

Corporate Social Responsibility Report

2023

 CargoBeamer



Editorial

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Introduction

Dear readers,

Strategy

CargoBeamer, an ambitious player in the freight train industry, revolutionizes the transportation of semi-trailers across Europe. Our mission is to champion a modal shift, steering traffic away from the road and onto the rail, unlocking a multitude of advantages for both our clients and the environment. By embracing the transformative benefits of modal shift, CargoBeamer seeks to reshape the logistics landscape. As an environmental leader in intermodal transport, we stand aware of the profound economic and societal challenges associated with sustainable business practices.

Environment

In 2023, the European economy and particularly the rail industry have been severely impacted by the consequences of the ongoing conflict in Ukraine. Industry production and transport volumes declined, and fluctuations in the electricity market impacted the cost competitiveness of rail vs. road transports. Additionally, inflation and rising global interest rates have created a challenging financing environment for many businesses, including ours. Meanwhile, the urgent need to transition to renewable energy sources has become more evident than ever, and installation rates are on record heights.

Social

CargoBeamer has faced these challenges head-on by focusing on its most successful relations, gaining market share as a result. On the transalpine corridor,

Governance

we are now market leader for non-craneable units, offering three roundtrips per day. While the European intermodal market declined by 11%, we have managed to transport more units and enhance our operational efficiency and environmental impact. Moreover, we made substantial strides in our commitment to sustainability. This year marks the release of our third CSR report.

Our transports increased by 1%, which means a total CO₂ saving of 30,037 tons compared to road transport. This is 10% less than in the previous year, which is due to a higher share of traffic in Germany vs. France and a calculation methodology update by our partner EcoTransIT. With an average of around 82% savings vs. road transport in 2023, we contribute to the EU goal to reduce 90% CO₂ emissions in the transport sector by 2050. We continuously work on advancing, adjusting and improving our sustainability goals.

A major milestone for us in 2023 was enhancing our corporate governance by fostering a strong organizational culture and establishing clear strategies and objectives. We implemented a comprehensive risk management framework to better identify and manage potential challenges. Additionally, we started preparations for the European Sustainability Reporting Standards (ESRS), which will become mandatory for us for the 2025 business year. In order to diligently

prepare for this, we conducted a test run of a double materiality analysis in 2023, identifying risks, opportunities, and impacts for our business.

Looking ahead, we are confident that the promised public investments in rail infrastructure will set the foundation for profitable growth of the industry. A historic financing of the German railway infrastructure has been announced in August 2023: Firstly, an unprecedented level of investment was to be made in the railways, and secondly, for the first time, revenue from road tolls was to flow into rail expansion. While some of these measures had to be scaled back subsequently, we are confident that European lawmakers understood the importance of a vital and innovative rail industry to reach environmental targets. CargoBeamer is also a potential beneficiary of such policies, as we have applied for grant approvals for both our terminals in Kaldenkirchen and Domodossola.

This report, covering the reporting year 2023, reiterates our unwavering dedication to environmental protection, a core element of our strategy and the reason our shareholders invest in CargoBeamer. Our annual CSR report highlights our achievements, the obstacles we face, and our strategies to overcome them.

Sincerely,

Publisher Details

The CargoBeamer Executive Board

Nicolas Albrecht
Chief Executive Officer

Dr. Markus E. Fischer
Chief Financial Officer

Boris Timm
Chief Operating Officer

Dr.-Ing. habil. Hans-Jürgen Weidemann
Chief Technology Officer

¹In this document, the term CO₂ refers to all greenhouse gases (e.g. methane or nitrous oxide). For reasons of readability, we do not use the common term CO₂e.



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- CargoBeamer in Numbers
- ESG Highlights in 2023
- General Disclosure
- Material Topics

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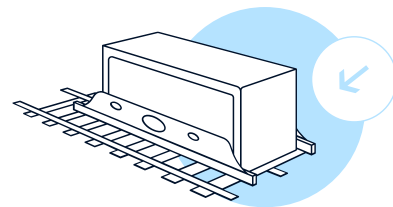
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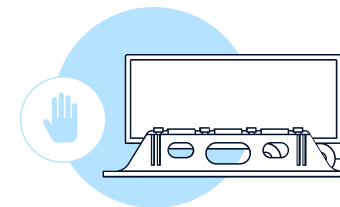
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CargoBeamer 2023 in Numbers



2

Terminals Operated



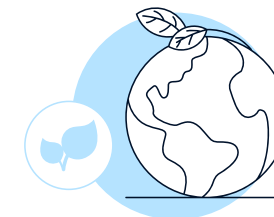
30,037 t

Saved CO₂ emissions
compared to road transport



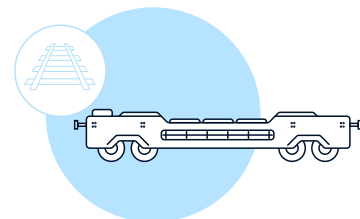
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Active Customers



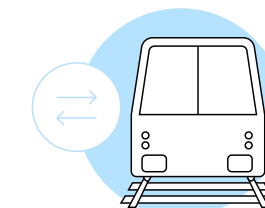
7,387 t

Compensated CO₂ emissions



354,508 GJ

Energy saved
compared to road transport



12.3 g

CO₂/tkm emissions

ESG Highlights in 2023

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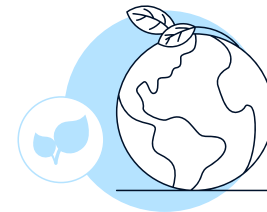
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Environmental Achievements

- **Calculated and Certified PCF & CCF**

We calculated and offset our product (PCF) and company carbon footprint (CCF) compliance with the Greenhouse Gas Protocol for the third time, achieving TÜV Nord Cert certification for net-carbon neutrality for the year 2023.

- **Preparation for ESRS**

With the ESRS regulation coming into force, we have been diligently preparing to meet these new requirements with the support of the AI-based sustainability reporting start-up Code Gaia, e.g., by conducting a double materiality assessment.

- **Monetizing ESG Benefits**

We realized significant revenue by participating in the French 'Certificats d'Economie d'Energie' (CEE) program. This framework rewards measures for energy efficiency. We benefit when purchasing or renting new railcars and using them in France.



Social Initiatives

- **Workforce Development**

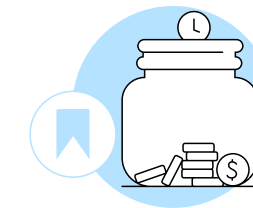
We continued to grow our diverse team and seamlessly onboarded 34 new employees. Our continuous headcount growth underscores our commitment to create a dynamic and inclusive workplace.

- **New Office in Frankfurt**

We reduced our footprint by moving to a new passive house office in Frankfurt, powered by 100% renewable energy. This new hub fosters collaboration and innovation, serving as a exchange platform for the logistics industry.

- **Support Services Enhancements**

To enhance operational efficiency, we launched an IT-Helpdesk and an HR-Infodesk. These services ensure timely resolution of technical issues and human resource inquiries, providing our employees with swift and effective support.



Governance Enhancements

- **Building up Legal and Compliance Department**

On the legal and compliance front, the addition of a Legal Counsel and Claim Manager has significantly strengthened our governance capabilities. Their expertise ensures more robust and effective handling of legal matters and claims.

- **Implementation of Risk Management**

As a growing company, we professionalized our risk management. Under the guidance of our newly appointed Risk Manager, we introduced a state-of-the-art risk management framework designed to identify and mitigate potential risks.

- **Implementing Governance Guidelines**

We implemented several new structures and guidelines to support our risk management and governance efforts. Key initiatives include the establishment of an Ombudsman's office and the introduction of a comprehensive Code of Conduct.

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General Disclosure

Introduction

Business Model

CargoBeamer offers an environmentally friendly system for combined transport, enabling the shipment of all kinds of semi-trailers by rail. The service targets logistics companies, freight forwarders, and large shippers across Europe. The CargoBeamer Group aims to reduce CO₂ emissions by establishing a network of routes and terminals in Europe. The company's value proposition is to provide an efficient and environmentally friendly alternative to the challenges of road freight transport - requiring only 20 minutes to load and unload a complete train while saving an average of 85% of emissions compared to road transport. We compensate for the remaining emissions with [Gold Standard](#) CO₂ certificates.

CargoBeamer has developed an innovative, system-open, and sustainable logistics concept, covering various service elements of a transport service in unaccompanied combined transport. Subsidiaries and second-tier subsidiaries of CargoBeamer AG cover production, ownership, and financing of special purpose vehicles for CargoBeamer railcars ('CB Railcars') and CargoBeamer road/rail transshipment facilities ('CB Terminals'). Additionally, CargoBeamer AG operates and further develops the digital logistics platform 'CB eLogistics'. We manage operations from our two office locations in Leipzig and Frankfurt, while our employees are based in four European countries, (Germany, France, Italy, and Spain).

Thanks to CargoBeamer's pioneering transshipment system, almost all semi-trailers commonly used in Europe can be transferred from road to rail, using specially designed baskets for CB Railcars.

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Semi-trailers are handled in a time-, energy-, and cost-efficient manner through parallel and automated horizontal loading in the CB Terminals. CB Railcars can be easily integrated into any intermodal freight train and loaded and unloaded in any conventional crane or reachstacker terminal. This means that CB Railcars are fully compatible with conventional combined transport, providing access to the market of non-craneable semi-trailers.

Organization and Shareholdings

CargoBeamer AG is the holding company and owner of the CargoBeamer patent and trademark rights. The patent groups cover the CargoBeamer cargo handling system, which includes the specific CB Railcar, the modular technology for road-rail transshipment called CargoBeamer GateModule technology, and the CargoBeamer CBoXX container, which is a high-volume rail container for the LTL market, that can be moved on a CB Railcar, ideally connecting automated warehouses.

CargoBeamer AG has overarching functions for the group. It is responsible for central areas, including Finance, Accounting, HR, Legal, IT, Sustainability, Controlling, and R&D. In addition, CargoBeamer AG develops business strategies and identifies new markets, including new terminal locations.

The Management Board of the AG is responsible for the operational management and strategic alignment of the group. It defines the company's goals and is responsible for achieving them with the help of management and control processes and available resources.

The business is divided amongst the following subsidiaries:

- CargoBeamer intermodal operations GmbH,
- CargoBeamer Rolling Stock GmbH,
- CargoBeamer Terminal GmbH,
- CB Rolling Stock Production GmbH,
- CargoBeamer International AG, and
- several financing companies.

CargoBeamer AG is the sole owner of the operational subsidiary companies, holding directly or indirectly 100% of their shares.

CargoBeamer intermodal operations GmbH acts as the central operator for transport services in Europe and is responsible for the commercialization of CargoBeamer's services. It is our group's interface to our customers. In 2023, our team managed operations on three routes throughout Germany, France, Switzerland and Italy.

CargoBeamer Rolling Stock GmbH is responsible for the management of the railcar fleet and serves as the Entity in Charge of Maintenance (*ECM*), maintaining and ensuring the safe condition of the railcars. This entity also oversees the leasing of the railcars to operators, such as CargoBeamer intermodal operations GmbH.

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CargoBeamer terminal possession entities such as CargoBeamer Terminal Domodossola Srl, CargoBeamer Terminal Calais SAS, and CargoBeamer Terminal Kaldenkirchen GmbH are responsible for the acquisition of land and construction of terminals and the receipt of terminal investment subsidies. In doing so, they make use of CargoBeamer AG's expertise in terms of content. In addition, there are **terminal operating companies** which, in each case, rent the terminal built and take care of the commission, operation, and maintenance. The first commercially operating CB Terminal is located in Calais, France.

In 2022, we launched our own CB Railcar production line in Erfurt, conducted by **CB Rolling Stock Production GmbH**. With this step, we vertically integrated

a part of our value chain that is of critical strategic importance and ensure a consistently high quality of our key technology. Individual CB Rolling Stock financing special purpose vehicles held by **CB Rolling Finanzierungsholding GmbH** are responsible for the acquisition and investments associated with the procurement of CB Railcars. CB Rolling Stock Financing GmbH acts as a holding entity for various financing vehicles involved in railcar procurement.

CargoBeamer International AG organizes the international business, with a particular focus on non-European regions. Its primary responsibilities encompass international acquisition, advisory consulting, and the establishment of partnerships.

In the reporting year, CargoBeamer International AG's joint venture, **CargoBeamer (Beijing) Rail Transportation Institute Co., Ltd.**, began exploring the market launch in China with a total of 7 employees. The first interim goal is to set up a pilot route with CargoBeamer technology in the medium term.

Furthermore, a newly founded company was added to the Group: **CB Rolling Stock Finance Poland 1 sp. z o.o.** is to be used in future for the purchase of CB Railcars and their leasing in relation to the Polish market.

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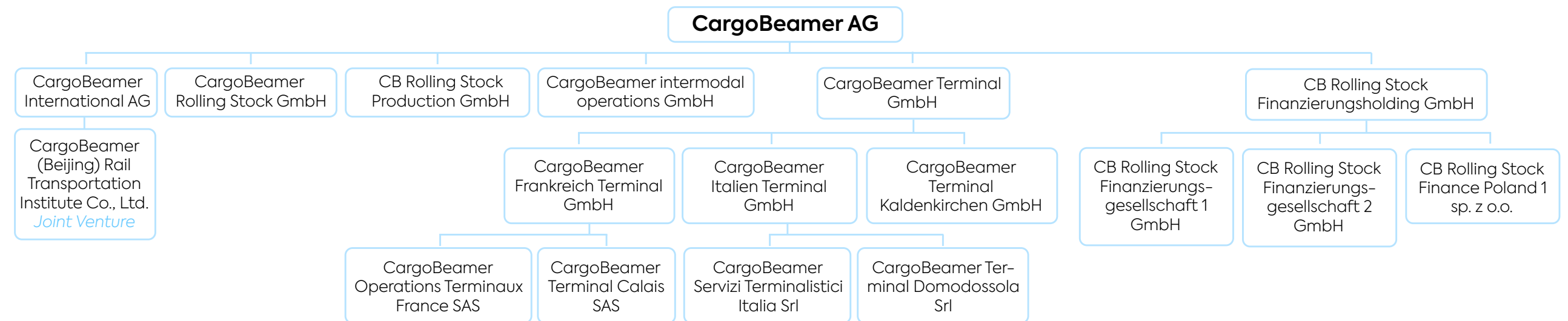
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Organizational Chart CargoBeamer AG as of 2023, end of year



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Material Topics

In 2023, CargoBeamer undertook an extensive materiality analysis to identify non-financial topics critical for the company. This assessment was based on the upcoming regulatory disclosure requirements applicable to CargoBeamer from 2025 onwards, the ESRS under the CSRD. Starting with these requirements and existing material topics, we developed a comprehensive longlist of potential ESG (environmental, social, and governance) topics, both negative and positive.

Workshops involving internal stakeholders and external experts from Code Gaia, a start-up specialized on AI-based sustainability reporting, which helped us to

pinpoint and validate the related impacts, risks, and opportunities of these issues. This dual-perspective analysis, focusing on both impact materiality and financial materiality, involved qualitative and quantitative assessments. In an obligatory stakeholder survey, we contacted about 150 external stakeholders (e.g., employees, shareholders, clients, financial institutions) for their input, and received responses from 43, which provided valuable insights.

For example, we identified the following substantial impacts:

Moreover, we identified risks and opportunities, predominantly in the environmental field, that are substantial for our business:

Market opportunities due to our climate-friendly profile, through easier access to funding and advantage in tenders and through profits from participating in carbon markets by reducing CO₂.

Market risks due to rising costs for (green) energy, transition costs (e.g., the purchase of electric terminal vehicles) and physical climate risks.

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For a company like CargoBeamer, which had sustainability and responsibility written in its DNA since the first day, reporting on our ESG initiatives is always a proud moment. In this report, we shed light on environmental, social, and governmental matters and measurements our organization has been guided by in 2023. We are excited to share our third CSR-Report this year, we are also looking forward to enhancing our initiatives to become an even more sustainable, high-performing, and responsible company by 2024 and onwards.

Nicolas Albrecht
Chief Executive Officer

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Substantial Material Impacts



Environment

Greenhouse gas emissions, emission reduction vs. road transport (both greenhouse gases and air pollutants).

Social

Health and safety (especially of our terminal workers), fostering diversity and equal opportunities, ensuring a good work-life-balance.



Governance

Promoting the development and maintenance of the corporate culture, setting strategies, and goals.



Strategy

Goals and Emission Monitoring

UN Social Development Goals Alignment

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Goals and Emission Monitoring

As an international company that has environmental protection at the center of its mission, CargoBeamer fully recognizes the challenges related to sustainability. Consequently, we have set ambitious sustainability goals encompassing environmental responsibility, social engagement, and corporate governance. Our mission is to actively contribute to sustainable practice by offering a net carbon-neutral product, promoting eco-friendly transportation solutions, enhancing air quality, and upholding our reputation as a high-quality employer. Given our business model, we particularly prioritize the examination of our CO₂ emissions².

Our goal is to reduce and compensate all our emissions including scope 3 by 2030.

As signatory of The Climate Pledge³, we committed to achieve net zero emissions by 2030 across all our scopes (1, 2 and 3). This target is 20 years ahead of the EU goal to reach net zero and 10 years earlier than The Climate Pledge requirements. Our objective in this context is to minimize CO₂ emissions wherever technologically and economically feasible, and to offset the remaining footprint by investing in high quality offsetting programs⁴.

In 2023, we conducted our fourth comprehensive carbon footprint analysis for both our company and our products. Our emissions are measured and reported in line with internationally recognized standards and

guidelines set by the Greenhouse Gas Protocol (GHG Protocol), ensuring consistency and transparency in greenhouse gas accounting and reporting. This allows us to benchmark our performance against industry standards and identify opportunities for emissions reductions. Our analysis covers the full scope of emissions associated with our activities, including:

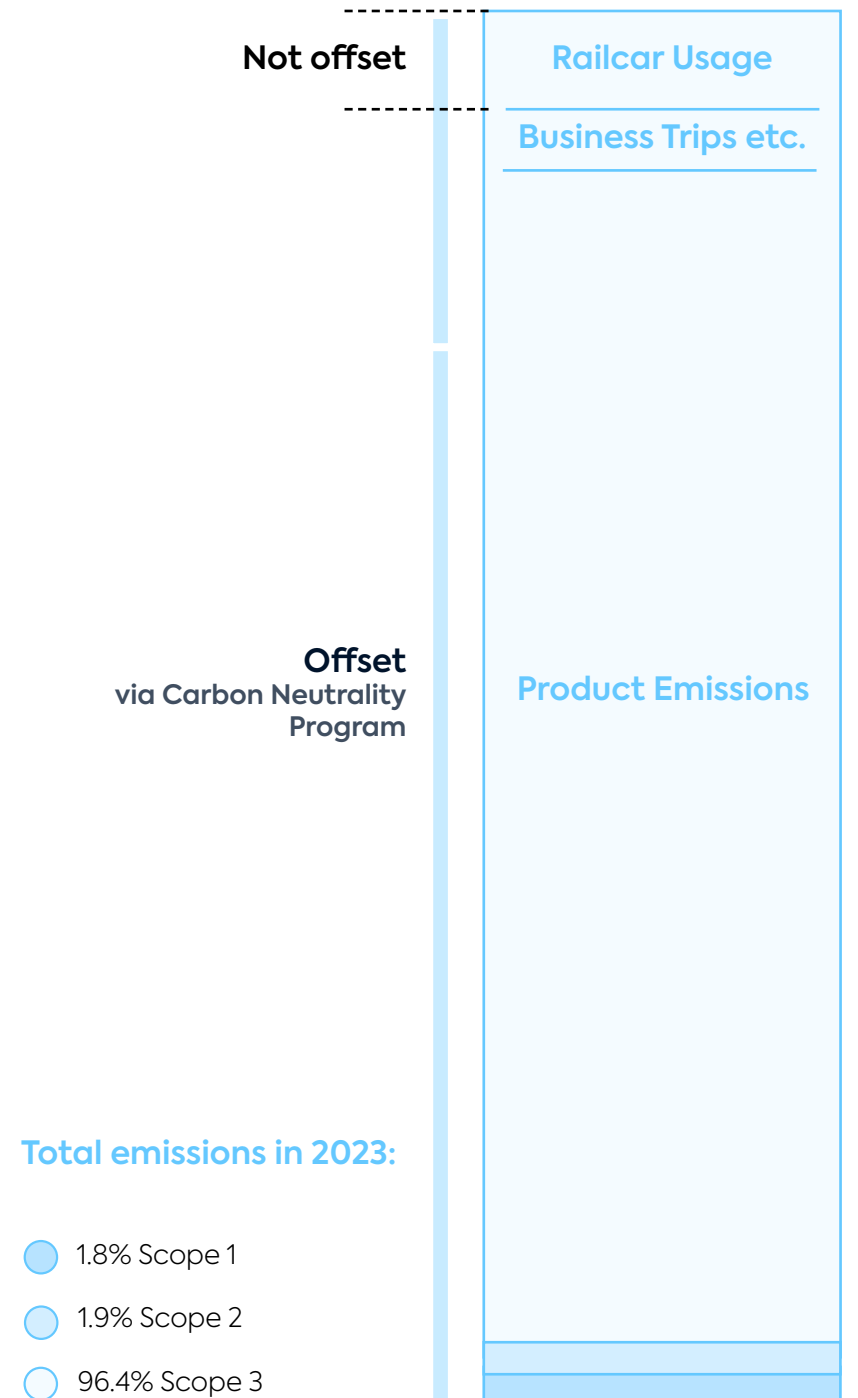
Scope 1 emissions: Direct emissions from sources owned or controlled by CargoBeamer, such as company vehicles, boilers, or other equipment.

Scope 2 emissions: Indirect emissions from the consumption of purchased electricity, heat, or steam (e.g. electricity at offices, terminal, or production sites).

Scope 3 emissions: All other indirect emissions that occur in our value chain, including traction current we purchase for moving goods via rail.

This year, our total emissions amount to 7,387 t CO₂⁵, equivalent to the average emissions of 923 German individuals⁶. Through our services, we have saved 30,037 t CO₂, equivalent to the emissions caused by around 3,755 German individuals.

Our 2023 footprint consists of 3.6% scope 1 and 2 emissions, with the remaining 96.4% being scope 3 emissions. We offset 96.1% of all our emissions (scope 1, 2 and 3), that is all emissions except for those for railcar



²Find more details on page 28.

³The Climate Pledge (2024): Signatories. <https://www.theclimatepledge.com/us/en/Signatories>. Last visit on July 29, 2024.

⁴Emissions are compensated via projects that meet the standards of the Gold Standard Foundation, a widely recognized certification body for carbon offsetting.

⁵Due to a lack of sufficient data, the carbon footprint of our 7 employees in China since 2023 is not yet included.

⁶The average CO₂ footprint of a German was 8 t CO₂ (location based) in 2022. See Global Carbon Budget (2023); Population based on various sources (2023) – with major processing by Our World in Data. <https://ourworldindata.org/grapher/co-emissions-per-capita>. Last visit on July 29, 2024.

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Goals and Emission Monitoring

usage, by retiring Gold Standard CO₂ certificates. The offset scope 3 emissions include, for example, traction energy emissions, terminal handling emissions, emissions from waste, commuting, travel, and other.

Our whole business model is centered around saving emissions. One semi-trailer that is moved from road to rail saves around 1 t of CO₂ on average (depending on distance, electricity mix, payload, etc.). Emission reductions are the most significant leverage to mitigate negative environmental impact within the industry. We want to increase the number of semi-trailers shifted to electrified railroads and, hence, reduce the overall transport emissions.

After collecting and analyzing datasets of our activities and related emissions, we have identified emissions as our most significant leverage to mitigate our own negative environmental impact of our operations. That is why we put a particular focus on the three sources of emissions that usually contribute to over 95% of our overall emissions:

1. Emissions from transportation (railroad current, shunting and terminal handling emissions at our own and third-party terminals),

2. Emissions from producing our rolling stock and
3. Emissions from building our terminals.

We prioritize reducing these emissions and implementing reduction measures as our primary goal. Our approach and achievements in this regard are described in the chapter *Environment*. The respective chapter also provides specific details on the measures we have already implemented towards the achievements.

Development of key KPIs in 2023 & YoY comparison

	Unit	2022	2023	Delta 2022-2023	Savings (2022)	Savings (2023)	Delta 2022-2023	Savings in % of Road Transport
CO₂ emissions (scope 1+2)⁷	(t)	272	277	2%	(n.a.)	(n.a.)	(n.a.)	(n.a.)
CO₂ emissions (scope 3, product)⁷	(t)	5,675	6,871	21%	33,340	30,037	-10%	83%
CO₂ (scope 3, other)⁷	(t)	1,778	278	-84%	(n.a.)	(n.a.)	(n.a.)	(n.a.)
Transport performance	(Mio. tkm)	662.2	556.9	-11%	(n.a.)	(n.a.)	(n.a.)	(n.a.)
CO₂/tkm	(g)	8.6	12.3	43%	(n.a.)	(n.a.)	(n.a.)	(n.a.)
Energy	(GJ)	276,940	234,275	-15%	345,134	373,167	8%	60%
SO_x	(kg)	7,235	7,988	10%	26,733	31,120	16%	77%
NO_x	(kg)	6,146	6,669	9%	34,732	33,411	-4%	84%
NMHC	(kg)	964	985	2%	11,949	11,801	-1%	92%
PM10	(kg)	1,185	1,226	3%	1,692	2,113	25%	58%

⁷ In order to ensure comparability over the years, the emission values in this table are presented without a safety buffer. All other CO₂ emission values presented in the report include a 0-10% safety buffer as we use a conservative calculation approach.

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Goals and Emission Monitoring

Here is an overview of the goals we have set ourselves in the areas E, S and G and their status in 2023. We are pleased that we are almost completely on track to achieve our targets.

Goals	Deadline	Status (2023)
Environment		
1. Develop a detailed plan in 2023 to reduce scope 1 and 2 emissions with specific milestones to be achieved by 2030.	2025	☑ Partially completed
2. Analyze and optimize the use of consumables in operations at our production facility and terminals.	2023	☑ Completed
3. Develop a concept for continuous optimization of emissions release during construction and life span of terminals.	2026	☑ Partially completed
4. Sustain a CB railcar recycling rate of at least 90%.	Ongoing	☑ Completed
5. Investigate electrified first and last mile transportation solutions.	2023	☒ Deprioritized
6. Investigate options for biodiversity-oriented design of terminal sites.	2023	☑ Completed
Social		
7. Maintain a work environment that attracts, retains, and develops talented and motivated employees.	Ongoing	☑ Completed
8. Promote diversity and inclusivity.	Ongoing	☑ Completed
9. Promote continuous training opportunities.	Ongoing	☑ Completed
10. Improve and further adapt our Occupational Health and Safety Management System.	Ongoing	☑ Completed
11. Participate in at least two community campaigns annually.	Ongoing	☑ Completed
Governance		
12. Strengthen the strategic integration of sustainability throughout the entire company and define timelines.	Ongoing	☑ Partially completed
13. Prepare for reporting requirements under the Corporate Sustainability Reporting Directive (CSRD).	2025	☑ Partially completed
14. Analyze and report on CargoBeamer's economic activities under the EU taxonomy in 2023.	2024	☑ Partially completed
15. Establish a comprehensive compliance system led by the General Counsel in 2023.	2023	☑ Completed
16. Implement ISO 27001 for our information security management system and maintain a high level of data security.	2023	☒ Deprioritized
17. Expand the company's internal helpdesk (intranet) to optimize support processes.	2023	☑ Completed
18. Develop a concept for continuous review of climate risks at all locations and plan adaptation measures.	2023	☑ Completed
19. Conduct information about importance of sustainability from customers perspective in regular surveys.	Ongoing	☑ Completed
20. Increase awareness for anti-corruption and human rights.	2023	☑ Completed
21. Implement professional company-wide risk management.	2023	☑ Completed
22. Implement the EU's NIS 2 Cyber Security Directive.	2024	● New Goal

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UN Social Development Goals Alignment

With the 2030 Agenda, the member states of the United Nations have developed a roadmap for *transforming the world for the better* in the sense of a sustainable transformation of society, the economy, and the environment by the year 2030. Part of the 2030 Agenda are 17 global Sustainable Development Goals (SDGs), divided into 169 sub-goals.

The goals can only be achieved if as many actors as possible get involved. CargoBeamer is committed to making a significant contribution. We particularly focus on SDG 13 by taking targeted measures to reduce and compensate for emissions in order to combat climate change. Additionally, we tackle SDG 9 by investing in innovative technologies and re-designing the transport sector. Furthermore, we contribute to the achievement of SDG 8 by ensuring fair and dignified working conditions for our employees and partners. Finally, we also support SDG 3 by promoting health, as we drastically cut emissions of particulate matter, SOx, NOx and NMHC.

Our efforts at CargoBeamer align most strongly with the following UN SDGs:

Climate Action

SDG 13 essentially provides for strengthening resilience and adaptive capacity to climate-related hazards, mainstreaming climate action into national policies, and enhancing human and institutional capacity in the area of climate change mitigation and adaptation.

Industry Innovation and Infrastructure

SDG 9 highlights the importance of innovative and resilient infrastructure. This is characterized by its reliability and sustainability to support economic development.

Decent Work and Economic Growth

SDG 8 aims for stable per capita economic growth and the decoupling of economic growth from environmental destruction. A subgoal is to achieve productive full employment under decent working conditions. Jobs should be free from forced labor, slavery, or child labor and safe in terms of compliance with the labor rights of all (migrant) workers.

Good Health and Well-being

SDG 3 aims to promote the health and well-being of people of all ages, with a specific goal of significantly reducing the number of deaths and illnesses caused by hazardous chemicals and pollution of the air, water, and soil.

CargoBeamer's UN SDGs Alignment⁸



⁸ United Nations, 2024: Social Development Goals. <https://www.un.org/sustainabledevelopment/>. Last visit on July 29, 2024.



Environment

Environmental Advantage from Rail over Road

Greenhouse Gas Emissions and their Reduction

Monetization of ESG Benefits

Resources and Circular Economy

Energy Consumed

Biodiversity

EU Taxonomy

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Environmental Advantage from Rail over Road

Rail transport offers inherent benefits over road transport:

1. Rail has an average of 85% less CO₂-emission per ton kilometer compared to road due to >50% less energy demand and high share of green electricity.
2. Steel on steel causes much less friction compared to rubber on concrete. Smoother operation not only results in energy savings, but also reduces wear and tear.
3. The aerodynamics of trains provide an edge over road transport, as one train has much less wind resistance compared to the trucks necessary to move the same number of trailers on the road.
4. Railways are generally engineered with gentler gradients compared to roads, making it easier for trains to traverse the landscape, resulting in further energy savings and less strain on the environment.

At CargoBeamer, sustainability is central to our mission. To measure our product carbon footprint, we integrated a calculation tool of EcoTransit, industry leader for calculating emissions in the logistics sector into our eLogistics software. To protect the climate to the fullest extent, we walk the extra mile and compensate for our remaining emissions by investing in [Gold Standard](#) certificates emissions, supporting for example projects for renewable energy in Asia and cooking stoves in Africa. For the reporting year, we compensated 7,387 t CO₂ for our Product and Company Carbon Footprint.

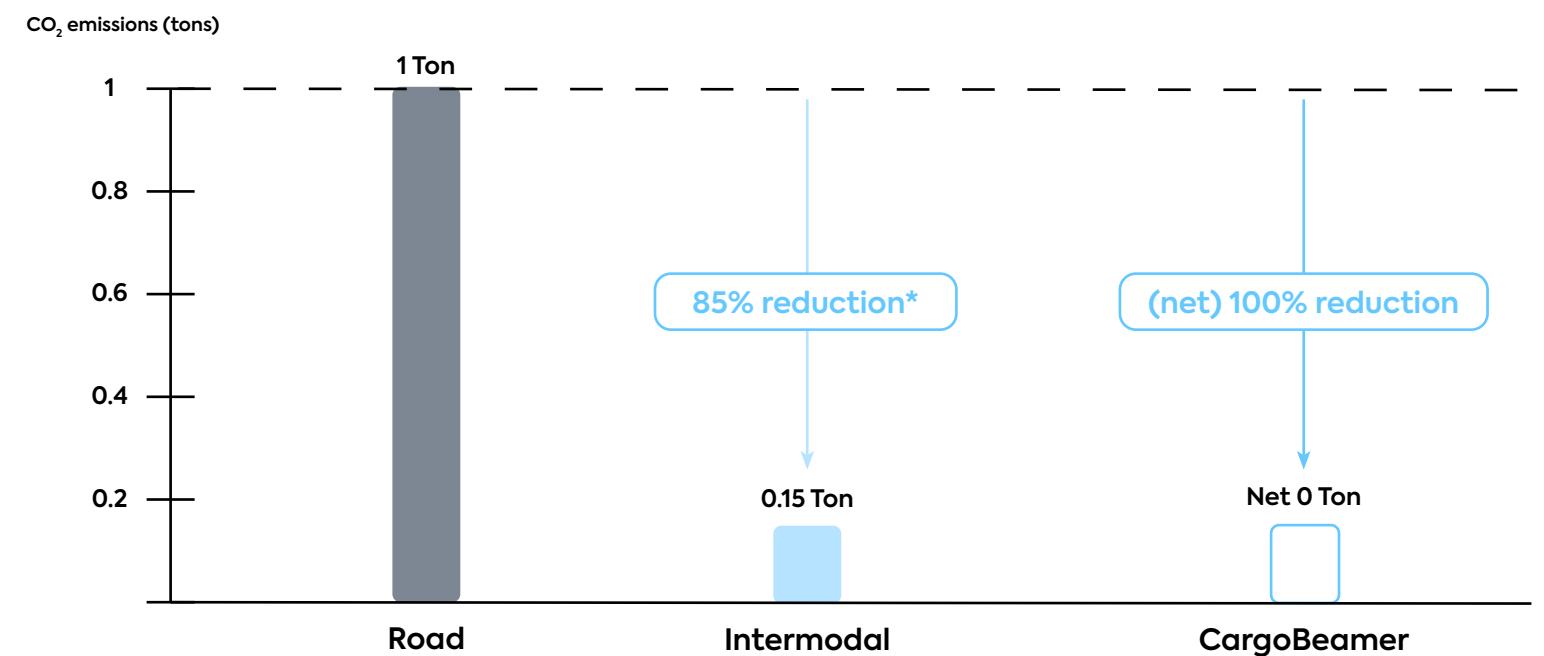
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Working with CargoBeamer means the fastest and most efficient way to decarbonize supply chains in Europe - which is directly represented by an average of 85% CO₂ saved when using rail instead of road. However, we do not stop here. CargoBeamer compensated the entire remaining Product and Company Carbon Footprint by supporting gold standard projects across the globe - paving the way towards a net CO₂ reduction of 100%

”

Dr. Frederik von Paepcke
Head of Sustainability

Comparison of CO₂ (net) emissions



*Intermodal transport vs. road transport on average.

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Greenhouse Gas Emissions and their Reduction

According to the latest IPCC report, global greenhouse gas emissions must be reduced by 45% by 2030 compared to 2010 levels to limit warming to 1.5°C and avoid the most severe impacts of climate change. At CargoBeamer, we are committed to reducing both direct and indirect emissions to minimize our environmental impact.

More than 95% of our emissions fall under Scope 3 and originate almost exclusively from three areas: transportation emissions, emissions from CB railcar construction, and emissions from terminal construction.

Transportation Emissions

Since the beginning of 2021, we calculate the route emissions using an API interface from EcoTransIT, the industry leader for calculating transport emissions in the logistics sector. This tool allows us to track and monitor emissions from transport in almost real time. We add the transshipment emissions at the (CargoBeamer and third party) terminals based on a calculation approved by TÜV Nord Cert as part of our annual Product Carbon Footprint Audit. Through the data provided by the tool we can monitor our emission reduction goal.

While we saved 30,037 t CO₂ vs. road transport, our remaining transportation emissions were 6,875 tons, a significant part of our carbon footprint. To further reduce emissions along our routes, we annually request prices for green electricity from our traction providers when negotiating new traction contracts for the upcoming season. They have not yet been price competitive. We remain committed to exploring and pursuing low-carbon energy alternatives whenever economically feasible.

Emissions from Terminal Operation

There is a strong interdependence between ecological and economic sustainability in our terminal processes. In 2023, we outlined strategies to lower terminal emissions, such as building and using more terminals equipped with CargoBeamer technology (which requires less energy when handling goods), optimizing existing terminals by installing more GateModules, using more electric tugmasters and E-Reachstackers, deploying hydro or e-locomotives for shunting, optimizing handling processes and terminal layouts, and purchasing green electricity for all our terminals. For new locations, we consider each option carefully.

Our FlexSim terminal simulation model for operational planning and optimization, developed by CargoBeamer, allows us to identify the most effective measures for each terminal layout by accurately forecasting emissions and energy demands using the generated data. Economic efficiency and ecologically sound planning go hand in hand at our terminals. Operational processes are designed and adjusted to local conditions in the best possible way to maintain a low emissions profile. For example, we save up to 70% of a tugmaster's emissions by deploying an E-tugmaster at our terminal in Calais. We have already held discussions with suppliers of such technologies to assess their integration into our shift system, charging infrastructure, and equipment.

Regarding our terminal operations, shunting with diesel locomotives and using diesel reachstackers produce the highest emissions, while E-tugmasters and GateModules contribute very little. Compared

to conventional loading terminals, our horizontal loading and unloading process requires significantly less energy and emits less CO₂.

Emissions from Terminal Building

In 2023, no new terminal was finished. Emissions from terminal construction are a major source of emissions for us. Future terminals, like the one in Kaldenkirchen expected in 2026, will be designed using digital BIM models to optimize operation emissions. We aim to implement cybernetic circular economy principles, simplify and reduce mass in construction, use ecological additives and recycled materials, and ensure precise separation and reuse of railway construction materials.

Emissions from CB Railcar Construction

In the past, all emissions stemming from the production of rolling stock were categorized as scope 3 emissions.

This changed in 2022 when we began producing our CB railcar fleet at our production site in Erfurt. Emissions associated with the value chain of our railcars originate from numerous upstream companies and activities, rendering accurate measurement and reporting challenges at present. Due to the lack of series production, we are not yet able to provide any information on how many emissions (scope 1 & 2) are generated per CB railcar during assembly in Erfurt. We plan to collect this KPI when series production is ramped up. Since, unlike in the past, we generally do

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Greenhouse Gas Emissions and their Reduction

not own the railcars but rent them on a sale-and-lease-back basis, we no longer recognize their scope 3 emissions in their entirety in the year of production, but on a pro rata basis over their expected service life.

In 2023, we upgraded our Erfurt factory's lighting to LED and repaired exterior wall holes to enhance energy efficiency. Additionally, in the second and third quarters, it completed the final repairs of holes in exterior walls, effectively preventing heat loss. While there is currently operational heat loss due to door operations, optimization is not feasible as operational procedures dictate door openings, with no changes planned. Other plans include further outdoor and indoor improvements, such as installing a stack rack for railcar parts and renewing the asphalt access road. We will also consider switching to green electricity and biogas once we have full data on consumption.

Other Emissions

Other sources only account for a small proportion of our overall emissions. As visible sources of emissions in everyday life, we nevertheless strive to reduce these emissions.

Our Leipzig office transitioned to green energy and implemented Cityflitzer, reducing the vehicle fleet and promoting car-sharing, which optimizes vehicle use and reduces costs and emissions. Car-sharing, particularly with electric or hybrid vehicles, contributes to environmental conservation by reducing traffic and emissions. Moreover, managing a dedicated fleet en-

tails administrative burdens, all of which are alleviated with the adoption of car-sharing⁹.

The new HOLM office in Frankfurt, a passive house powered by 100% renewable energy, uses district heating and overall focuses on sustainability. It also provides excellent public transport, bicycle access, and electric charging stations in the underground. A cafeteria offering vegetarian meals is present, and employees often dine together, fostering closer connections. Overall, the feedback from the staff has been positive, with a sense of increases connectedness in the new office space. All in all the new office is enhancing sustainability and employee satisfaction both ecologically and socially..



Further measures to encourage our employees to a more sustainable behavior comprise:

- Educating in sustainable behavior, e.g. an inhouse training sessions and providing plant-based food at company events
- Nudging employees to commute more sustainably by participating in the *Job-Rad* program
- Reducing travel emissions by purchasing *Bahn-cards* for employees who travel frequently, which also reduces their private footprint

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We are delighted to be relocating our Frankfurt office to HOLM, after the team at our second-largest location has grown continuously since the opening of our first office there in 2021. The HOLM combines several positive innovations: the proximity to the logistics industry, other companies in the sector and various events will be of particular value to the team on site. In addition, the structure of the new premises will allow our team to move even closer together and promote mutual exchange. Last but not least, we also benefit from the good connections with the train station and airport in the immediate vicinity.

Boris Timm,
Chief Operating Officer

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⁹ It's noted that scientific evidence supports traffic relief primarily for station-based car-sharing, although CargoBeamer participates in free-floating car-sharing, offering potential benefits. See: Bundesverband CarSharing e.V. (2020): Verkehrsentlastung durch CarSharing – Fact Sheet, 2020.

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Monetization of ESG Benefits

Another important component of our sustainability strategy is the monetization of our environmental benefits. A cornerstone of this is the French 'Certificats d'économies d'énergie' (CEE) program, which already enables us to monetize the sustainability benefits of rail transport to a considerable extent. This program does not reward CO₂ savings, but energy savings. With the TRA-EQ-108 form, we receive money from an obligated party in the program for all journeys that new (leased or purchased) railcars make on French soil within a six-month measurement period. The program enables us to build up our railcar fleet much faster thanks to the reimbursements for new purchases. This will allow us to promote and expand our environmentally friendly and efficient transport offering for our customers on existing and new routes in France.

In 2023, we invoiced 109 newly acquired CB railcars and leased double-pocket wagons as part of the CEE program and thus generated a significant portion of our revenue.

As far as we are aware, there is currently no way to directly monetize the CO₂ savings from rail freight transport in Europe, i.e. with a price per tonne. However, we believe that this economization of emissions, such as the European Trading Scheme (ETS), which is not yet mandatory for our industry, is essential in order to bring together sustainable business models and come closer to the EU's goal of internalizing all external costs by 2050. This is why we are working with the start-up [TransparenC](#), which has set itself the task of making emissions savings economically viable. To achieve this goal, we are collaborating on a number of different approaches. For example, we completed a two-day TÜV audit at the Cal-

ais terminal in May 2023. We are also investigating the co-founding of a book-and-claim model, which could be used to trade savings for our customers and

their competitors for a fee. We hope to be able to report new milestones on these exciting topics in the coming year.



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Ressource use and circular economy

The responsible use of resources is essential if humanity is to operate within planetary boundaries. CargoBeamer's business model is not very waste-intensive. The most significant material flows are in the areas of terminal construction and CB railcar construction. Our railcars are predominantly made of steel and thus have a recycling rate (after >40 years of expected service life) of well above 90%. Our terminals are to be used for decades, too. The largest quantities of waste are generated during terminal construction, mainly through demolition work. No terminal or railcars were completed in 2023, which is why the waste generated in the reporting year essentially comes from two sources: Firstly, commercial and industrial waste as well as wood generated during renovation work on the pro-

duction site in Erfurt and secondly, office waste. Measures to enhance our resource usage include:

- Integrating the dimension of IT lifespan into our asset management system and ensuring an end-of-life in place by donating equipment we do not use anymore to local non-profit associations
- Providing a multiple water dispenser that saved 12,645 water bottles in 2023 at our Leipzig office
- Maintaining an almost paperless office
- Implementing proper waste disposal and separation protocols across all locations. This ensures that

biodegradable waste is recycled, and nutrients are added back to the cycle

As no terminal was completed and no railcar was produced in 2023, we have instead looked at some smaller sources. E.g., we use lubricants at our terminals which include formulations based on both mineral and vegetable oils. We have specific data on the PCFs of our lubricants and greases as well as selected components that are required for our railcar production. These enable us to accurately calculate their emissions for the first time this year under scope 3. This capability is supported by our internal Enterprise Resource Planning systems, which began tracking consumption on a monthly basis in 2023.

Energy Consumed

Unlike road transport, which uses over twice as much energy, rail transport offers significant energy savings for the following three reasons: The frictional loss of iron on iron is less than rubber on asphalt, the air resistance of railcars traveling one behind the other is less than that of individual trucks, and the gradient on rails is less steep than on the road.

In 2023, our total energy usage was 234,248 GJ (-19.5% vs. 2022) with nearly 99% attributed to service-related activities such as traction and terminal handling. Non-service related activities, such as renting a car or heating our offices, amounted to 3,152 GJ. Traction energy is used most efficiently with longer trains and

high utilization rates, which is in line with our economic aspirations. The energy used at the terminals accounts for a much smaller share, but we are constantly looking for optimization opportunities here, too. The unique layout of each terminal, influenced by factors like available space and railway connections, impacts energy requirements. For instance, we assess how to best position GateModules at new terminals, reduce shunting, and improve efficiency of the Tugmaster between the trailer parking spaces and GateModules.

Our FlexSim terminal simulation model supports our operation in optimizing terminal workflows, providing

insights into potential improvements, and helping to balance multiple factors for better energy efficiency.

Our handling processes are already significantly more energy-efficient compared to third-party terminals, primarily due to our technological advantage of horizontal loading. Energy use at our non-terminal locations, such as offices and our Erfurt production site, includes electricity, heating, and gas. To further reduce the energy demand here, we have insulated the roof, installed less energy intensive lighting and implemented additional heat loss prevention measures in 2023. These measures were subsidized by the Federal Office of Economics and Export Control (BaFa).

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Biodiversity

The preservation and protection of biodiversity is, alongside the containment of climate change, the most important prerequisite for enabling life on this planet as we know it to continue in the long term. We want to make our contribution to this. Our major impact in this field stems from construction projects, none of which were finished in 2023. In the preparation and planning of our construction projects, currently in Kaldenkirchen (Germany) and Domodossola (Italy), we ensure to take appropriate measures for the biodiversity, e.g. by protecting endangered species.

At both construction sites, we are committed to minimizing land use and environmental impacts. At both Kaldenkirchen and Domodossola, the terminal areas are restricted to the necessary extent, with unsealed,



green spaces planned for drainage. Both project locations are predominantly on brownfield sites to minimize the impact on sensitive areas, with partial areas at Kaldenkirchen already being used as terminal space, and at Domodossola, already existing parking areas are used.

Before construction at Kaldenkirchen, we planned for the necessary relocation of 65 wall lizards, with replacement habitats provided, initial relocations already conducted, and final relocations are set for 2024. At Domodossola, no relocations of animals were necessary. Construction activities at both locations occur outside sensitive periods, such as avoiding tree clearing during bird breeding season. At Kaldenkirchen, tree clearing was conducted in the respective periods of 2023 and will be completed in 2024. At Domodossola, the tree clearing was done in February 2023 in accordance with legal approval criteria.

We are committed to minimizing unwanted emissions such as dust, noise, and pollutants at both Kaldenkirchen and Domodossola. At Kaldenkirchen, a noise barrier is planned, and a study has evaluated noise emissions, determining that no additional measures are necessary. At Domodossola, no such measures are currently deemed necessary. To prevent pollution and contaminant entries into water bodies, both locations plan to use special separators and techniques, including extensive infiltration through appropriate filter layers.

Lighting at both locations is designed to restrict light intrusion only to the necessary area, avoiding spill-over beyond the boundaries. We protect temporarily driven areas from soil compaction by using excavator mats, gravel roads, and untreated wood chips as a

protective layer at Kaldenkirchen, while Domodossola does not currently plan for these measures as they are not needed.

At both Kaldenkirchen and Domodossola, construction site paths are not paved, or the asphalt layer is removed after construction, with green medians added to reduce ecological separation and landscape fragmentation. No separate construction site paths are planned that will not later serve as roads, ensuring green areas remain throughout construction.

Collaboration with service providers is also a priority at both future terminal locations. We demand that they use the latest generation vehicles and machinery. We also focus on material sourcing to minimize transportation distances. Additionally, at Kaldenkirchen, the CO₂ balance of bulk materials is considered, and innovative construction methods are allowed in tenders.

Our collaboration with authorities at both locations includes ecological and sustainability considerations. This is reflected in our planning approval process, environmental assessments, and CO₂ criteria.

Local communities at both Kaldenkirchen and Domodossola are protected from emissions. At Kaldenkirchen, the area is surrounded by a noise barrier, and targeted lighting minimizes light intrusion into surrounding areas. Similarly, at Domodossola, we have adapted the angles of the lights to reduce impact. The measures ensure emissions are controlled, safeguarding the nearby communities at both locations.

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EU Taxonomy

In 2021, the European Green Deal brought the EU Taxonomy Regulation 2020/852 into force, setting a new benchmark for sustainability reporting across Europe. Commonly known as the *EU-Taxonomy*, this regulation was officially published on June 22, 2020, and became effective on July 12, 2020, with its provisions applying from January 1, 2021.

The EU Taxonomy provides a standardized framework for classifying environmentally sustainable economic activities. Its primary aim is to steer investments towards projects and activities that significantly contribute to the EU's environmental goals, thus aiding the transition towards a more sustainable economy. Under this framework, activities that fall under the regulation's scope, referred to as *eligible* activities, are evaluated based on their environmental impacts through a set of detailed guidelines called the *Technical Screening Criteria*, outlined in the Taxonomy Delegated Acts.

For an activity to be deemed environmentally sustainable, it must contribute substantially to at least one of the six defined *environmental objectives* while ensuring it does not negatively impact the other objectives and meets minimum safeguards regarding human and labor rights. These objectives are

- Mitigating climate change
- Adapting to climate change
- Sustainable use and protection of water and marine resources

- Transitioning to a circular economy
- Preventing and controlling pollution
- Protecting biodiversity and ecosystems

Adhering to the Taxonomy Regulation is essential for companies wishing to align their operations with the EU's environmental objectives and attract sustainable investment. The regulation has set specific Delegated Acts for climate change mitigation and adaptation, marking a pivotal step towards the EU's target of achieving climate neutrality by 2050.

For sectors like freight transport, including companies such as CargoBeamer, the Taxonomy offers a framework for evaluating environmental performance. CargoBeamer's involvement in railway freight transport (EU Tax. 6.2), the construction and operation of rail infrastructure (EU Tax. 6.14), and the development of low-carbon transport technologies (EU Tax. 3.3) are considered eligible under the Taxonomy.

CargoBeamer is dedicated to fulfilling the requirements of the Taxonomy Regulation and improving its environmental performance in the future. As part of its ongoing efforts, the company is actively preparing to publish an EU taxonomy declaration. In the reporting year, we thus conducted a comprehensive Climate Risk Assessment that is obligatory for alignment under the Taxonomy.

Due to its operational model, CargoBeamer believes it is well-positioned to meet the objectives of the EU

Taxonomy. The company is committed to understanding the new system thoroughly and assessing how its economic activities align with the ecological sustainability criteria defined by the Taxonomy, aiming for a high compliance score of >90 in all three areas.

To achieve this, CargoBeamer will analyze key indicators, such as the proportion of revenue, capital expenditures (CapEx), and operating expenses (OpEx) attributable to its activities. This analysis will provide valuable insights into the extent to which the company's operations comply with the sustainability standards set by the Taxonomy.

Through these initiatives, CargoBeamer demonstrates its commitment to environmental sustainability and its proactive role in the EU's journey towards a greener and more sustainable future.

Social

Working Conditions and Benefits

Health and Safety

Training and Skills

Diversity and Equal Opportunities



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Working Conditions and Benefits

In 2023, CargoBeamer made significant strides toward enhancing its work environment and supporting employee well-being. Notable changes included relocating to a new, improved office in Frankfurt, designed to foster better collaboration among teams. Alongside these physical enhancements, the company implemented time tracking and guidelines for work hours and compensatory time off for the subsidiaries in Germany, ensuring fairness and transparency in work arrangements.

We have actively expanded our work-from-home options and implemented flexible work schedules and part-time employment arrangements. In 2023, almost all our office-based employees took advantage of the work-from-home option.

CargoBeamer continued to provide a range of corporate benefits to its employees, including free public transportation passes and JobRad bike leasing, allowing employees to combine climate protection with health promotion. Nearly 25% of our employees received a Bahncard 25, 50, or 100 for frequent travel. Additionally, employees could opt for capital-forming benefits of €40 per month and company pension plans. Fresh fruits, coffee, and water were made available in our offices.

In 2023, we continued to provide professional and employee-orientated onboarding through our dedicated onboarding website, making the preboarding and onboarding process easier for our new employees. This website offers access to introductory company information, including the organizational chart, benefits explanation, and other introductory documents, even before the first day of work.

Our onboarding materials also include a section outlining our sustainability initiatives and goals. By familiarizing new recruits with the importance of our corporate responsibility, we aim to foster a collective understanding and shared commitment. Additionally, we organize a comprehensive onboarding week to create a seamless start with CargoBeamer.

This week includes:

- Security and SAP trainings.
- Shared lunches and time to set up workspaces.
- Feedback sessions with our HR team.
- A onboarding interview with the manager.
- A visit to our prototype terminal in Leipzig to showcase our unique GateModules and CargoBeamer technology.

In response to employee feedback, we initially introduced Lunch Roulette, later changing it to Coffee Roulette, to enhance employee networking. This initiative facilitates interactions between different departments and locations, particularly beneficial for remote workers. The adjustment was made to provide more flexible and self-determined break times, emphasizing our commitment to a participatory work culture where employee input shapes our structures.

In France, the introduction of the CSE (Conseil social et économique, Works Council) marked a significant development. Monthly meetings between the elected CSE representatives and management promote teamwork and transparency.

At CargoBeamer, we constantly endeavour to promote job security. In 2023, for example, we hired a temporary employee in our production site in Erfurt on a permanent basis.

The company also engaged in notable charitable initiatives, including packing and sending Christmas gifts to a women’s shelter in Leipzig and a postcard campaign for Easter for elderly individuals. These initiatives were driven by employee suggestions, highlighting our commitment to community involvement and support.



Editorial

Health and Safety

Introduction

We prioritize health-adequate working conditions for our employees. A significant improvement has been the introduction of height-adjustable desks for all employees, achieving a 100% implementation rate in all major offices.

Strategy

In 2023, we made various safety equipment purchases to enhance employee safety across different locations. This included new work clothes, high-visibility jackets, helmets, and trousers for personnel such as the Terminal Manager in Calais and workers at the Er-

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furt production facility.

At our German sites, we have established a Safety Committee to address health and safety concerns regularly. It covers topics such as workplace hazards and accident prevention. Annual meetings with the Safety Committee, involving key stakeholders, further reinforce our commitment to maintaining high safety standards.

In France, employees undergo regular health as-

sessments by a company doctor to ensure they are in good health for tasks such as driving and maneuvering vehicles at the terminal. Additionally, internal and external safety training sessions, conducted by personnel, enhance safety awareness and practices among employees.

Moreover, the introduction of a risk management system¹⁰ underscores our dedication to proactive risk mitigation strategies, strengthening our overall approach to safety and security across the organization.

Training and Skills

We have dedicated numerous training hours to several key initiatives. These include Business Intelligence (BI) tool training for all future users to enhance reporting efficiency since its introduction in 2023, leadership training, and diverse department-specific sessions such as ECM (*Entity in charge of maintenance*), Power BI, and VAT training for accounting as well as quality management.

Our company actively fosters improved teamwork and inter-team collaboration through various HR-proposed structures. These initiatives include sales days to unite globally dispersed teams and activities suggested by the *CargoBeamer Connect* Microsoft Teams Channel in Leipzig and Frankfurt. Annual team

events like summer and christmas parties, as well as structured management meetings (offsites), further enhance team cohesion. Additionally, a comprehensive communication guideline aids fostering clarity across departments. Leadership development programs enrich management skills through targeted training, personalized coaching facilitated by HR, and strategic discussions during management offsites.

One year after implementing our feedback process, we have optimized its usage by increasing the utilization of Personio and its goal-setting tool. We conduct goal and feedback discussions biannually for all our permanent employees. These discussions focus on employee competencies, development, team dy-

namics, and objectives and include a section for providing upward feedback to managers.

In 2023, we took on interns, including through the Erasmus+ programme, as we recognise the considerable benefits of such internships. They enhance intercultural collaboration, bringing diverse perspectives and ideas that foster innovation and creativity within our teams. Additionally, partnering with academic institutions through Erasmus+ helps us stay connected with cutting-edge research and emerging talents, ensuring we remain competitive and forward-thinking in our industry.

¹⁰ See page 32 for more details.

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Diversity and Equal Opportunities

As we plan for our future development, we place a strong emphasis on equal opportunities in recruitment and employment. In our recruiting process, we welcome applications from all qualified individuals regardless of ethnicity, gender, age, sexual orientation, possible disabilities, or religion.

We are committed to promoting gender equality and fostering an inclusive and equitable work environment. This commitment extends beyond the workplace to encompass private spheres as well. In 2023, the compatibility of family and work has further increased, with eight employees (5 female, 3 male) taking parental leave or working part-time during parental leave, highlighting our support for work-life balance.

Additionally, we encourage our employees to engage in voluntary activities and ensure they have the necessary time and flexibility to do so. For example, our employees contribute to voluntary emergency re-

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We proudly emphasize the strong collaborative ethos within our teams. Our achievements highlight the success of our teamwork, demonstrated by our remarkable age diversity. I am proud to work alongside colleagues up to 42 years younger than myself. The unique insights and approaches from different generations contribute to our common goal of shifting semi-trailers from road to rail. This diversity is a refreshing experience every day and will surely be a cornerstone in ensuring CargoBeamer successfully drives the modal shift to rail in the coming years.

Dieter Keller
Senior Advisor Intermodal Operations

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sponse organizations, including the fire department and technical relief services or provide volunteer translation services for refugees, dedicating their time and skills to serve the community.

By the end of 2023, CargoBeamer had a diverse workforce of 107 employees (98.95 FTE) from 12 nationalities working in five different countries: Germany, France, Italy, Spain and China. We hired 34 employees throughout the reporting year. The mean age of all employees was 38.8 years, and 24.3 % of the workforce was female. Additionally, CargoBeamer employed six working students and one intern. The company also employed 10 part-time employees and three individuals within the inclusion aspect.

The salary band process was continued and further developed in 2023 and 2024, with a phased rollout planned to gradually introduce salary bands and align salaries, further enhancing equal opportunities.

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At CargoBeamer, we believe that a supportive and well-equipped work environment is essential to our success. This year, we've prioritized initiatives that enhance our employees' well being and work-life balance. From our modern new office in Frankfurt to offering exciting events to our team and enabling also younger team members to grow and take on responsibility early, every step we take is aimed at fostering a more engaged and satisfied workforce.

Katharina Bauer
Head of HR

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Corporate Governance

Introduction

To achieve our corporate goals, promote sustainable growth, and increase long-term corporate value, our company continuously improves corporate governance to ensure transparent, fair, and fast decision-making taking into account the applicable legal framework. The CargoBeamer Article of Association, the bylaws for our Managing Directors and our internal directives serve as our legal framework that defines the rights, responsibilities, and procedures within the CargoBeamer group.

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Our internal control system employs appropriate performance indicators and is continuously evolving. The system includes a range of weekly and monthly operational and financial reports, as well as ad-hoc reports. They include information about bookings, cancellations, quality KPIs, and allow for the monitoring of revenue developments and enable prompt action if necessary. They allow to oversee quality also outside the operational departments, what encourages shared responsibility for our company's success. In order to strengthen our internal control system, we implemented a legal and claims team in 2023 to protect the integrity interests of CargoBeamer, to create the provisions for minimizing the legal risks as far as possible and within the framework of the principle of legality.

We publish a quarterly report for investors and quarterly staff information and newsletters for our team. The financial and non-financial performance indicators used are based on standard industry management and control systems. The exchange between the executive board and the chairman of the Supervisory Board happens weekly in a structured jour-fixe format, fostering transparent collaboration on major

operational and strategic tasks. Our Executive Board convenes with all senior managers on a bi-weekly basis. These meetings aim to keep everyone updated, inform them about ongoing matters, and discuss upcoming decisions and voting processes.

The Executive Board is responsible for the operational management and strategic alignment of the Group. In consultation with the Supervisory Board and with the responsible departments, it defines the corporate goals and is responsible for achieving them. To enhance corporate governance effectiveness, we include non-financial topics in our board meetings. An internal directive has been implemented in 2023 to ensure that the Executive Board is involved in all relevant decisions. Furthermore, the dual control principle must be observed in all business dealings.

Since 2022, we are ISO 9001 certified for our Quality Management System (QMS), reaffirming our commitment to delivering high-quality products and services. Our QMS ensures robust quality control mechanisms, proactive risk mitigation, and continuous improvement initiatives. Also, TÜV Rheinland conducted a successful TSI Audit (Module SD) at our Erfurt facility. This certification demonstrates our compliance with quality requirements for our production and enables us to manufacture CB Railcars.

With the TSI-SD Audit, CargoBeamer Rolling Stock Production GmbH is authorized to be listed as a manufacturer which is a prerequisite for applying for the *Authorization to Place onto Market* from the European Union's Railway Agency, which we have successfully achieved.

Rapid growth in both our terminals and our railcar fleet is an integral part of our business strategy for the next decade. This inevitably means that the demands on our sustainability strategy including governance principles and structure, and our transparency with regard to non-financial performance indicators will also increase even more. We are confident that we can further enhance our strong environmental advantage over other modes of transportation, ensuring that our emissions do not increase linearly but rather decrease significantly relative to our transport performance.

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“Considering the dynamic growth CargoBeamer has experienced in recent years, our compliance framework is well-established. While we are in the process of developing a comprehensive Compliance Management System to align with the company's growth trajectory, we have already implemented and operationalized key components as part of our interim strategy.”

Arta Majlesi
General Counsel

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Corporate Behavior and Compliance

Our organization is dedicated to fair competition and takes measures to prevent and combat corruption and antitrust. While we have not fully implemented a holistic Compliance Management System for the whole cooperation, we have successfully incorporated key components that are legally mandated and deemed urgent. This foundation includes the establishment of an external ombudsman.

Implementation of the Whistleblower Directive (Directive (EU) 2019/1937)

In October 2023, we adopted the 'Whistleblower Directive' (Directive (EU) 2019/1937) within the statutory deadline. Among other things, a process was set up that enables employees to contact a reporting office anonymously to report grievances. This also includes the establishment of an Ombudsman's office. The Ombudsman's office marks a significant step towards further fostering a culture of transparency, integrity, and accountability within our organization. In compliance with the new Whistleblower Directive, we have established an independent entity to provide a confidential channel for employees to report concerns or wrongdoing without fear of retaliation. Alongside the Ombudsman's office, we have implemented two related policies to ensure the protection of individuals who speak up in good faith. These initiatives demonstrate our commitment to upholding ethical standards and promoting a safe and supportive work environment where all voices are heard and valued. Through the Ombudsman's office and associated policies, we strive to build trust, enhance transparency, and strengthen our corporate governance framework for the benefit of our employees and stakeholders alike.

Implementation of Claim Management

We have set up a claims department and introduced a corresponding policy and process for claims management in order to ward off unjustified claims and enforce our claims efficiently. The aim is also to increase transparency, efficiency and accountability within our organization. This initiative formalizes processes for identifying, documenting and enforcing or defending against claims and aims to defuse disputes at an early stage and reduce financial and legal risks. Through this proactive approach, we promote clearer communication and trust between stakeholders while streamlining decision-making processes. In addition, the policy ensures compliance with contractual obligations and legal requirements, which underlines our commitment to ethical business practices and strengthens overall operational resilience.

Implementation of a Risk Management System

The implementation of a sustainable risk management system at CargoBeamer highlights our commitment to effective corporate governance and sustainability. The process commenced with a comprehensive analysis of our organizational structure, business environment, and critical success factors, enabling us to assess our current risk landscape and define internal requirements. Subsequently, a group-wide risk management policy was developed, serving as a guiding framework and fostering a shared understanding of risk management practices across the organization.

The decision to introduce the risk management system stems from our dedication to ensuring continuous and proactive management of both existing and emerging

risks. By establishing a structured approach to risk identification and monitoring in the reporting year, CargoBeamer aims to enhance risk awareness throughout the company. The system facilitates the early detection of potential threats through the identification and monitoring of key risk indicators, thereby safeguarding the company's long-term sustainability. Moreover, compliance with legal requirements, such as those outlined in KonTraG or IDW PS 340 n.F., is ensured through the implementation of this system.

The risk management tool provides us with the capability to systematically identify, assess, and document risks, as well as develop and implement countermeasures. These components are reviewed and monitored in cyclical reporting periods, enabling us to adapt our risk mitigation strategies effectively. Serving as a central repository for cross-departmental risk issues, the system allows for a holistic view of risk interdependencies at all levels of the organization, facilitating more informed decision-making and enhancing risk management efficiency.

Examples of risks that we monitor include financial risks, market risks, competition risks, price risks, and technological risks. By proactively monitoring and addressing these risks, CargoBeamer aims to strengthen its resilience and ensure sustainable growth in the long term.

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Corporate Behavior and Compliance

Management of Supplier Relations

A compliance vulnerability lies in the absence of a centralized procurement function within the CargoBeamer, a common compliance risk. To mitigate this, we have advertised a relevant position, with plans to swiftly fill the vacancy. Once this role is occupied, procurement will be centralized, with the designated individual receiving specialized training and increased awareness of compliance considerations. Currently, our procurement functions are decentralized.

In managing relationships with suppliers, CargoBeamer adheres to a set of guidelines encompassing various aspects such as antitrust laws, fair competition, exchange of information with competitors, prevention of personal gain, appropriate communication practices, and respect for intellectual property and third-party copyrights. These guidelines are integral to our commitment to ethical business practices and maintaining fair and transparent dealings with our partners. By upholding these standards, we ensure that our supplier relationships are built on trust, integrity, and mutual respect, fostering long-term collaboration and sustainable business growth.

We manage supplier relationships by evaluating terminals for operational limitations, such as track length and capacity, before requesting slots. New terminal locations receive briefings on IT and railcar technology, and our staff regularly visits terminals to verify and improve operations, addressing problems immediately as they arise.

In terminal construction, we include environmental aspects such as supplier certification under ISO14001 and CO₂ emissions assessments for selected materials, complying with EU regulations on labor conditions and human rights. Local construction supervision ensures compliance, and a safety and health coordinator monitors adherence to social regulations.

For CB railcar construction, we did not purchase components this year. Our railcars consist of parts from single manufacturers, limiting our selection options. Where multiple suppliers are available, our decisions are based on price and availability, with all suppliers currently based in Europe or Turkey.

Others Measures

Additionally, CargoBeamer introduced a dual control principle when signing contracts. The considerable expertise of our executive board, derived from previous roles where compliance issues were paramount, serves as an additional asset. Given the size of our organization, we are well-positioned.

In the international sales domain, an ongoing compliance focus pertains to cartel compliance. Our sales teams are well-informed and collaborate effectively with our General Counsel. As we continue to expand, our compliance management system will evolve and professionalize accordingly, as this is already factored into our strategic plans.

An insurance policy was also implemented to ensure that CargoBeamer's risks are adequately insured and adjusted depending on the business situation.



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Resilience to Climate Risks

In order to comply with EU Taxonomy scoring criteria, CargoBeamer has taken proactive steps to address climate-related risks through a site-specific analysis of climate data based on IPCC guidelines, with meta-information sourced from [meteoblue](#). This analysis measures 31 different climate variables for the topics temperature, wind, water and solid matter (according to EU-Taxonomy) and compares four different emission scenarios (RCP2.6, RCP4.5, RCP6.0, RCP8.5) in a future period (2031-2050) to a reference period (2011-2030). This serves as the foundation for developing adaptation measures that ensure uninterrupted operations in the face of climate risks in the long term.

In our adaptation planning, we prioritize identifying and addressing external dependencies to minimize vulnerability to climate-related disruptions. Recognizing the shared responsibility for climate resilience, we actively engage with stakeholders to ensure safe-

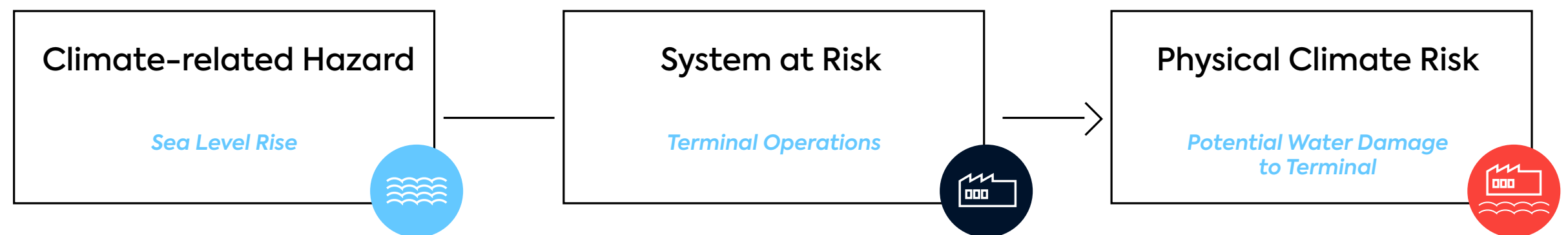
guarding critical infrastructure, such as rail networks and access roads to terminals, as part of our commitment to sustainable operations.

Calais serves as a focal point for our future climate risk management efforts due to the anticipated rise in sea levels and associated state-led mitigation measures. We closely monitor developments in Calais, acknowledging the potential future impact on our operational activities and readiness to adapt as necessary.

Furthermore, we acknowledge the importance of addressing smaller-scale risks, such as changing working conditions at our outdoor sites. To mitigate these risks, we maintain open communication channels with site managers who promptly report any changes, for example rising heat stress, enabling CargoBeamer to implement responsive measures effectively.

Overall, our climate risk management approach underscores our commitment to resilience and sustainability. By integrating climate considerations into our operations, we aim to ensure the continued viability of our business while contributing to a more sustainable future.

Climate Risk Analysis for Single Assets (Example: Sea Level Rise)



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Corruption

Our company is committed to never engaging in actions that could be deemed bribery in dealings with any of its business partners, government officials, employees of government agencies (including international agencies), or any other parties. We seek to earn and maintain the respect and trust of all our stakeholders, and we expect that each of our employees acts in a manner consistent with the law, our policies, and our values.

To support these expectations, we have developed several policies and measures:

- We conduct mandatory anti-corruption training for our entire workforce, including high-risk roles and leadership positions. This computer-based training takes approximately 10-15 minutes and is held annually for all employees with a German employment contract.
- We implemented the dual control principle for all our business transactions, transferring the power of representation from individual authority to joint authority. This change is reflected in our commercial register.
- We established a Code of Conduct that strictly prohibits all forms of economic crime and emphasizes our commitment to fair competition.
- Employees are encouraged to report any violations through multiple channels, including their supervisors, the legal department, or an external ombudsman service.

These measures are designed to uphold ethical standards, promote transparency, and safeguard our business integrity. We are pleased to report that there were no confirmed cases of corruption or bribery in 2023. We

encourage all our employees to speak up and share any concerns they might have, as we continually strive to meet or exceed high ethical standards.



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Privacy and Data Security

The global increase in security threats and higher levels of professionalism in computer crime have increased the importance of effective IT security measures, including proper identity management processes to protect against unauthorized systems access. Nevertheless, given the very fast pace of technological change, the company's systems, networks, products, solutions, and services remain potentially vulnerable. Cybersecurity remains a high priority, as attacks by nation states, phishing, ransomware, and supply chain attacks are becoming increasingly sophisticated.

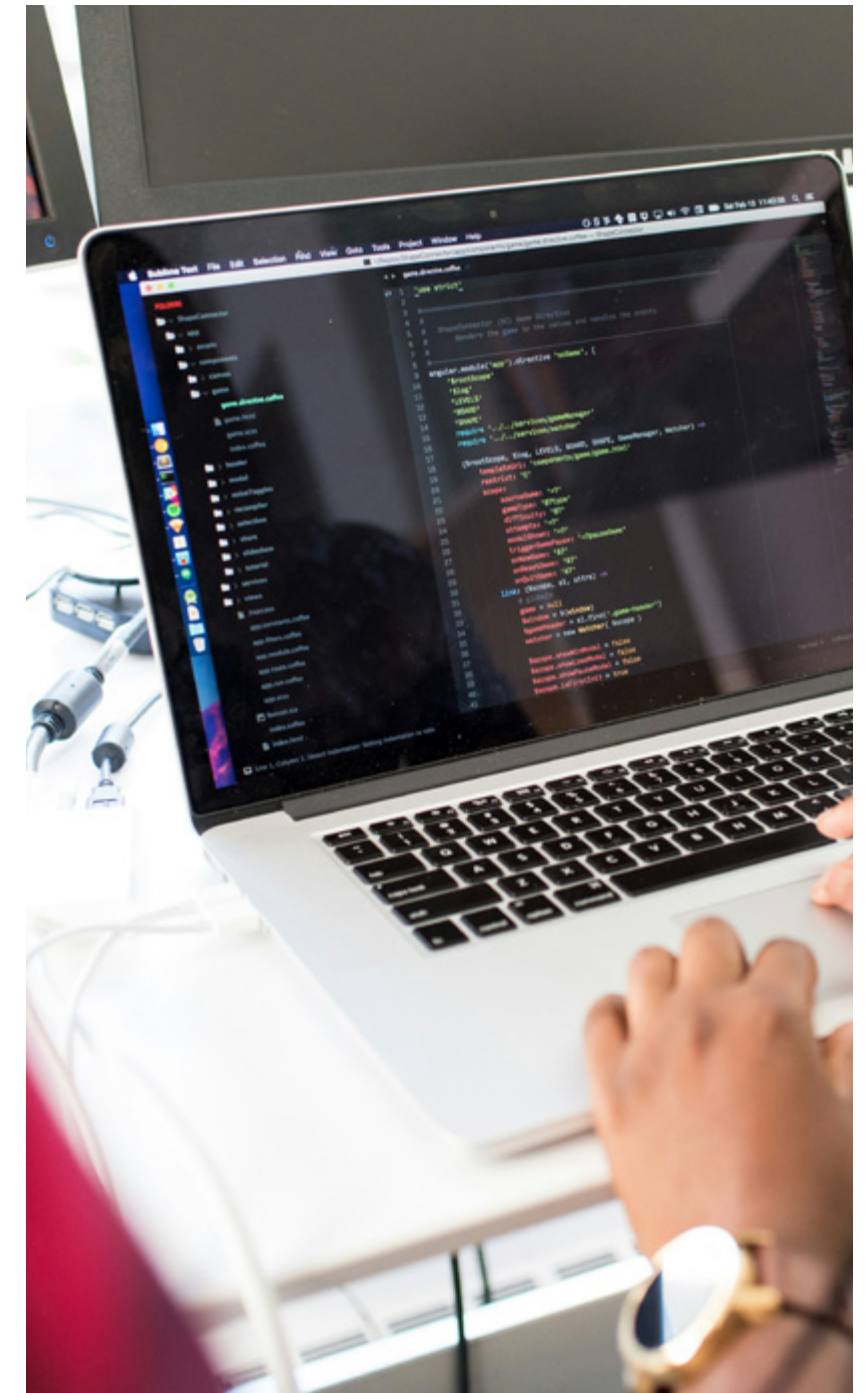
Ensuring compliance with legal requirements in data protection, including the proper handling of personal data and IT security, is an essential component of our sustainability strategy. While our B2B customer base has historically led to a lower internal demand for data protection consulting, this need is growing. To meet the requirements of the General Data Protection Regulation in our rapidly expanding environment, we have a partnership with an external data privacy expert. This partnership demonstrates our commitment to handle sensitive information with the utmost importance and seriousness, particularly as we consider expanding our business activities to other European countries.

As part of our ongoing efforts to raise awareness about data protection, we incorporate trainings on this topic into our digital training platform for all employees and management. Our partnership with the external data protection officer also marks the beginning of the implementation of a professional data protection management system, which will ensure a consistently high level of data protection.

Our IT management works closely together with operational units to establish and implement ongoing IT security goals. Our level of protection is maintained through regular backups that are geographically distributed, proactive software updates to address security gaps, and other measures. We rely on the expertise of external service providers who provide advisory and operational support to ensure we maintain a high level of security. Administrative access to our systems is strictly limited to a small, named group of individuals.

We have implemented a ticketing system for IT support requests, enabling employees to submit inquiries directly to the IT department. This system streamlines the process of handling the respective issues by providing a centralized platform for reporting and tracking requests. Employees can now easily log their IT problems or service requests, ensuring timely and efficient resolution by our IT team. This initiative enhances communication between staff and IT support, reduces response times, and allows for better prioritization of tasks based on urgency. Overall, the ticket system enhances organizational efficiency and ensures that IT resources are deployed effectively to support our operations.

Our current objective is to attain compliance with the industry standards set forth by the ISO 27001 family. Although this project is critical, it has experienced some delays since 2021 due to the multitude of high-priority projects that require attention. Nevertheless, our aim to achieve sustainable and measurable success in reaching our goals remains steadfast, along with our ceaseless endeavors to mitigate IT risk.





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Environmental KPIs

All emissions are expressed in CO₂ equivalents (CO₂e). Unless otherwise stated, all CO₂e values are rounded to the nearest ton.

GHG Emissions	(t CO ₂)
Scope 1 and 2	277
Scope 3	7,349
Total	7,626
Compensated	7,387

Depending on the data quality, a 0-10% safety buffer is included.

Energy Consumption by Source ¹⁰	(GJ)
Renewable	0
Non-Renewable	1,818
Electricity, Heating, Steam, Cooling	1,307
Total	3,125

Total Energy Consumption	(GJ)
Diesel	1,122
Petrol	564
Diesel & Petrol Mix	7
Natural Gas	123
Petrol Super E10 (10% bioethanol admixture)	1
Heating	659
Electricity	648
Energy for traction	231,123
Total	234,248

Water Consumption	(Ml)
Water Withdrawn	0.4
Water Discharge	0.4

Waste Disposal (all non-hazardous)	(t)
Mixed Waste	23.9
Commercial and Industrial Waste	6.6
Wood Waste	2.3
Total	32.8

System Boundary

The CO₂ emissions included in this report relate to CargoBeamer's operations and economic activities. The period considered in this report is: 01.01.2023 – 31.12.2023. In accordance with the GHG Protocol Corporate Accounting and Reporting Standard, this report covers the accounting and reporting of seven greenhouse gases covered by the Kyoto Protocol: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFC), perfluorinated hydrocarbons (PCF), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃).

¹⁰As we do not purchase this ourselves, traction energy is not included.

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Health and Safety

Reported Health and Safety Incidents	0		
Reported Fatalities	0		
Reported Injuries (accident frequency)	2		
	2023	2022	2021
Sick days per employee	7.7	4.8	1.9

Injury Rates

Number of reported injuries per million hours worked in 2023	11.9
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Health and Safety Management System

Is one implemented?	Yes ¹¹
Required by law?	Yes ¹¹

Employee Statistics

	2023	2022	2021
FTE (end of year)	99	98.5	56
Share of women	24%	23%	27%
Average age (in years)	39	39	39
Nationalities	12	12	5
Share of employees working part-time	9%	9%	7%

Employee Statistics by Gender and Age

	<30	30-50	>50
Male Employees	10	59	12
Female Employees	4	19	3
Diverse Employees	0	0	0

Hire Statistics by Gender

	<30	30-50	>50
Male Employees	3	16	3
Female Employees	3	7	2
Diverse Employees	0	0	0

Parental Leave Statistics

100% of parental leave takers returned to work

Discrimination Incidents Data

Number of discrimination incidents: 0

Training Hours by Gender

	Male	Female	Diverse	Total
Training	30	61	0	91

Percentage of Staff with Performance Reviews

100% of staff receive regular performance reviews

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¹¹Excluding CargoBeamer (Beijing) Rail Transportation Institute Co., Ltd., where no Health & Safety Management System is required nor implemented.

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Details of the Highest Governance Body

Name of the Body	Supervisory Board
Number of Members	5
Number of Executive Members	0

Tenure of Highest Governance Body Members

Years	<2	2-5	5-10	>10
Number of Members	0	0	5	0

Gender Composition of Highest Governance Body Members

	Male	Female	Diverse
Number of Members	4	1	0

Representation Details of the Highest Governance Body

Number of members who represent vulnerable social groups	0
Number of members with environmental/social competencies	3
Number of members who represent stakeholder groups	5

Top Level Remuneration Policy

Member or executive remuneration linked to environmental/social criteria?	No
Top-level remuneration policies disclosed?	No

Human Rights Policies and Reviews

Implement policies or procedures relating to human rights?	No
Conduct human rights risk assessments in own operations?	No
Conduct Human rights supply chain risk assessments?	No

Corruption Risks

Number of risks identified	0
Number of confirmed corruption incidents	0
Number of public legal cases brought against the entity or its employees	0
Number of public legal cases which were resolved	0

Privacy Complaints Data

Total substantiated complaints concerning breaches to customer security	0
Total substantiated complains from external/third party	0
Total substantiated complaints from regulators	0
Total number of leaks, thefts, or other losses of data	0

Details of Legal Actions

Number of legal actions pending regarding anti-competitive behavior and violations of anti-trust and monopoly legislation	0
Number of legal actions completed regarding anti-competitive behavior and violations of anti-trust and monopoly legislation	0
Number of significant fines and non-monetary sanctions for non-compliance with laws and/or regulations in the social and economic area	0
Total number of leaks, thefts, or other losses of data	0

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Executive Board of CargoBeamer AG

Persons with key Sustainability Responsibility

Nicolas Albrecht, Chief Executive Officer

Dr. Frederik von Paepcke, Head of Sustainability

Hanna Fiedler, Sustainability Manager

Sophie Stolz, Sustainability Manager

sustainability@cargobeamer.com

Media Contact Person

Tim Krause, Communications & Marketing Manager

press@cargobeamer.com

Pictures

CargoBeamer AG, Markus Seeger, Bálint Paha, HOLM, Christina@wocintechchat.com

Contact Details

CargoBeamer AG

Kreuzstraße 12

04103 Leipzig

www.cargobeamer.com

+49 341 652 339 00

info@cargobeamer.com

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