**	45	9	**53**	275	54	**329**
Departure rate (in %)	18.7	15.8	**18.1**	10.2	8.6	**9.9**	11.8	10.0	**11.4**	11.1	9.4	**10.8**
North America												
Number of departures	18	4	**22**	63	14	**78**	122	27	**149**	203	46	**249**
Departure rate (in %)	27.5	28.8	**27.8**	9.9	10.4	**10.0**	16.7	17.4	**16.8**	14.2	14.8	**14.3**
Latin America												
Number of departures	11	4	**15**	49	17	**67**	12	4	**17**	72	26	**98**
Departure rate (in %)	15.8	16.8	**16.0**	13.9	15.0	**14.1**	14.4	15.8	**14.7**	14.2	15.4	**14.5**
Total												
Number of departures	187	53	**240**	702	203	**905**	524	149	**673**	1,413	405	**1,818**
Departure rate (in %)	13.9	15.2	**14.1**	8.3	9.6	**8.6**	9.6	10.8	**9.8**	9.3	10.5	**9.5**

Total number of departures

December 31, 2023	Number	in %
Voluntary employee departures	1,003	5.3
Involuntary employee departures	603	3.2
Retirement	207	1.1
Total	**1,813**	**9.5**

Job functions

December 31, 2023	Total		thereof employees		thereof executives	
	Number	%	Number	%	Number	%
Employees in revenue-generating functions	**10,749**	**100.0**	**9,242**	**100.0**	**1,507**	**100.0**
thereof male	9,703	90.3	8,292	89.7	1,412	93.7
thereof female	1,046	9.7	950	10.3	95	6.3
Employees in MINT functions	**8,935**	**100.0**	**8,078**	**100.0**	**857**	**100.0**
thereof male	8,127	91.0	7,320	90.6	806	94.0
thereof female	808	9.0	758	9.4	51	6.0
GEA employees – total	**18,773**	**100.0**	**16,299**	**100.0**	**2,474**	**100.0**
thereof male	14,998	79.9	12,931	79.3	2,067	83.6
thereof female	3,774	20.1	3,368	20.7	406	16.4

Internal vs. external hiring ratio

1/1/2023 – 12/31/2023	New hires	Hiring ratio
	Number	%
Management position hires	**369**	**100.0**
thereof external	125	33.9
thereof internal	244	66.1

Training

	2023
Average training hours per employee*	11.1
Average training costs per employee (in EUR)	1,194

*) related to full-time and part-time employees and contingent workers

Occupational health & safety

Work safety numbers[1]

per million hours worked	2023	2022
Lost Time Injuries[3]	217	197[2]
Accidents with sequence of death	1	1
Lost Time[4]	5,008	3,986
Lost Time Injury Frequency Rate[5]	5.14	4.98
Lost Time Injury Severity Rate[6]	119	101
Proactive Incident Rate[7]	509	317
Total Recordable Injury Frequency Rate[8]	**27.51**	**31.96**
Sites without occupational accidents with downtime, in percentage of all sites	75	74

1) Accidents and incidents are to be reported for all: GEA Employees, temporary employees, students/interns, trainees. Data is recorded manually and decentrally
2) The 2022 numbers have not been adjusted.
3) The number of work-related injuries with ≥ 1 day of lost time
4) Lost Days (full calendar days, without the day of the accident). GEA is counting Lost Days up to 182 days in accordance with the European Statistics on Accidents at Work (ESAW) since 2018.
5) The number of lost time injuries x 1,000,000 divided by the number of working hours in reporting period
6) The number of lost time days x 1,000,000 divided by the of working hours in reporting period
7) The number of other incidents (e.g. unsafe situations, unsafe acts, near misses) x 1,000,000 divided by the number of working hours in reporting period
8) The sum of lost time injuries without lost time x 1,000,000 divided by the number of hours in reporting period

Environmental protection

Greenhouse gas emissions[1]

in t CO_2e	2023	2022	Change to previous year in %	Change to base year 2019 in %
Scope 1: Direct greenhouse gas emissions	30,869	32,292	-4.4	-13.2
Scope 2: Indirect greenhouse gas emissions[2]	856	726	17.9	-97.3
Scope 1 and 2 greenhouse gas emissions total[2]	**31,725**	**33,018**	**-3.9**	**-53.0**
Scope 3.1: Purchased products and services[3]	1,229,447	1,220,912	0.7	-1.0
Scope 3.2: Capital goods[3]	50,174	17,764	182.4	183.6
Scope 3.3: Fuel and energy-related emissions (not in Scope 1 and Scope 2)	14,032	15,089	-7.0	4.1
Scope 3.4: transportation and distribution (upstream)[3]	162,664	109,493	48.6	39.2
Scope 3.5: Waste	1,129	906	24.6	3.7
Scope 3.6: Business travel[4]	15,392	12,464	23.5	-16.4
Scope 3.7: Employee commuting[5]	6,041	6,261	-3.5	-39.8
Scope 3.11: Use of sold products[6,7]	27,820,028	45,342,680	-38.6	-23.3
Scope 3: Total upstream greenhouse gas emissions	1,478,879	1,382,889	6.9	4.2
Scope 3: Total downstream greenhouse gas emissions	27,820,028	45,342,680	-38.6	-23.3
Scope 3: Total greenhouse gas emissions	**29,298,907**	**46,725,569**	**-37.3**	**-22.2**
Scope 1 – 3 total	**29,330,632**	**46,758,587**	**-37.3**	**-22.3**

1) Greenhouse gas emissions were calculated using the UK DEFRA 2019 to 2023 emission factors, where applicable.
2) Market-based emissions according to GHG Protocol Scope 2 guidance. Where no contract-specific emission factors were available, the Location based - NEW (IEA production mixes) (ID #3)- DEFRA 2023 Updated IEA 2022 emission factors were used. Scope 1 and 2 emissions calculated using the location-based method: 58,918 t CO_2e in 2023.
3) Emissions were calculated using a recognized input-output model, which is not subject to the limited assurance engagement of KPMG AG Wirtschaftsprüfungsgesellschaft. Based on a global impact analysis of sectoral and international supply chains, direct and indirect effects of corporate activities along the supply chain were determined, including the CO_2 emissions. GEA strives to continuously improve the accuracy of its CO_2 emissions calculation. As part of this, GEA updated and expanded the product taxonomy in the reporting year. The shift of purchasing volumes from Scope 3.1 to 3.2 has led to a sharp increase in reported Scope 3.2 emissions compared to the previous year. The updated allocation of emissions within the Logistics division has led to an increase in Scope 3.4 emissions.
4) Global air travel; rental cars for Europe and USA; travel by German rail estimated based on 2021. No Radiative Forcing Index is used
5) The calculation of the CO_2 emissions from employee commuting is done globally on a yearly basis by Business Excellence and Performance Management team, using the average FTE numbers from HR. The assumed share of commuting type is: Car - 69 % (68%), Public Transportation - 14 %, by Foot - 7 %, Bicycle - 11 %. An average commuting distance of 17.2 km and an office work rate of 70 % are assumed. Emission factors for Petrol, Diesel, local bus, light rail & tram (kg CO_2e/km) are used from DEFRA.
6) The Scope 3.11 emissions are based on the expected lifetime, the yearly runtime, the direct electricity, natural gas usage and refrigerant leakages and their respective emission factors of the products (not accounting for the electricity and natural gas used to generate the steam, the vacuum and the pressured air used by the products); these shall be based on assumptions and estimates by the product engineers and shall be reviewed by the product engineers of all divisions regularly. For the emissions of the use phase (3.11), an average service life of 20 (to be provided by SA) years was assumed for GEA machinery and equipment in 2023. Emissions calculated through direct consumption data with a coverage rate of 100 % for 2023. In the reporting year, GEA increased the calculation of Scope 3 emissions from 80 % to 100 % of product emissions, thus enabling maximum transparency. The historical figures have also been adjusted to make progress measurable; this includes the 2022 figure. The 2019 figure is 36,258,456 t CO_2e.
7) The reduction in emissions in 2023 compared to 2022 is mainly due to the decrease in units sold in some business units - mainly due to the lower order intake in the chemical business in LPT-APAC. As chemical applications have high energy consumption, especially many spray dryers sold for lithium refining/production in China, more so in 2021 and 2022 than 2023, this will also lead to a reduction in carbon emissions as reported for the period.

Greenhouse gas (GHG) intensity

	2023	2022
Ratio t CO_2e to EUR 1 million revenue	5,458	9,053

Direct greenhouse gas emissions (Scope 1)[1]

in t CO_2e	2023	2022	Change to previous year in %
Asia-Pacific (incl. China)	1,520	1,678	-9.4
Germany, Austria, Switzerland & Eastern Europe	14,957	17,573	-14.9
Northern and Central Europe	2,512	2,055	22.3
Latin America	8	8	5.0
North America	6,419	5,660	13.4
Western Europe, Middle East & Africa	5,453	5,319	2.5
Scope 1 total	**30,869**	**32,292**	**-4.4**

in t CO_2e	2023	2022	Change to previous year in %
Division Separation & Flow Technologies	8,925	10,257	-13.0
Division Liquid & Powder Technologies	2,421	2,448	-1.1
Division Food & Healthcare Technologies	6,678	6,741	-0.9
Division Farm Technologies	5,795	5,164	12.2
Division Heating & Refrigeration Technologies	2,315	2,466	-6.1
Global Corporate Center	4,735	5,216	-9.2
Scope 1 total	**30,869**	**32,292**	**-4.4**

Indirect greenhouse gas emissions (Scope 2)[1]

in t CO_2e, market-based	2023	2022	Change to previous year in %
Asia-Pacific (incl. China)	–	–	
Germany, Austria, Switzerland & Eastern Europe	181	237	-23.6
Northern and Central Europe	675	490	37.8
Latin America	–	–	
North America	–	–	
Western Europe, Middle East & Africa	–	–	
Scope 2 total	**856**	**726**	**17.9**

in t CO_2e, market-based	2023	2022	Change to previous year in %
Division Separation & Flow Technologies	–	–	
Division Liquid & Powder Technologies	668	490	36.3
Division Food & Healthcare Technologies[2]	–	–	
Division Farm Technologies	188	181	3.9
Division Heating & Refrigeration Technologies	–	56	-100.0
Global Corporate Center	–	–	
Scope 2 total	**856**	**726**	**17.9**

1) Greenhouse gas emissions were calculated using the UK DEFRA 2019 to 2023 emission factors where applicable. Market-based emissions according to GHG Protocol Scope 2 guidance. Where no contract-specific emission factors were available, the Location based - NEW (IEA production mixes) (ID #3)- DEFRA 2023 Updated IEA 2022 emission factors were used. Scope 2 emissions calculated using the location-based method: 28,049 t CO_2e in 2023.
2) Correction of the previous year's figure.

Energy consumption

in MWh		2023	2022	Change to previous year in %
Total energy consumption		229,869	243,498	-5.6
thereof electricity		83,727	90,825	-7.8
thereof self-generated electricity from photovoltaics		4,963	2,852	74.0
thereof electricity from renewable energies		78,764	87,973	-10.5
thereof electricity from non-renewable energies		–	–	
thereof district heating		4,766	4,253	12.1
thereof natural gas		99,567	108,026	-7.8
thereof heating oil		1,956	2,251	-13.1
thereof others[1]		39,853	38,143	4.5
Number of reporting sites		85	85	
Energy intensity (ratio MWh to EUR 1 million revenue)		42.8	47.1	-9.2
Tons of CO_2e per MWh		0.14	0.14	0.3[2]

1) Fossil fuels such as diesel, gasoline, kerosene.
2) 2022: 135.6 kg / MWh. 2023: 138.0 kg / MWh

Water

in m³		2023	2022	Change to previous year in %
Water withdrawal total		316,618	347,972	-9.0
thereof municipal water		263,322	289,566	-9.1
thereof groundwater		53,296	58,406	-8.7
Water discharge total		275,470	297,761	-7.5
thereof municipal waste water		251,908	283,193	-11.0
thereof wastewater treatment on site		23,562	14,568	61.7
Water consumption total[1]		41,149	50,210	-18.0
Ratio of water consumption to water withdrawal (in %)		13.0	14.4	28.9
Number of reporting sites[2]		83	84	-1.2
Water intensity (ratio m³ to EUR 1 million revenue)		58.9	67.4	-12.6
Water intensity (ratio m³ to 1 FTE)		17.0	19.2	-11.5

1) Total net fresh water consumption is composed by: Municipal water + Fresh ground water - Water returned to the source of extraction.
2) Decrease in the number of sites due to the sale of operations and site relocations.

Air emissions

in t		2023	2022	2021	Change to previous year in %[1]
NMVOC (non-methane volatile organic compounds)		52	44	44	18.2
NO_x (total nitrogen oxides)		210	221	224	-5.0
SO_x (total sulfur oxides)		134	174	187	-23.0
PM10 (particulate matter)		2	2	3	-11.4
PM2.5 (particulate matter)		8	9	9	-7.5
BC (black carbon, % of PM2.5)		4	4	4	-7.3
CO (Carbon Monoxide)		355	298	256	19.1

1) The figures for 2021 and 2022 and the changes compared to the previous year are not part of the audit by KPMG.

Waste

in t	2023	2022	Change to previous year in %
Waste generation total[1]	**13,089**	**13,437**	**-2.6**
thereof hazardous waste	896	904	-0.9
thereof non-hazardous waste	12,193	12,533	-2.7
Waste directed to disposal. non-hazardous[1]	1,705	1,391	22.6
thereof landfill	829	536	54.7
thereof incineration with energy recovery	855	847	0.9
thereof incineration without energy recovery	21	8	162.5
thereof other disposal operations[1]	–	–	
Waste directed to disposal. hazardous[1]	896	904	-0.9
thereof landfill	–	–	
thereof incineration with energy recovery	–	–	
thereof incineration without energy recovery	–	–	
thereof other disposal operations[1,2]	896	904	-0.9
Waste diverted from disposal. non-hazardous	10,488	11,142	-5.9
thereof preparation for re-use	–	–	
thereof recycling	10,488	11,142	-5.9
thereof other recovery operations	–	–	
Waste recovery rate (in %)[3]	93.4	96.0	-2.6
Recycling rate (in %)	80.1	82.9	-3.4
Number of reporting sites[4]	68	72	-5.6

1) Treatment off-site
2) Treatment of halogen-free machining emulsions and solutions and aqueous rinsing liquids.
3) Waste recovery rate = (Recycling plus incineration of non-hazardous waste directed to disposal with energy recovery plus other recovery operations of non-hazardous waste diverted from disposal) / Waste generation total. New reporting factories in e.g. US influenced the recovery rate.
4) Decrease in the number of sites due to the sale of operations and site relocations.

Composition of waste

in t	2023 Total waste generation	2023 Waste diverted from disposal[1]	2023 Waste forwarded to disposal	2022 Total waste generation	2022 Waste diverted from disposal[1]	2022 Waste forwarded to disposal
Household waste	1,706	–	1,706	1,391	–	1,391
Packaging material: paper, cardboard	–	–	–	678	678	–
Paper and cardboard	854	854	–	258	258	–
Packaging material: plastics	303	303	–	279	279	–
Packaging material: wood	1,735	1,735	–	1,835	1,835	–
Metal	7,595	7,595	–	8,093	8,093	–
Aqueous rinsing liquids containing hazardous substances[2]	446	446	–	432	432	–
Halogen-free processing emulsions and solutions[2]	450	450	–	473	473	–
Total	**13,089**	**11,383**	**1,706**	**13,437**	**12,046**	**1,391**

1) Total of waste directed to reuse through recycling plus hazardous waste for disposal through other disposal methods
2) Hazardous waste

Key indicators for waste

	2023	2022	Change to previous year in %
Ratio of hazardous waste directed to disposal to total waste generation (in %)	6.84	6.73	1.6
Ratio of waste recovery rate to total waste generation (in %)	93.40	95.95	-2.7
Total waste generation in tons per EUR 1 million revenue	2.40	2.60	-7.7
Total waste generation in tons per employee (full-time)	0.71	0.74	-4.1

Supply chain

Share of local procurement in total volume (in %)[1]

		2023	2022
Asia-Pacific		88	90
China		91	92
Germany, Austria, Switzerland & Eastern Europe		81	80
Latin America		93	93
North America		93	94
Northern and Central Europe		74	72
Western Europe, Middle East & Africa		92	84
Global		**85**	**83**

1) Excluding intragroup procurement (intralogistics)

Share of region of origin in total volume (in %)

		2023	2022
Asia-Pacific		6	6
China		5	6
Germany, Austria, Switzerland		39	38
Eastern Europe		3	5
Latin America		2	2
North America		15	12
Northern and Central Europe		14	17
Western Europe, Middle East & Africa		15	14
Global		**100**	**100**

Compliance

Number of reports

Category	Number of reports 2023	Number of reports 2022	Number of reports 2021
Compliance	21	18	21
Export controls	2	–	–
Data protection	2	1	–
Purchasing	–	–	–
Sustainability	–	–	–
QHSE	2	2	–
HR	11	4	2
Information Security	–	1	–
Human rights	–	–	–

Other

Cooperation with institutions

in EUR	2023	2022
Business federations with voluntary membership	1,058,079	1,037,997
Interest groups	198,069	261,000
Local, regional or national political campaigns/organizations/candidates	–	–
Other	51,000	46,000
GEA total	**1,307,149**	**1,344,997**

Donations in the current reporting year

in EUR	2023
Total	**1,187,476**
thereof top 3 major donations:	
BILD hilft e.V. "Ein Herz für Kinder"	300,000
Viva con Agua	250,000
Support for earthquake victims in Turkey	109,800

Type of charitable donations

in EUR	2023	2022
Financial donations	1,121,787	1,346,967
Donations of time (volunteering)[1]	48,258	–
Donations in kind	65,689	–
Management consulting	–	–

1) Average daily salary in Germany as of September 1, 2021

Other major expenditures in 2023

Organization name	Organization type	2023 in EUR
World Economic Forum	Business federation	213,249
German Mechanical Engineering Industry Association	Business federation	184,979
Accounting Standards Committee of Germany	Other	31,370

TCFD Report

TCFD | TASK FORCE ON CLIMATE–RELATED FINANCIAL DISCLOSURES

Governance

Since 2022, GEA has been following the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) in reporting on its approach to climate change. The TCFD was established by the Financial Stability Board in 2015 to develop a uniform framework for reporting climate-related financial impacts on companies. The framework covers climate-related risks and opportunities for businesses arising from the physical impacts of climate change or the transition to a lower-carbon economy. As part of our reporting to CDP (formerly Carbon Disclosure Project), we report annually on climate-related data, the associated strategies and corresponding transformation paths. In addition, we provide information on overarching climate-related issues in our annual and sustainability reports. How we address the challenges and opportunities related to climate change is described below in accordance with the TCFD structure and the four categories of governance, strategy, opportunity and risk management as well as metrics and targets.

Our governance structure ensures close involvement of the Executive Board and the highest management level in climate-related opportunities and risks. The full Executive Board is responsible for the climate strategy – and hence climate-related opportunities and risks. Stefan Klebert, CEO, is responsible for implementation of the climate strategy. All related activities and other sustainability issues are consolidated in the Sustainability department, which has a group-wide remit and is managed by the Chief Sustainability Officer (CSO), Dr. Nadine Sterley. GEA's CSO reports directly to the CEO and is a member of the Global Executive Committee (GEC), GEA's extended management body, which comprises the full Executive Board, the CEOs of the divisions and sales regions as well as the head of Human Resources. This committee meets monthly to address such matters as strategic and operational issues, including topics related to climate change. Under the leadership of the CSO, the cross-functional Sustainability Committee actively involves the global functions and the operating business units in implementing sustainability measures. Its responsibilities include all operational decisions regarding implementation of the climate strategy at cross-divisional and cross-

functional level. In 2023, updating our climate strategy was on the GEC's agenda several times. It primarily focused on raising our climate targets, obtaining Science Based Targets initiative (SBTi) validation for the targets and preparing the Climate Transition Plan 2040. This plan sets out the levers for achieving net-zero emissions along the entire value chain by 2040.

That includes, but is not limited to, the following topics:
- ongoing integration of the climate strategy, including the raised targets, into GEA's business model
- supervising implementation of the climate strategy in accordance with the Climate Transition Plan 2040 as well as the progress of the targets resulting from it
- monitoring the appropriateness of regular reporting to the GEC

The GEC adopted the following resolutions on climate-related issues in 2023:

- **Photovoltaics**: Since 2022, GEA has been continuously expanding the share of on-site generation of electricity from photovoltaic (PV) systems to reduce greenhouse gas emissions. Yet individual PV systems on rooftops or parking lots, such as those in Oelde (Germany), Suzhou or Tianjin (China), are not sufficient to achieve our goals because of their low capacities compared with the amount of electricity required. That is why, in 2023, GEA decided to finance the construction of a large, high-performance PV farm on its own land in Hachen, Germany, by 2026. With an area of over seven hectares and 18,000 solar collectors, this farm could supply more than 2,000 four-person households with electricity. For GEA, this means that we can generate up to 18 percent of our electricity requirements in Germany ourselves with this solar farm. Further information can be found on page 58.

- **Sustainathons – fostering forward-looking innovations**: 2023 was the Year of Innovation in Sustainability at GEA, during the course of which we launched what we call Sustainathons. This series of collaborative workshops brought together colleagues from all five divisions to work on implementing sustainable GEA solutions. More than anything else, these called for a completely new way of thinking. Sustainathons are events based on the hackathon principle in which interdisciplinary teams work in a short space of time to develop pioneering and disruptive innovations for sustainable solutions. The multi-stage workshops staged at five different sites were attended by 88 product developers, business development and sales employees as well as market and technology experts from all GEA divisions. Further information can be found on page 90.

- **Say on Climate**: Having positioned itself at the forefront of its industry two years ago with its ambitious climate strategy, GEA is now shifting up a gear and going a step further. By holding a "Say on Climate" vote, we are actively involving our shareholders in our transformation to a climate-neutral (net-zero) company, and thereby creating maximum transparency regarding our climate protection activities. At the Annual General Meeting in April 2024, GEA will voluntarily present the Climate Transition Plan 2040 to its shareholders and ask them to approve this plan in an advisory vote. This emphasizes our role as a pioneer when it comes to sustainability. GEA is the first member of the DAX index family (DAX: German stock market index) to hold a "Say on Climate" vote. Further information can be found starting on page 29.

In 2023, GEA's Supervisory Board was regularly informed by the full Executive Board about the development and implementation of the climate strategy, climate-related opportunities and risks and the preparation of the Climate Transition Plan 2040. In March 2024, the Supervisory Board approved the Climate Transition Plan 2040 drawn up by the Executive Board.

Climate-related opportunities and risks at the different levels of the group hierarchy are analyzed by the Risk Assessment and Advisory Committees (RAACs). More information can be found in the "Opportunity and risk management" chapter.

Strategy

GEA will be affected by the impact of climate change in the form of physical (including thunderstorms and rising sea levels, storm surges and precipitation stress) and transitory (including political and legal) risks. Equally, however, we will benefit from new market opportunities in connection with the decarbonization of the global economy. To deepen our proper understanding of the relevant climate-related opportunities and risks as well as to test the resilience of our strategy, GEA has analyzed scenarios for different time horizons. The scenario analysis was first conducted in 2022 with the involvement of a cross-functional team and based on external sectoral scenarios and studies. In 2023, these scenario analyses were updated and applied to additional GEA locations. This involved assessing the impact along the entire value chain, from procurement (such as steel, for example, as well as other upstream activities like logistics and distribution for raw materials and services) to markets (for example, downstream activities such as the use phase of our products, including the need for life cycle assessments and the introduction of circularity) in order to determine the market potential.

Scenario analysis

Time frame
In our overarching analysis of climate-related opportunities and risks, we distinguish between different time horizons comprising short-term (up to 2030), medium-term (up to 2040) and long-term (up to 2050) analyses. In our scenario analyses, we focused primarily on the medium- and long-term time horizons. Both horizons are consistent with GEA's 2040 Net Zero target as well as with regulatory requirements surrounding decarbonization that have a significant impact on transitory risks and generally cover the period up to 2050. At the same time, this time horizon fits well with the specific nature of physical climate change risks, which will increasingly crystallize over medium- to long-term time frames. Most established scenarios cover a period up to at least 2050.

Selection of scenarios and key messages
GEA has gone beyond the TCFD recommendation and conducted an analysis with three (rather than two) temperature scenarios that depict very different development paths in relation to climate change. One focuses on successfully transforming the economy, thereby limiting global warming to a maximum of 1.5°C compared with the pre-industrial era, in line with the goals of the Paris Climate Agreement, and thereby also curbing the increase in physical climate hazards. The second assumes limited success in transformation and adoption of additional climate policies, leading to a further increase in global temperatures by 2.7°C and significant physical climate hazards. The third assumes a continuous rise in greenhouse gas emissions until 2100, leading to a further increase in global temperatures by 4.3°C and therefore to the maximum potential impact of physical climate hazards.

Table 1: Key features of the selected IEA transition scenarios

	IEA NZE 2050	IEA Stated Policies
General scenario characteristics	A normative scenario that specifies a tailored pathway for the global energy sector to achieve net-zero CO_2 emissions by 2050. The scenario considers solely energy-related emission reductions to achieve the targets. It corresponds to the highest ambition level of the Paris Climate Agreement to limit global warming to 1.5°C.	An exploratory scenario according to current policy frameworks, based on a sectoral assessment of specific policies already in place (e.g., nationally determined contributions), as well as policies announced by governments worldwide and reflected in official targets and plans. This scenario reflects global warming by 2.7°C.
Underlying reports	IEA (2021): Net Zero by 2050. A Roadmap for the Global Energy Sector	IEA (2017): Energy Technology Perspectives IEA (2021): World Energy Outlook 2021
Core scenario narratives and impact drivers	Macroeconomic assumption: economic growth (GDP USD 320 trillion) and population growth to 9.7 billion people by 2050	
Political/Regulatory	Sharp increase in CO_2 costs for fossil fuels (USD 200–250/ton CO_2 by 2050).	Moderate increase in CO_2 costs for fossil fuels (USD 50–95/ton CO_2 by 2050).
Technologies and Markets	Transition to low-carbon technologies and strong demand for low-carbon products. Lower coal demand also affects the raw materials market (e.g. in steel production). The share of renewable energies in electricity generation reaches a global average of 88 percent by 2050.	Delayed transition from fossil fuel-based technologies and products to renewable energies. The share of renewable energies in electricity generation reaches a global average of 60 percent by 2050.
System boundaries	Focus on energy-related sectors (very limited information relevant to food sector), limitations apply in terms of data availability and granularity.	

Source: International Energy Agency (IEA)

Table 2: Most important characteristics of the selected IPCC scenarios

	RCP 2.6/SSP1-2.6[1]	RCP 4.5/SSP2-4.5[1]	RCP 8.5/SSP 5[1]
General scenario characteristics	IPCC scenario corresponding to the ambition level to limit the temperature increase to well below 2°C. The scenario describes a pathway in which significant reductions in emissions would occur as early as the 2020s. In this scenario, the emissions balance would already be net negative before the end of the 21st century.	Temperature increase by approx. 2.7°C This scenario describes a medium emissions pathway in which maximum greenhouse gas emissions are reached around 2040. Emissions then decline at a constant rate in the following years.	Business-as-usual scenario without significant climate mitigation measures, which assumes a temperature rise of 4.3°C. The RCP 8.5 projection describes a pathway with high greenhouse gas emissions. In this scenario, greenhouse gas emissions continue to grow until 2100. It assumes that no net-zero greenhouse gas emissions will be achieved up to the end of the century.
Underlying reports (by way of example)	Climate Change 2021: The Physical Science Basis. Working Group I Contribution to the IPCC Sixth Assessment Report		
Core scenario narratives and impact drivers	Moderate changes in the frequency of climate-related physical hazards. Although this scenario is associated with strong decarbonization, the impact of climate-related hazards such as floods or tropical cyclones would still increase. Global mean sea level rise of 44 cm by 2100. Extreme heat events would increase by a factor of 4.8.	Compared with the RCP2.6 scenario, the impacts of this scenario would be significantly greater due to the higher intensity of the physical hazards that occur. This refers to not only acute but also to chronic physical hazards. Global mean sea level rise of 56 cm by 2100. Extreme heat events would increase by a factor of 7.2.	In this scenario, the effects of physical climate hazards would be felt to the maximum. This is attributable to the projected continuous growth in greenhouse gas emissions. The effects of both acute and chronic physical climate hazards are assessed to be very high. Global mean sea level rise of 84 cm by 2100.
System boundaries	In particular, short- and medium-term physical climate hazards are subject to a measure of uncertainty and are of limited use in terms of financial quantification, since climate science usually considers periods of 30 years.		

Source: Intergovernmental Panel on Climate Change (IPCC)

The International Energy Agency's (IEA) Net Zero Emissions (NZE) 2050 scenario was selected as the dominant scenario to examine potential transitory risks of a 1.5°C increase in global temperatures. It was supplemented by selected studies, especially for the agricultural sector, which is not covered by the energy-focused IEA scenarios[2]. In addition, GEA took account of the IEA's Stated Policies scenario to assess the transitory impacts of 2.7°C global warming.

In 2023, the RCP8.5 Intergovernmental Panel on Climate Change (IPCC) temperature pathway scenario was used as the dominant scenario to examine the potential physical impacts of climate change at 4.3°C global warming. For comparison purposes, we used the IPCC's RCP2.6 and RCP4.5 scenarios, which respectively reveal the physical risks in a world with successful global warming mitigation consistent with the goals of the Paris Agreement and a world where success in transformation is limited and additional climate policy measures are adopted.

The tables 1 and 2 summarize the most important messages of the IEA and IPCC scenarios for medium- to long-term time horizons.

1) RCP: Representative Concentration Pathways, SSP: Shared Socioeconomic Pathways
2) See, among others, BCG (2021): Food for Thought: The Protein Transformation.

System boundaries of the scenario analysis

In conducting the scenario analysis, GEA ensured comprehensive coverage of the most important business activities along the entire value chain, including the key supplier industries and sourcing countries, the relevant production locations and countries as well as the key customer markets per operating business. All of these activities were assessed for relevant climate-related impacts.

Categories of risks and opportunities

We followed the TCFD classification with regard to the risk and opportunity categories we examined:

- Transitory risks were divided into the categories of political and legal risks, technology, market and reputation.
- In terms of physical risks, we make a distinction between acute and chronic risks. Acute risks arise from event-driven hazards, whereas chronic risks relate to long-term climate change. We analyzed climate-related hazard types; chronic risks include rising sea levels and, indirectly for all hazard types, rising temperatures, while acute risks include severe thunderstorms, storm surges, tropical cyclones, tornadoes, floods, droughts, heat waves and wildfires.
- The potential opportunities were classified into the dimensions of resource efficiency, energy sources, products and services, markets, and resilience.

Approach for identifying and assessing opportunities and risks

In the first step, GEA conducted a qualitative analysis of a 1.5°C, a 2.7°C and a 4.3°C scenario. This aimed to answer the question of what types of climate risks and opportunities could lead to significant impacts along our entire value chain in 2030 and 2050. For transitory impacts, we assessed the potential impact on the value chain of key scenario assumptions and influencing factors, such as CO_2 and energy costs, technology plans and market development. This took into account purchasing volumes and countries of origin, energy consumption profiles and cost structures of our production sites as well as key target markets.

The links in the value chain with potentially the highest physical risk were identified on the basis of physical risk profiles of those countries that are relevant for GEA Group's purchasing, production and sales activities. Taking into account hazard-related frequency change, we identified China, India, Germany and the USA as the countries relevant to us that could potentially be most affected by physical risks such as tropical cyclones, tornadoes, rising sea levels, storm surges and flooding. The analysis revealed that the focus of quantifying climate-related impacts should be on our production sites, as this is where the greatest potential losses are expected to occur.

In a second step, we performed an in-depth analysis of the opportunities and risks identified in order to assess and quantify the potential financial impact. For transitory risks, the first in-depth analysis focused on steel purchasing and the associated changes in production costs in relation to different steel production routes (primary and secondary) for all scenarios. Based on GEA's cost and purchasing structure for steel, the potential financial implications were derived, allowing for the sector-related climate scenarios. To investigate our potential market and product opportunities in the alternative proteins (new food) market with a sensitivity analysis, we considered various growth rates for the protein market from recognized studies depending on the regulatory environment, consumer behavior and technological development. The growth rates resulting from these external insights were combined with GEA's 2022 revenue in alternative food and protein applications. The third in-depth analysis on transitory impacts focused on demand changes in the heat pump market, with future scenario-based growth rates applied to GEA's current revenue for both scenarios. Subsequently, both the risks and opportunities resulting from the in-depth analysis were compared with GEA management's assessment.

The identified and assessed risks and opportunities are presented in the following respective dominant scenarios.

The three most significant climate-related transitory risks and opportunities in the 1.5°C scenario

	Possible risks in a 1.5°C scenario	Possible opportunities in a 1.5°C scenario	
Possible risks or opportunities for GEA identified in a 1.5°C scenario	(1) Rising steel prices	(2) Growth market for alternative proteins	(3) Growth market for industrial refrigeration and heat generation
TCFD risk or opportunity category	Political and legal risks Technology Market	Markets Products and services	Markets Products and services
Description of relevant risk and opportunity drivers in a 1.5°C scenario	The procurement costs for steel could increase due to alternative steelmaking methods for "green steel", e.g., with hydrogen-based furnaces or electric arc furnaces.	Socioeconomic impacts such as population and economic growth, as well as increased demand due to political measures, changes in consumer behavior and product innovation, could more than double global demand for protein products by 2035, leading to a market share of alternative protein products derived from plants, microorganisms and animal cells (from precision fermentation) of more than 20 percent[1].	The general global rise in demand for heat, technological progress and a regulatory framework to promote heat pumps as a climate-friendly way of generating heat are leading to a significant increase in the share of heat pumps in the supply of heat in process and district heating.
Time points observed	2030 and 2050	2025 and 2035[1,2]	2030 and 2050
Methodology for deriving potential financial impacts in a 1.5°C scenario and underlying assumptions	Potential financial impacts were derived based on GEA's cost and purchasing structure for steel in combination with the climate scenario, which takes into account the development of CO_2 costs and changes in steel production routes for different regions and time horizons. This assumed constant demand for steel. Strategic measures by GEA that would, for example, increase the share of climate-neutral steel were not taken into account.	Since the IEA does not focus on the agricultural sector, both food market growth and alternative protein market size were taken from studies to allow a sensitivity analysis to be performed. A breakdown of regional sales was used to model regional demand trends. The sensitivity analysis reflected the impact of different proportions of alternative protein products on the market in the results. Strategic measures by GEA that would, for instance, increase the market share for new food were not taken into account.	We used the IEA's net-zero emissions scenario to model overall growth in industrial demand for heat through 2050, and combined it with GEA's breakdown of current heat pump sales. Strategic measures by GEA that would, for example, increase the market share for heat pumps were not taken into account.
Possible financial impact in a 1.5 °C scenario (presentation of pure scenario effects without considering any management decisions by GEA)	Potential additional annual costs for the GEA Group (non-cumulative) compared with base year 2022 2030: EUR 5–10 million 2050: EUR 1–5 million Despite declining costs for coal in conventional steelmaking, the overall cost of steel production is rising due to the impact of the price of CO_2 and the introduction of new low-carbon technologies, such as carbon capture and storage (CCS), especially by 2030. For GEA, this could be reflected in temporarily higher procurement costs. Due to the market maturity of alternative steelmaking technologies after 2030, this effect declines in the period up to 2050.	Range of potential additional annual revenue (non-cumulative) compared with base year 2022[3]: 2025: EUR 25–100 million 2035[1]: EUR 350–750 million If GEA continues to enjoy the same market share in the growth of the market for alternative protein products, further revenue growth could be achieved by 2025 or 2035.	Range of potential additional annual revenue (non-cumulative) compared with base year 2022[3]: 2030: EUR 50–75 million 2050: EUR 125–175 million If GEA continues to enjoy the same market share in the growth of the market for heat pumps, further revenue growth could be achieved by 2030 or 2050.

	Possible risks in a 1.5°C scenario		Possible opportunities in a 1.5°C scenario	
Assessment of the probability of occurrence[4]	**2050: Possible**		**2035: Probable**	**2050: Probable**
Financial assessment of risks/opportunities[5]	**2050: Low**		**2035: Moderate to significant**	**2050: Low to moderate**
Evaluation by GEA of the results in a 1.5°C scenario	GEA continuously monitors the development of steel prices and also takes climate change-related changes into account. The steel market is currently subject to strong volatility for geopolitical and competitive reasons, so the scenario effects must be rated as not material. GEA is looking at sourcing green steel in the context of its "Net Zero 2040" strategy to reduce supply chain emissions and avoid transitory risks.		The new food business has been actively established and further expanded since 2021. GEA is aiming to steadily grow its market share and increase its revenue above and beyond the scenario results presented above.	GEA is actively expanding the heat pumps business in order to further increase market share and achieve revenue growth above and beyond the scenario results presented above.

1) BCG (2021): Food for Thought: The Protein Transformation
2) Different scenario period because of the underlying source: BCG (2021): Food for Thought: The Protein Transformation
3) Approximated based on market expectations (study-based) and current GEA market share
4) Assessment of probability of occurrence: **Unlikely**: ≥ 1%–25% | **Possible**: ≥ 26%–50% | **Probable**: ≥ 51%–75% | **Almost certain**: ≥ 76%–100%
5) Financial assessment (EBIT effect): **Low**: < EUR 20 million | **Moderate**: EUR 20–< EUR 70 million | **Significant**: EUR 70–< EUR 120 million | **Substantial**: ≥ EUR 120 million

With regard to physical risks and the selection of relevant locations, we considered several criteria, including location-specific revenue and insurance volumes, adequate coverage of business activities and broad geographical coverage, taking into account various types of hazards such as floods, tropical cyclones or forest fires. Based on this approach and the preceding qualitative analysis, which identified the most important risk countries, we identified 13 locations with potentially high physical risks in 2022. To derive the financial impact for these locations, we first considered property damage, including losses to buildings, inventory and equipment. Additionally, we included business interruptions due to extreme weather-related events or damage to infrastructure making production impossible. In 2023, the analysis of physical climate hazards was extended by six relevant locations. Potential climate-related physical hazards were examined and assessed in the RCP 8.5 scenario.

The three most significant climate-related physical risks in the 2.7°C scenario (corresponding to RCP 4.5)

Potential hazards for GEA identified in a 2.7°C scenario	(1) Flooding	(2) Tropical cyclones	(3) Rising sea levels
TCFD risk category	Acute physical risk	Acute physical risk	Chronic physical risk
Description of relevant risk and opportunity drivers in a 2.7°C scenario	In a 2.7°C scenario, extreme weather events such as flooding increase in frequency and intensity. This can lead to financial losses and business interruptions.	Rising air and ocean temperatures could increase the frequency and severity of tropical cyclones. This could result in further potential damage. Tropical cyclones occur in tropical and subtropical areas between the latitudes of 5° and 30°.	The increase in average global temperatures and the resulting melting glacial ice sheets lead to rising sea levels. This risk, in conjunction with potential flooding, may pose a threat, especially to coastal areas.
Time point observed	2050	2050	2050
Methodology for deriving potential financial impacts in a 2.7°C scenario and underlying assumptions	Results are based on a changing frequency of a once-in-a-century flood for the specific sites. Potential financial impacts pertain to event-related losses.	Location-specific results were derived from a mean one-minute maximum wind speed of a once-in-a-century event. Potential financial impacts pertain to event-related losses.	The location-specific results are composed of a steady rise in sea levels. The geospecific variable considered represents the mean annual water depth in coastal areas. Potential financial impacts pertain to event-related losses.
Possible financial impact in a 2.7°C scenario (representation of pure scenario effects without considering any management decisions by GEA)	Assuming that this event occurs in 2050, it could result in a potential revenue loss of EUR 50–150 million. The locations potentially most affected include, for example, Suzhou (China) and Büchen (Germany).	Assuming that this event occurs in 2050, it could result in a potential revenue loss of EUR 25–50 million. The locations potentially most affected include, for instance, Suzhou (China).	Assuming that this event occurs in 2050, it could result in a potential revenue loss of EUR 10–25 million. The locations potentially most affected include, for instance, Suzhou (China).
Assessment of the probability of occurrence[1]	**Unlikely**	**Unlikely**	**Unlikely**
Financial assessment of risks/opportunities[2]	**Low**	**Low**	**Low**
Evaluation by GEA of the results in a 2.7°C scenario	GEA assesses the existing protection measures at regular intervals and, if necessary, explores constructing added protection measures such as flood protection dams in order to minimize the impact of such a scenario.	GEA assesses the existing protection measures at regular intervals and, if necessary, explores constructing added protection measures such as flood protection dams and stormproof buildings in order to minimize the impact of such a scenario.	GEA assesses the existing protection measures at regular intervals and, if necessary, explores constructing added protection measures in cooperation with the local authorities in order to minimize the impact of such a scenario.

1) Assessment of probability of occurrence: **Unlikely**: ≥ 1%–25% | **Possible**: ≥ 26%–50% | **Probable**: ≥ 51%–75% | **Almost certain**: ≥ 76%–100%
2) Financial assessment (EBIT effect): **Low**: < EUR 20 million | **Moderate**: EUR 20–< EUR 70 million | **Significant**: EUR 70–< EUR 120 million | **Substantial**: ≥ EUR 120 million

The three most significant climate-related physical hazards in the 4.3°C scenario (corresponding to RCP 8.5)

Potential hazards for GEA identified in a 4.3°C scenario	(1) Tornado	(2) Storm surge	(3) Precipitation stress
TCFD risk category	Acute physical climate hazard	Acute physical climate hazard	Acute physical climate hazard
Description of relevant risk and opportunity drivers in a 4.3°C scenario	In a 4.3°C scenario, extreme weather events such as tornadoes increase in frequency and intensity. This can lead to financial losses and business interruptions. Tornadoes usually occur between the latitudes of 20° and 60°.	Storm surges occur along the coast when constantly high winds generate large waves, pushing high levels of water inland. Storm surges are also made more likely and intensified by higher sea levels. Storm surges can lead to financial losses – for example, in the form of damage to buildings – as well as business interruptions.	The increased frequency and intensity of precipitation stress by way of heavy rainfall events is most pronounced in a 4.3°C scenario. This can lead to financial losses and business interruptions if the heavy rainfall damages buildings or causes access roads to become impassable.
Time point observed	2050	2050	2050
Methodology for deriving potential financial impacts in a 4.3°C scenario and underlying assumptions	Results are based on meteorological data. A tornado map assessing the global situation was used to identify the risk. Potential financial impacts pertain to event-related losses.	Location-specific results refer to once-in-a-century events, the data basis for which also takes into account wind speeds and seabed depth. Potential financial impacts pertain to event-related losses.	The results are based on a combination of the different parameters related to heavy rainfall events. The data on precipitation duration, intensity and frequency is aggregated.
Possible financial impact in a 4.3°C scenario (presentation of pure scenario effects without considering any management decisions by GEA)	Assuming that this event occurs in 2050, there would be no revenue loss. The location most at risk is Northvale (USA).	Assuming that this event occurs in 2050, it could result in a potential revenue loss of EUR 25–50 million. The locations potentially most affected include, for instance, Suzhou (China).	Assuming that this event occurs in 2050, it could result in a potential revenue loss of EUR 5–10 million. The locations potentially most affected include, for instance, Suzhou (China).
Assessment of the probability of occurrence[1]	**Unlikely**	**Unlikely**	**Unlikely**
Financial assessment of risks/opportunities[2]	**Low**	**Low**	**Low**
Evaluation by GEA of the results in a 4.3°C scenario	The economic activities at the Northvale location will no longer be significant for GEA in 2050, as the value-added activities will by then have been relocated to another site for other operational reasons.	GEA assesses the existing protection measures at regular intervals and, if necessary, explores constructing added protection measures such as flood protection dams and stormproof buildings in order to minimize the impact of such a scenario.	GEA assesses the existing protection measures at regular intervals and, if necessary, explores constructing added protection measures in cooperation with the local authorities in order to minimize the impact of such a scenario.

1) Assessment of probability of occurrence: **Unlikely**: ≥ 1%–25% | **Possible**: ≥ 26%–50% | **Probable**: ≥ 51%–75% | **Almost certain**: ≥ 76%–100%
2) Financial assessment (EBIT effect): **Low**: < EUR 20 million | **Moderate**: EUR 20–< EUR 70 million | **Significant**: EUR 70–< EUR 120 million | **Substantial**: ≥ EUR 120 million

The material opportunities and risks relating to the GEA Group are presented in the Management Report included in the current Annual Report as an integral part of the Report on Opportunities and Risks. Taking into account the group's materiality, the analysis of physical risks in relation to the production locations considered did not reveal any material risks requiring mandatory presentation in the Annual Report because of the low financial impact associated with them.

The resilience of GEA's strategy

Maximizing opportunities in the context of decarbonization
while mitigating risks
As part of the scenario analysis and the transformation associated with a 1.5°C world, no material financial risks could be derived for the years 2030 or 2050. GEA's strategy of net-zero emissions by 2040 is a driver for greater energy efficiency, a shift to renewable energy and low-carbon fuels, carbon-neutral purchasing and a "green" product portfolio. We see this as a key contribution to minimizing our transition risks while positioning ourselves as a major provider of solutions for a carbon-neutral economy. At the same time, the net-zero strategy helps us counter potential reputational risks or increased financing costs associated with our climate impacts. With our product portfolio – notably our offerings in the fields of heat pumps and alternative proteins – we see fresh market opportunities that will help us grow sustainably in the coming decades.

Adaptation measures at location level
GEA has forwarded the results of the analysis to the representatives of the locations affected by physical risks in the 2.7°C and 4.3°C scenarios. Based on this, the current risk minimization measures were evaluated and next steps were defined on how to reduce the risks even better. This might include, for example, the installation of additional protective walls or a more closely knit exchange of information with the relevant authorities on protection and risk minimization plans already in place.

Opportunity and risk management

Analyze current external requirements
As a global company, GEA must keep up with the challenges of an increasingly complex, fast-moving economic and technological world. Accelerated globalization and intense international competition mean that we need to continuously adapt and innovate to ensure the long-term success of our company. Additionally, we face growing regulatory requirements at both national and international level, particularly in relation to corporate governance and adherence to financial market regulations.

In this context, implementation of the TCFD recommendations is a priority for GEA. The aim of these recommendations is to ensure transparent reporting of the financial impact of climate change. Compliance with new reporting requirements, such as those specified in the Corporate Sustainability Reporting Directive (CSRD), is another area of focus. GEA has established an interdisciplinary working group to effectively tackle these challenges. This working group coordinated by GEA's Chief Sustainability Officer and the Risk & Internal Control Management & Data Governance department optimizes the processes for identifying, assessing, defining and implementing measures to mitigate climate risks and leverage climate opportunities within the GEA Group. It also actively involves Procurement, Production and Sales from the operating and central business areas.

For GEA's business, which is predominantly characterized by multi-year projects and systems solutions as well as the processes aligned with them, we use an integrated approach to identifying, assessing, managing, communicating and reducing order risks as well as other operational and strategic opportunities and risks within the group. The aim of our group-wide opportunity and risk management system is to identify the key opportunities and risks in these core operating business areas at an early stage, adequately assess the financial impact, identify the measures to leverage opportunities and minimize risks as well as inform the relevant decision makers accordingly.

The organization, principles, framework conditions and responsibilities of our opportunity and risk management system are set out in a policy and are based on the international COSO II model.

Feedback loop for managing opportunities and risks in the group
Our opportunity and risk management system is established as a conti-nuous group-wide, active process that identifies, assesses, manages and monitors opportunities and risks. Derived from the concept of the opportunity and risk management cycle, the process is an integral component of GEA's value-based corporate governance.

Legal & Compliance	Financial	Operating	Strategic	Project	Sustainability	Other

Management of TCFD-related risks and opportunities: continuous cycle

1. Identification:

Identification of all relevant opportunities and risks

Clustering opportunities and risks by category

Assignment according to the cause-effect chain

4. Monitoring:

Ongoing monitoring of established risks and opportunities and identification of new risks and opportunities

Analysis of the **maturity** of measures to exploit opportunities and minimize risks

Identification

Evaluation

Reporting

Monitoring

Management

The risk and opportunity management cycle is a continuous process

2. Evaluation:

Determining the amount of potential reward or loss and probability of occurrence according to the **current and target method** and analysis of possible changes in the opportunity/risk situation over time

Quantification includes information on the cost of measures and provisions

3. Management:

Development and implementation of specific measures or revisions to current measures to exploit opportunities and manage risks

All operating and central business areas as well as GEA subsidiaries with majority shareholdings are required to review the status of the opportunity and risk situation every quarter (changes, additions, removal of opportunities and risks).

The opportunities and risks identified are continuously monitored by "opportunity and risk managers". In addition, measures are defined and implemented to leverage opportunities and manage risks.

Opportunity and risk coordinators support the opportunity and risk managers in their work. They ensure that the tasks arising from the opportunity and risk management processes are performed and that the management bodies responsible are provided with the relevant opportunity and risk information in a timely manner.

Risk Assessment and Advisory Committees (RAACs) were introduced to provide targeted information to the management bodies at the level of the various group hierarchies. On the one hand, these interdisciplinary bodies act as a multiplier to establish a sustainable opportunity and risk culture in the operating and central business areas. On the other hand, they ensure that complete and regular, up-to-date reporting is harmonized and optimized.

To identify opportunities and risks, we have defined reporting thresholds at different group levels (company/business unit/division/lead company), above which opportunities and risks must be included in regular reporting. As part of this process, quantifiable and qualitative opportunities and risks are systematically recorded and monitored for the current fiscal year and the medium-term period. In addition, ad hoc reporting is included when new risks arise or significant changes occur in previously identified risks. The trigger for an ad hoc report is when a materiality threshold is exceeded.

Enhancement of the opportunity and risk management system

At the same time, the TCFD categories for identifying opportunities and risks were integrated into the existing GEA categorization model. GEA has developed seven main categories for aggregating the opportunities and risks in the GEA Group. The TCFD categories were assigned to the main categories on the basis of their underlying nature and their level of association in the GEA categorization model. Potential financial impacts are marked with symbols (see graphic).

The opportunity and risk management system is continuously adapted to new regulatory requirements. In this context, our TCFD working group expanded the process for identifying and assessing potential long-term climate risks and opportunities in the reporting period by implementing qualitative and quantitative scenario analyses.

More information on opportunity and risk management can be found in the "Opportunity and risk management" section of GEA's 2023 Annual Report.

Our opportunity and risk management has sufficient flexibility for the TCFD categories to be integrated into our model. The decarbonization of the global economy is thus associated with the following opportunities and transition risks, among others:

Legal & Compliance	Financial	Operating	Strategic	Project	Other
Antitrust law	Exchange rates	Market	Legislative	Products/ technology	Other
Corporate liability	Interest rates	Products/ technology	Trends/ megatrends	Preliminary costing	
Corruption	Funding	Procurement	Portfolio & M&A	Execution	
Data protection	Ratings	Supply chain	Changes in regulations	Procurement	
Export controls	Taxes	Research & development	Process & structure	Supply chain	
Intellectual property	Foreign trade & customs duties	QHSE	Capital markets		
Litigation and conflict resolution	Solvency/ payment default	HR	Reputation		
Mining & legacy impacts	Accuracy of financial information	Information technology			
Product/ project liability		Information security			

GEA's extended categorization model including TCFD opportunity and risk categories:

Opportunities:

Resource efficiency   Energy sources   Products and services   Markets   Resilience

Transitional risks:

Political and legal risks   Technology   Markets   Reputation

Physical risks at the location:

Acute   Chronic

GEA's greenhouse gas balance

In 2023, GEA was responsible for the following greenhouse gas emissions:

Scope 1:
30,869 tons of CO$_2$ equivalent

Scope 2:
856 tons of CO$_2$ equivalent
(market-based method)

Scope 3:
29,298,907 tons of CO$_2$equivalent

A more detailed breakdown of greenhouse gas emissions and additional climate-relevant data can be found starting on ⊘ page 142.

Metrics and targets

Climate strategy, transformation plan and status
of target achievement
We have established interim targets in addition to the long-term goal of net-zero emissions by 2040 at every link in the value chain. Compared with the baseline year 2019, we aim to reduce our greenhouse gas emissions from our own operations (Scope 1 and 2) by 60 percent by 2026 and by 80 percent by 2030. We also aim to reduce our greenhouse gas emissions from upstream and downstream activities such as purchasing and product use by customers (Scope 3) by 27.5 percent by 2030. We defined our climate targets based on the ambitious goal of limiting global warming to a maximum of 1.5°C and had them successfully validated by the Science Based Targets initiative. You can find more information about our climate strategy in the ⊘ "Climate Strategy" chapter starting on page 28.

Our Climate Transition Plan 2040 focuses on energy efficiency, switching energy sources and the use of renewable energies in our own operations. Key action areas for successfully achieving our Scope 3 emissions targets include factoring climate impacts into supplier management and continuously improving the energy efficiency of our products. You can find more information about our Climate Transition Plan 2040 in the ⊘ "Climate Strategy" chapter starting on page 28 and in our ⊘ Climate Transition Plan 2040.

The status of target achievement with regard to greenhouse gas emissions from the company's own operations (Scope 1 and 2) can be found in the ⊘ "Responsible Operations" chapter starting on page 60 and in the ⊘ Appendix starting on page 142. The status of target achievement with regard to greenhouse gas emissions from upstream and downstream operations (Scope 3) can be found in the ⊘ Appendix starting on page 142.

Linking the remuneration of the Group Executive Board
to GEA's climate targets
In order to exert a controlling and guiding effect on the achievement of sustainability targets, in particular climate targets, GEA links the remuneration of the Group Executive Board and other executives to the degree of target achievement. The strategic goals that determine the LTI 2023 are, first, the reduction of greenhouse gas emissions and, second, organic revenue growth. The strategic goals thus support the target set by GEA itself as part of its climate strategy of reducing its own greenhouse gas emissions along the entire value chain to Net Zero by 2040.

You can find more information about the rules governing the remuneration of the Executive Board and other executives in the ⊘ "Corporate governance" chapter starting on page 133 as well as in GEA's 2023 Annual Report.

Sustainable Development Goals

The 17 Sustainable Development Goals (SDGs) are political objectives of the United Nations. They serve to ensure economically, ecologically and socially sustainable development worldwide and entered into force on January 1, 2016 for a term of 15 years (up to 2030). The 17 goals of the 2030 Agenda are directed at states, civil society, business, science and every individual. For more information on the SDGs, visit https://sdgs.un.org/goals.

No Poverty
Page

End poverty in all its forms everywhere. 78–80, 83–85

Zero Hunger

End hunger, achieve food security and improved nutrition and promote sustainable agriculture. 46–48

Good Health and Well-Being

Ensure healthy lives and promote well-being for all at all ages 44, 46, 47, 49, 65–68, 70–73, 109, 110

Quality Education

Ensure inclusive, equitable and high-quality education and promote lifelong learning opportunities for all. 101–104, 113

Gender Equality

Industry, Innovation and Infrastructure

Life Below Water

Clean Water and Sanitation

Reduced Inequalities

Life on Land

Affordable and Clean Energy

Responsible Consumption and Production

Peace, Justice and Strong Institutions

Decent Work and Economic Growth

Climate Action

Partnerships for the Goals

Linking SASB and GRI Standards

GEA sustainability reporting is carried out in accordance with the standards of the Global Reporting Initiative (GRI). Some of GEA's key stakeholders also use SASB standards. The Sustainability Accounting Standards Board (SASB) is a non-profit organization founded to develop standards for sustainability reporting. GRI and SASB Standards have different objectives and are based on different assumptions with regard to materiality. The two organizations have published a joint guide to share the experience of using both sets of standards. The two standards complement rather than replace each other. GRI supports broad and comprehensive disclosure of the impacts of organizations and SASB focuses on a subset of the financially material issues. The combined application of both standards can provide a holistic picture of corporate performance by bringing sustainability and financial information closer together. According to the SASB Standards, GEA is in the "Resource Transformation Sector"; the applicable industry standard is "Industrial Machinery & Goods". For more information on the SASB Standards, please visit https://www.sasb.org/

Linking SASB and GRI Standards

Topic	SASB Accounting Metric	Unit of Measure	Code	Note	GRI Standard(s)	Page
Energy Management	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable	Gigajoules (GJ), percentage (%)	RT-IG-130a.1	GEA discloses total energy consumption, thereof electricity, and thereof electricity from renewable sources. Furthermore, we disclose information on direct and indirect energy-related and other indirect greenhouse gas emissions (Scope 1–3)	GRI 302-1–5	39, 42, 53, 64, 65, 144
Employee Health & Safety	(1) Total recordable incident rate (TRIR), (2) fatality rate, and (3) near miss frequency rate (NMFR)	Rate	RT-IG-320a.1	In addition to the number of occupational accidents resulting in lost time or fatalities, we report on the accident frequency and severity rates as well as the rate of other incidents.	GRI 403-1–9	70–74, 56, 83, 84, 109, 110, 141
Fuel Economy and Emissions in Use Phase	Sales-weighted fleet fuel efficiency for medium- and heavy-duty vehicles	Gallons per 1,000 ton-miles	RT-IG-410a.1	The majority of GEA's machines and facilities are powered by electricity. Due to the wide variety of components and processes and notably the need to gather comprehensive operating data outside the company's own sphere of influence, it is not possible to obtain concrete global evidence of the entire product and service portfolio's climate footprint during its use phase. That is why we are working on extensions to climate reporting and carrying out internal projects to quantify greenhouse gas emissions along the entire value chain (Scope 1 and 2 as well as Scope 3, upstream/downstream). Additionally, in accordance with established standards such as the Avoided Emissions Framework, we rely on the concept of "Avoided Emissions". Avoided emissions result from the effect of a product on greenhouse gas emissions compared with the baseline situation without that product.	GRI 302-1–2, GRI 305-7	64, 65, 144
	Sales-weighted fuel efficiency for non-road equipment	Gallons per hour	RT-IG-410a.2			
	Sales-weighted fuel efficiency for stationary generators	Watts per gallon	RT-IG-410a.3			
	Sales-weighted emissions of: (1) nitrogen oxides (NO$_x$) and (2) particulate matter (PM) for: (a) marine diesel engines, (b) locomotive diesel engines, (c) on-road medium- and heavy-duty engines, and (d) other non-road diesel engines	Grams per kilowatt-hour	RT-IG-410a.4			
Materials Sourcing	Description of the management of risks associated with the use of critical materials	Discussion and analysis	RT-IG-440a.1	GEA discloses local procurement as a percentage of total volume and detailed information about conflict minerals.	GRI 308, GRI 414	77–79, 82–85
Remanufacturing Design and Services	Revenue from remanufactured products and remanufacturing services	Reporting currency	RT-IG-440b.1	In certain cases, we already offer to take back our products to refurbish them for additional years of operation. From 2026, the offer of reuse will also apply to selected service parts.	For general information on the subject, see Sustainable Solutions chapter	52–55

GRI 102-44

This overview shows which stakeholder groups found which topics most important:

Stakeholder group assessment of topic materiality

	Investors	Customers	Industry	NGOs/ civil society	Sustainability experts (scientists, consultants)	Employees
CO_2 emissions & decarbonization	•	•	•	•	•	•
Energy consumption	•		•		•	•
Waste management	•	•	•	•	•	
Water consumption	•	•		•	•	
Wastewater management				•		
Green logistics & transportation	•	•	•	•		•
Sustainable innovation & products		•	•		•	
Circular economy		•			•	
Product stewardship		•	•			
Sustainable procurement	•	•	•	•	•	•
Human rights				•		•
Diversity, inclusion & equal opportunity	•					•
Occupational health & safety		•				•
Talent acquisition & retention						•
Training & talent development						•
Business ethics & corporate responsibility	•	•		•		
Data protection & information security	•	•	•			•

GRI content index

Statement of use

GEA has reported the information cited in this GRI content index for the period 01/01/2023 – 12/31/2023 in accordance with the GRI Standards. The index indicates which indicators we address in the report and on which report page this information can be found.

GRI version used GRI 1: Foundation 2021

GRI STANDARD	Disclosure		Page/Comment
GRI 2: **General Disclosures 2021**	2-1	Organization details	Annual report
	2-2	Entities included in the organization's sustainability reporting	Annual report
	2-3	Reporting period, frequency and contact point	137, 166, 175
	2-4	Restatements of information	No corrections or restatements were made in the reporting period. Any corrections or restatements are reported at www.gea.com.
	2-5	External assurance	The Sustainability Report has not been externally audited.
	2-6	Activities, value chain and other business relationships	6-12, 41, 42, 52, 55, 75-85, annual report
	2-7	Employees	90-110, 138-141

GRI STANDARD	Disclosure		Page/Comment
	2-8	Workers who are not employees	119, 121, 139, 141, annual report
	2-9	Governance structure and composition	139, annual report
	2-10	Nomination and selection of the highest governance body	Annual report
	2-11	Chair of the highest governance body	135, annual report
	2-12	Role of the highest governance body in overseeing the management of impacts	130, 135, annual report
	2-13	Delegation of responsibility for managing impacts	117, 120, 122-124, 130-132, 148, annual report
	2-14	Role of the highest governance body in sustainability reporting	136
	2-15	Conflicts of interest	Annual report

GRI STANDARD	Disclosure		Page/Comment
	2-16	Communication of critical concerns	117-119
	2-17	Collective knowledge of the highest governance body	135
	2-18	Evaluation of the performance of the highest governance body	Annual report
	2-19	Remuneration policies	32, 106, 107, 133, 134, 160
	2-20	Process to determine remuneration	134, annual report
	2-21	Annual total compensation ratio	Annual report
	2-22	Statement on sustainable development strategy	19-24, 29-35, 38, 121, 122, 149
	2-23	Policy commitments	24, 79, 80, 84, 85
	2-24	Embedding policy commitments	20-24, 79, 84, 85, 93, 113, 116, 130-132, annual report
	2-25	Processes to remediate negative impacts	113, 118, 119, 120
	2-26	Mechanisms for seeking advice and raising concerns	118, 119
	2-27	Compliance with laws and regulations	118, 120, 121, 124, 146
	2-28	Membership associations	20, 21, 77, 116
	2-29	Approach to stakeholder engagement	4, 13, 19-22, 25, 29, 30, 32, 51-53, 55, 56, 63, 64, 66-68, 72, 73, 75-77, 116, 148-164
	2-30	Collective bargaining agreements	100, 106
GRI 3: Material Topics 2021	3-1	Process to determine material topics	25, 26
	3-2	List of material topics	25, 165
	3-3	Management of material topics	25, 26, 130-132, 135, 157-159

GRI STANDARD	Disclosure		Page/Comment
Economic Performance			
GRI 3: Material Topics 2021	3-3	Management of material topics	Annual report
GRI 201: Economic Performance 2016	201-1	Direct economic value generated and distributed	Annual report
	201-2	Financial implications and other risks and opportunities due to climate change	153-156
	201-3	Defined benefit pension plan obligations and other retirement plans	Annual report
	201-4	Financial assistance received from government	Information about financial support is not published.
Market Presence			
GRI 3: Material Topics 2021	3-3	Management of material topics	Annual report
GRI 202: Market Presence 2016	202-1	Ratios of standard entry-level wage by gender compared to local minimum wage	106, 107
	202-2	Proportion of senior management hired from the local community	Data is not collected.
Indirect Economic Impacts			
GRI 3: Material Topics 2021	3-3	Management of material topics	Annual report
GRI 203: Indirect Economic Impacts 2016	203-1	Infrastructure investments and services supported	Annual report
	203-2	Significant indirect economic impacts	This information is not being published.
Procurement Practices			
GRI 3: Material Topics 2021	3-3	Management of material topics	81, 82, 85
GRI 204: Procurement Practices 2016	204-1	Proportion of spending on local suppliers	146

GRI STANDARD	Disclosure		Page/Comment
Anti-corruption			
GRI 3: Material Topics 2021	3-3	Management of material topics	116-121
GRI 205: **Anti-corruption 2016**	205-1	Operations assessed for risks related to corruption	121
	205-2	Communication and training about anti-corruption policies and procedures	120
	205-3	Confirmed incidents of corruption and action taken	119
Anti-competitive behavior			
GRI 3: Material Topics 2021	3-3	Management of material topics	116-121
GRI 206: **Anti-competitive** **behavior 2016**	206-1	Legal actions for anti-competitive behavior, anti-trust and monopoly practices	119
Taxes			
GRI 3: Material Topics 2021	3-3	Management of material topics	Annual report
GRI 207: **Taxes 2019**	207-1	Approach to tax	The topic of taxes is a key element of responsible corporate management, with which organizations make a contribution to the economies of the countries in which they operate. We pursue a clear and transparent tax strategy, whereby profits are taxed in the countries in which they are generated (see also the Corporate Governance Statementin the Annual Report 2023). The most important stakeholders - in particular customers and investors - do not consider the issue of taxes at GEA as material. According to the German Commercial Code (HGB), this immateriality is due to the fact that the issue of taxes has no impact on non-financial matters and/or there is no business relevance.
	207-2	Tax governance, control and risk management	Annual report
	207-3	Stakeholder engagement and management of concerns related to tax	Annual report
	207-4	Country-by-country reporting	Data is not collected.

GRI STANDARD	Disclosure		Page/Comment
Materials			
GRI 3: Material Topics 2021	3-3	Management of material topics	50, 52-54, 130-132
GRI 301: **Materials 2016**	301-1	Materials used by weight or volume	Data is not collected.
	301-2	Recycled input materials used	54 A breakdown of the total weight into renewable and non-renewable materials is not yet possible for the Group as a whole. In the future, we intend to continuously increase the use of renewable materials and integrate their use into our calculation methods.
	301-3	Reclaimed products and their packaging materials	53-55
Energy			
GRI 3: Material Topics 2021	3-3	Management of material topics	61, 62, 130-132, 138
GRI 302: **Energy 2016**	302-1	Energy consumption within the organization	64, 144
	302-2	Energy consumption outside the organization	64, 144
	302-3	Energy intensity	144
	302-4	Reduction of energy consumption	64, 65
	302-5	Reductions in energy requirements of products and services	39, 42, 53, 64
Water and Effluents			
GRI 3: Material Topics 2021	3-3	Management of material topics	61, 65, 66, 130-132, 138
GRI 303: **Water and Effluents 2018**	303-1	Interactions with water as a shared resource	65, 66, 68, 88
	303-2	Management of water discharge-related impacts	66
	303-3	Water withdrawal	65, 66, 144
	303-4	Water discharge	66
	303-5	Water consumption	66, 144

GRI STANDARD	Disclosure		Page/Comment
Biodiversity			
GRI 3: Material Topics 2021	3-3	Management of material topics	61, 67, 130-132, 138
GRI 304: **Biodiversity 2016**	304-1	Operational sites owned, leased, managed in or adjacent to protected areas and areas of high biodiversity value outside protected areas	68
	304-2	Significant impacts of activities, products and services on biodiversity	67-68
	304-3	Habitats protected or restored	67-68
	304-4	IUCN (International Union for Conservation of Nature) Red List species and national conservation list species with habitats in areas affected by operations	67-68
Emissions			
GRI 3: Material Topics 2021	3-3	Management of material topics	26, 61, 62, 130-132, 138
GRI 305: **Emissions 2016**	305-1	Direct (Scope 1) GHG emissions	63, 64, 142, 143, 160
	305-2	Energy indirect (Scope 2) GHG emissions	63, 64, 142, 143, 160
	305-3	Other indirect (Scope 3) GHG emissions	63, 142, 160
	305-4	GHG emissions intensity	143
	305-5	Reduction of GHG emissions	16, 17, 21, 30, 33-35, 37-39, 42-45, 47, 48, 52, 55, 58, 59, 64, 65, 68, 83, 148
	305-6	Emissions of ozone-depleting substances	65, 144
	305-7	Nitrogen oxides (NO_x), sulfur oxides (SO_x), and other significant air emissions	65, 144

GRI STANDARD	Disclosure		Page/Comment
Waste			
GRI 3: Material Topics 2021	3-3	Management of material topics	61, 66, 138
GRI 306: **Waste 2020**	306-1	Waste generation and significant waste-related impacts	66, 145
	306-2	Management of significant waste-related impacts	66
	306-3	Waste generated	66, 145
	306-4	Waste diverted from disposal	145
	306-5	Waste directed to disposal	67, 145
Supplier Environmental Assessment			
GRI 3: Material Topics 2021	3-3	Management of material topics	78-82, 85, 130-132
GRI 308: **Supplier Environmental** **Assessment 2016**	308-1	New suppliers screened using environmental criteria	82, 83, 85
	308-2	Negative environmental impacts in the supply chain and action taken	77-79, 84
Employment			
GRI 3: Material Topics 2021	3-3	Management of material topics	93, 130-132
GRI 401: **Employment 2016**	401-1	New employee hires and employee turnover	94, 139, 140
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Company benefits are offered to all employees, whether full-time, part-time or temporary.
	401-3	Parental leave	105
Labor/Management Relations			
GRI 3: Material Topics 2021	3-3	Management of material topics	93, 130-132
GRI 402: **Labor/Management** **Relations 2016**	402-1	Minimum notice period regarding operational changes	The legally prescribed deadlines are met.

GRI STANDARD	Disclosure		Page/Comment
Occupational Health and Safety			
GRI 3: Material Topics 2021	3-3	Management of material topics	70-73, 130-132, 138
GRI 403: Occupational Health and Safety 2018	403-1	Occupational health and safety management system	70, 72, 74, 138
	403-2	Hazard identification, risk assessment and incident investigation	73
	403-3	Occupational health services	71
	403-4	Worker participation, consultation and communication on occupational health and safety	73, 109, 110
	403-5	Worker training on occupational health and safety	72
	403-6	Promotion of worker health	109, 110
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	56, 70-73, 83, 84
	403-8	Workers covered by an occupational health and safety management system	The occupational health and safety management system covers all GEA workplaces.
	403-9	Work-related injuries	74, 141
	403-10	Work-related ill health	Data is not collected.
Training and Education			
GRI 3: Material Topics 2021	3-3	Management of material topics	93, 130-132
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	141
	404-2	Programs for upgrading employee skills and transition assistance programs	90, 91, 101-104
	404-3	Percentage of employees receiving regular performance and career development reviews	102

GRI STANDARD	Disclosure		Page/Comment
Diversity and Equal Opportunity			
GRI 3: Material Topics 2021	3-3	Management of material topics	93, 130-132
GRI 405: Diversity and Equal Opportunity 2016	405-1	Diversity of governance bodies and employees	96-99
	405-2	Ratio of basic salary and remuneration of women to men	97, 106
Non-discrimination			
GRI 3: Material Topics 2021	3-3	Management of material topics	79, 85, 93, 117, 130-132
GRI 406: Non-discrimination 2016	406-1	Incidents of discrimination and corrective action taken	Data is not collected. 118, 146
Freedom of Association and Collective Bargaining			
GRI 3: Material Topics 2021	3-3	Management of material topics	93, 130-132
GRI 407: Freedom of Association and Collective Bargaining	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	77-86, 112-115
Child Labor			
GRI 3: Material Topics 2021	3-3	Management of material topics	80, 85, 130-132
GRI 408: Child Labor 2016	408-1	Operations and suppliers at significant risk for incidents of child labor	77-86, 112-115
Forced or Compulsory Labor			
GRI 3: Material Topics 2021	3-3	Management of material topics	80, 85, 130-132
GRI 409: Forced or Compulsory Labor 2016	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	77-86, 112-115
Security Practices			
GRI 3: Material Topics 2021	3-3	Management of material topics	112-115, 130-132
GRI 410: Security Practices 2016	410-1	Security personnel trained in human rights policies or procedures	112-115, 130-132

GRI STANDARD	Disclosure		Page/Comment
Rights of Indigenous Peoples			
GRI 3: Material Topics 2021	3-3	Management of material topics	130-132
GRI 411: **Rights of Indigenous Peoples** **2016**	411-1	Incidents of violations involving rights of indigenous peoples	No incidents were reported.
Local Communities			
GRI 3: Material Topics 2021	3-3	Management of material topics	130-132
GRI 413: **Local Communities 2016**	413-1	Operations with local community engagement, impact assessments and development programs	Data is not collected.
	413-2	Operations with significant actual and potential negative impacts on local communities	GEA did not undertake any business activities that had a negative impact on local communities during the reporting period. We have the claim to work in dialog with local communities to reach a mutually beneficial outcome for all.
Supplier Social Assessment			
GRI 3: Material Topics 2021	3-3	Management of material topics	80, 81, 83, 85, 130-132
GRI 414: **Supplier Social Assessment 2016**	414-1	New suppliers screened using social criteria	82, 83, 85
	414-2	Negative social impacts in the supply chain and action taken	84, 85
Public Policy			
GRI 3: Material Topics 2021	3-3	Management of material topics	130-132
GRI 415: **Public Policy 2016**	415-1	Political contributions	147

GRI STANDARD	Disclosure		Page/Comment
Customer Health and Safety			
GRI 3: Material Topics 2021	3-3	Management of material topics	56, 130-132
GRI 416: **Customer Health** **and Safety 2016**	416-1	Assessment of the health and safety impacts of product and service categories	56
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	During the reporting period, no violations with health consequences occurred.
Marketing and Labeling			
GRI 3: Material Topics 2021	3-3	Management of material topics	56, annual report
GRI 417: **Marketing and** **Labeling 2016**	417-1	Requirements for product and service information and labeling	56
	417-2	Incidents of non-compliance concerning product and service information and labeling	There were no such violations during the reporting period.
	417-3	Incidents of non-compliance concerning marketing communications	There were no such violations during the reporting period.
Customer Privacy			
GRI 3: Material Topics 2021	3-3	Management of material topics	123, 124, 130-132
GRI 418: **Customer Privacy 2016**	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	124

PAI Indicators according to the SFDR (Sustainable Finance Disclosure Regulation) – Index

Mandatory indicators under the SFDR: Climate and other environmental-related indicators

#	Category	Indicator	Data requirements	Page/strategy/comment
1	Greenhouse gas emissions	Greenhouse gas emissions	Sum and individual values of scope 1-3 emissions	142-143, chapter climate strategy.
2	Greenhouse gas emissions	Carbon footprint	Scope 1-3 emissions per EUR million EUR	142-143, chapter climate strategy.
3	Greenhouse gas emissions	Greenhouse gas intensity	Scope 1-3 emissions per EUR million revenue	142-143, chapter climate strategy.
4	Greenhouse gas emissions	Companies active in fossil fuel sector	Active: Yes / No	6, 8-12, 36-56
5	Greenhouse gas emissions	Share of non-renewable energy consumption and production	As a percentage of total consumption/total production	144, chapter climate strategy.
6	Greenhouse gas emissions	Energy consumption intensity	Energy consumption in GWh per EUR million of revenue	144, chapter climate strategy.
7	Biodiversity	Activities negatively affecting biodiversity-sensitive areas	Activities existing: Yes / No	67-68: As part of the risk assessment of all sites carried out in the reporting year, two sites with a high biodiversity risk potential were identified, which must develop and implement a biodiversity strategy until the third quarter of 2024.
8	Water	Emissions to water	Tonnes of emissions to water	65-66, 144, analysis in progress.
9	Waste	Hazardous waste and radioactive waste ratio	Tonnes of hazardous waste generated	66-67, 145

Mandatory indicators under the SFDR: Social and employee, respect for human rights, anti-corruption and anti-bribery matters

#	Category	Indicator	Data requirements	Page/strategy/comment
10	Social and employee matters	Violations of UN Global Compact principles and Organisation for Economic Cooperation and Development (OECD) Guidelines for Multinational Enterprises	Violations: Yes / No	No, there are no violations. 20, 137: GEA is committed to the ten principles of the UN Global Compact. The sustainability report also serves as a progress report for the UN Global Compact of the United Nations.
11	Social and employee matters	Lack of processes and compliance mechanisms to monitor compliance with UN Global Compact principles and OECD Guidelines for Multinational Enterprises	Lack of processes and compliance mechanisms: Yes / No	No, there is no lack of processes and compliance mechanisms. 20, 79, 84, 85, 137
12	Social and employee matters	Unadjusted gender pay gap	Average unadjusted gender pay gap	14, 23, 94, 96, 107: GEA is fully committed to equality, including equality in pay. To this end, we have implemented mechanisms in many countries to prevent wage differences between genders.
13	Social and employee matters	Board gender diversity	Average ratio of female to male board members	21, 93: Until 2026, 21 percent of the positions in the top three management levels must be filled with women. In 2023, the figure was 21.1 percent (previous year: 18.6 percent). 139 table "members of the governing bodies and employees by gender"
14	Social and employee matters	Exposure to controversial weapons (anti-personnel mines, cluster munitions, chemical weapons and biological weapons)	Exposure to controversial weapons: Yes / No (sales / production)	Gea is not active in these sectors.

Additional voluntary climate and other environment-related indicators*

#	Category	Indicator	Data requirements	Page/strategy/comment
2	Emissions	Emissions of air pollutants	Tonnes of air pollutants equivalent	21, 65, 144
4	Emissions	Companies without carbon emission reduction initiatives	Initiatives/strategies existing: Yes / No	Yes, strategy and initiatives exist. Chapter climate strategy.
5	Energy performance	Breakdown of energy consumption by type of non-renewable sources of energy	Share of energy from non-renewable sources used broken down by each non renewable energy source	144
6	Water, waste and material emissions	Water usage and recycling	1. Amount of water consumed (in cubic meters) 2. Percentage of water recycled and reused	66, 144
7	Water, waste and material emissions	Companies without water management policies	Water management policies: Yes / No	Yes, existing. 65-66
8	Water, waste and material emissions	Exposure to areas of high water stress	Sites located in areas of high water stress without a water management policy: Yes / No	Although there are sites located in these areas, these sites have to implement a water strategy until 2026. 65-66

*) GEA reports selected, relevant aspects of the voluntary indicators.

Additional voluntary indicators for social and employee, respect for human rights, anti-corruption and anti-bribery matters[*]

#	Category	Indicator	Data requirements	Page/strategy/comment
1	Social and employee matters	Companies without workplace accident prevention policies	Prevention policies: Yes / No	Yes, prevention policies exist. Chapter Occupational Health and Safety.
2	Social and employee matters	Rate of accidents	Rate of accidents	74, chapter Occupational Health and Safety.
3	Social and employee matters	Number of days lost to injuries, accidents, fatalities or illness	Number of days lost to injuries, accidents, fatalities or illness	141
4	Social and employee matters	Lack of a supplier code of conduct	Supplier code of conduct exists: Yes / No	Yes, existing. 24
5	Social and employee matters	Lack of grievance/complaints handling mechanism related to employee matters	Lack of mechanism: Yes / No	No lack of mechanism. 118
6	Social and employee matters	Insufficient whistleblower protection	Insufficient protection: Yes / No	No insufficient protection. Protection exists. 118
9	Human Rights	Lack of a human rights policy	Lack of a human rights policy: Yes / No	No lack of a human rights policy, human rights policy exists. 112–115
10	Human Rights	Lack of due diligence	Lack of due diligence: Yes / No	No lack of due diligence. 112–115
11	Human Rights	Lack of processes and measures for preventing trafficking in human beings	Lack of processes and measures: Yes / No	No lack of measures. Non-acceptance of child or forced labor and human trafficking. 112–115
12	Human Rights	Operations and suppliers at significant risk of incidents of child labour	Significant risk of child labour: Yes / No	No significant risk of child labour. Non-acceptance of child or forced labor and human trafficking. 112–115
13	Human Rights	Operations and suppliers at significant risk of incidents of forced or compulsory labour	Significant risk of incidents of forced or compulsory labour: Yes / No	No significant risk of incidents of forced or compulsory labour. Non-acceptance of child or forced labor and human trafficking. 112–115
14	Human Rights	Number of cases of severe human rights issues and incidents	Number of cases	118: There were no reported human rights violations.
15	Anti-corruption and anti-bribery	Lack of anti-corruption and anti-bribery policies	Lack of policies: Yes / No	No lack of policies. Measures exist, also for suppliers. 82, 116–120
17	Anti-corruption and anti-bribery	Number of convictions and amount of fines for violation of anti-corruption and anti-bribery laws	Numbers of convictions and amount of fines for violations of anti-corruption and anti-bribery laws	119: No sanctions were imposed on GEA in the reporting period for violations of anti-corruption or money laundering regulations, antitrust law or data protection. GEA was not required to pay any significant fines (EUR 10,000 or more) for non-compliance with laws or regulations governing economic, environmental and social matters.

*) GEA reports selected, relevant aspects of the voluntary indicators.

Imprint

Note on forward-looking statements:
This report contains forward-looking statements about GEA Group Aktiengesellschaft, its subsidiaries and affiliates as well as the economic and political conditions that may affect GEA's business performance. All these statements are based on assumptions made by the Executive Board using the information available to it. Should these assumptions prove to be wholly or partly incorrect or should further risks arise, actual business performance may differ from that expected. No assurance can therefore be accepted for the accuracy of the statements.

Rounding:
Small differences may arise due to the commercial rounding of figures and percentages.

Note on the translation:
This Sustainability Report is a translation of the German report. The German version applies in case of any discrepancies between the two.