



**Corporate Social  
Responsibility  
Report**

**2021**

**CargoBeamer AG**

**CargoBeamer®**

## Editorial

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# Editorial

Dear readers,

The decade of the 2020s is critical for reaching the Paris Agreement goal of limiting global warming to well below 2°C, preferably to 1,5°C, compared to pre-industrial levels. Succeeding in this existential endeavor requires a fundamental transformation of the transportation sector. According to The International Council on Clean Transportation (icct), transportation is responsible for about 29% of all CO<sub>2</sub> emissions.<sup>1</sup> CO<sub>2</sub> savings are particularly urgent in the transport sector, as it is the only sector that so far has not reduced its emissions compared to 1990.

Rail is by far the most climate- and cost-efficient means of freight transportation available today. Compared to road transport, rail freight saves an average of around 85% CO<sub>2</sub> in Europe. It also saves more than 50% of the energy required to move goods from A to B. Besides, it causes fewer fine dusts emissions, less noise and fewer accidents. Saved external costs of 3.1 cents compared to road transport result in a total of more than 11 million euros, which we have saved for the benefit of society, based on an annual transport performance of around 325 million tkm. One train driver can carry up to 36 semi-trailers today, which corresponds to 97% driverless driving.

The EU, as part of its Green Deal, plans a 50% share of freight transport on routes >300 km by 2050. However, 95% of all semi-trailers can't access current rail technologies as they are non-craneable. CargoBeamer's proprietary railcar and terminal technology makes rail accessible to all semi-trailers and enhances capacity by up to factor 5.

CargoBeamer believes in the benefits of all three: E(nvironment), S(ocial) and G(overnance). While Social and Governance will become increasingly important as our company grows, Environmental has been at the core of our mission from the very beginning.

In 2021, we took our efforts in terms of sustainability onto the next level: With our partner Climate Extender, we calculated our first ever CO<sub>2</sub> balance as a basis for future efforts to reduce our relative CO<sub>2</sub> footprint (Scope 1, 2, and 3). Furthermore, we conducted a sustainability workshop in order to better prioritize the many topics in the realm of sustainability into a milestone plan.

In our first Sustainability report we want to outline our ESG-strategy, where we stand and what we aim for. We pursue a best-in-class approach not only regarding the environmental friendliness of our service or our company. Our social profile is also to focus on the people for whom and with whom we work every day. We are preparing KPIs for the coming year,

for example, to strive for gender diversity at all levels. We are also revising our processes, for example to have full transparency on environmental costs in order to continuously improve our governance.

Next year we will align our non-financial reporting with the principles of the CSRD. This year we have decided not to do so because the framework is currently being revised.

We hope this report gives you an idea of the great environmental impact we already have and are still striving to achieve. Because we only have a few years left to meet the Paris climate target, solutions like ours and their rapid upscaling are needed. Let's get started!



*N. Albrecht*

**Nicolas Albrecht**  
Chief Executive Officer



*M. Fischer*

**Dr. Markus Fischer**  
Chief Financial Officer



*B. Timm*

**Boris Timm**  
Chief Operating Officer



*H.-J. Weidemann*

**Dr. habil. Hans-Jürgen Weidemann**  
Chief Technical Officer



Notes: 1) When referring to CO<sub>2</sub> in this document, we are talking about CO<sub>2</sub>-equivalents. Other greenhouse gases like methane are included in this metric.

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# About CargoBeamer

The CB system is a system solution for combined freight transport (CT), which consists of the following components:

1. Modular technology for road-rail transshipment ("GateModule"),
2. a special freight car design adapted to it ("JetModule"), and
3. a logistics coordination system ("eLogistics", eLS).

The core of the system is the handling and transportation of all types of semi-trailers with a total weight of up to 44 t within the framework of unaccompanied rail transport. The transport offer is aimed at logisticians, forwarders and large shippers throughout Europe. The CargoBeamer Group's goal is to make a significant contribution to avoiding CO<sub>2</sub> emissions by implementing a network of routes and terminals in Europe.

CargoBeamer's value proposition is to provide an attractive and climate-friendly alternative to the growing challenges of road freight transport, which are caused in particular by driver shortages and congestion. In recent years, CargoBeamer AG has developed an innovative, system-open and sustainable logistics concept to market maturity.

The subsidiaries and second-tier subsidiaries of CargoBeamer AG cover the various service elements of a transport service in unaccompanied combined transport (UCT) between the modes of transport including rail. In addition, they act as special purpose companies for the ownership and financing of CargoBeamer railcars ('CB Railcars') and CargoBeamer road/rail transshipment facilities ('CB Terminals').

In 2021, trains were operated in Germany, France, Switzerland (transit), Italy, Poland and the United Kingdom. The company is working on realizing a European network of efficient CargoBeamer terminals, connected in fixed timetables with trains consisting of up to 36 CargoBeamer wagons.

CargoBeamer operated in 2021 at Leipzig (headquarters), Frankfurt and Zurich, as well as on existing and future terminal sites in Calais, Kaldenkirchen and Domodossola. As of 31.12.2021, CargoBeamer had 56 employees. Our wagon fleet has increased from 77 (end of 2020) to 269 (end of 2021).



**1,215**

trains operated in 2021



**82**

active customers



**60 %**

operational growth



**6**

offices across Europe



# Strategy

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– and what is next?



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# Overview: The Road to Rail

With environmental protection at the heart of our strategy, we believe that the race-to-the-bottom competition on the logistics market, concentrating on the lowest price, increasingly has come to an end. Saving Energy and CO<sub>2</sub> more and more translates into both financial and non-financial benefits, making zero and low carbon transportation a premium product.

Our customers' customers increasingly pledge to reduce their CO<sub>2</sub> footprint along their whole value chains. Transport (passenger & freight) accounts for around 29% of global CO<sub>2</sub> emissions. Low or zero carbon technologies on road, water or in the air do either not exist or they are very expensive. There is, for many players in the industry, no way around rail when it comes to reducing greenhouse gas emissions at a competitive price.

As we firmly believe that the importance of a sustainable profile will further increase with each passing year, we pursue a best-in-class approach to differentiate ourselves from the competition. This is true especially in terms of the environment, but also regarding social and governance issues vis-à-vis customers, investors, and on the job market.

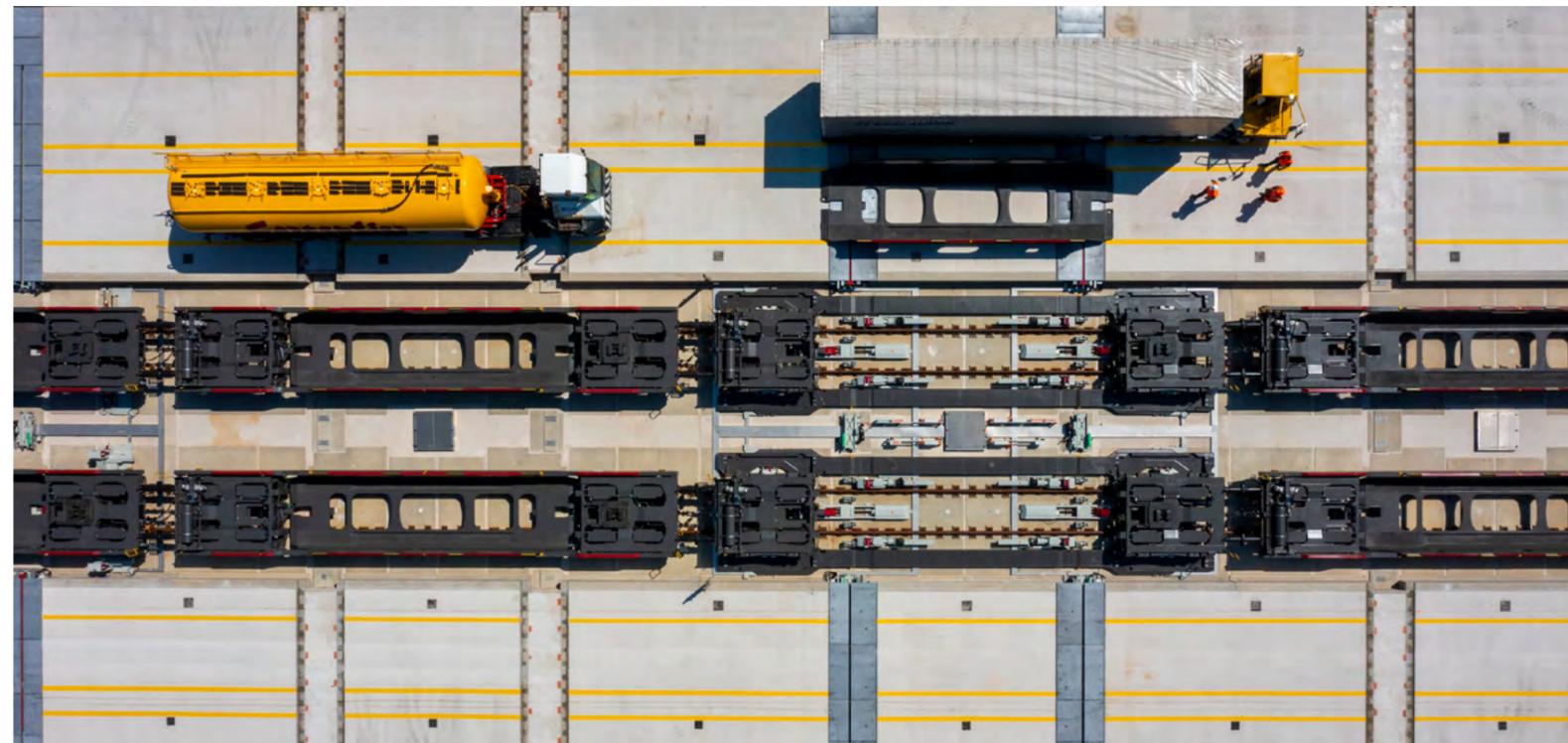
Quick growth of both our terminals as well as our wagon fleet is an integral part of our business strategy in the next decade. This necessarily means that the demands on our sustainability strategy and our transparency regarding non-financial performance indicators are also increasing. With this report, we want to create a baseline for the first time in order to be able to show our development in future reports.

In October 2021, we conducted a sustainability strategy workshop in order to assess where we stand and what our goals are. We prioritized our next ESG measures alongside both our stakeholders' and our company's interests.

As you will learn in the following chapters, we are already close to where we want to be in terms of our environmental profile and efforts.

Our social profile quickly evolved in 2021, too. This is especially true for our work environment after moving to a new office that meets our requirements in both quality and growth – we roughly doubled in size. E.g., by structuring our onboarding processes, training courses, and attractive benefits, we have laid further foundations for continuing to be a desirable employer in the future.

In terms of Governance, we take strict care of data protection, IT Security and anti-corruption. We want to better incorporate environmental KPIs into decision making processes in the future.



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# CargoBeamer going Europe (and beyond)

The headquarter of CargoBeamer is in Leipzig and we are proud to be a quickly evolving enterprise from Saxony. Offices in Frankfurt and Zurich as well as at our current and future terminal locations in Calais, Domodossola and Kaldenkirchen simultaneously underline our claim to be an international company. In the coming decade alone, we are planning to build around 60 terminals throughout Europe, with over 26,000 CargoBeamer wagons running between them.

In 2021, we quadrupled the number of our relations: In addition to our regular route between Domodossola (Italy) and Kaldenkirchen (Germany), we successively implemented the following connections:

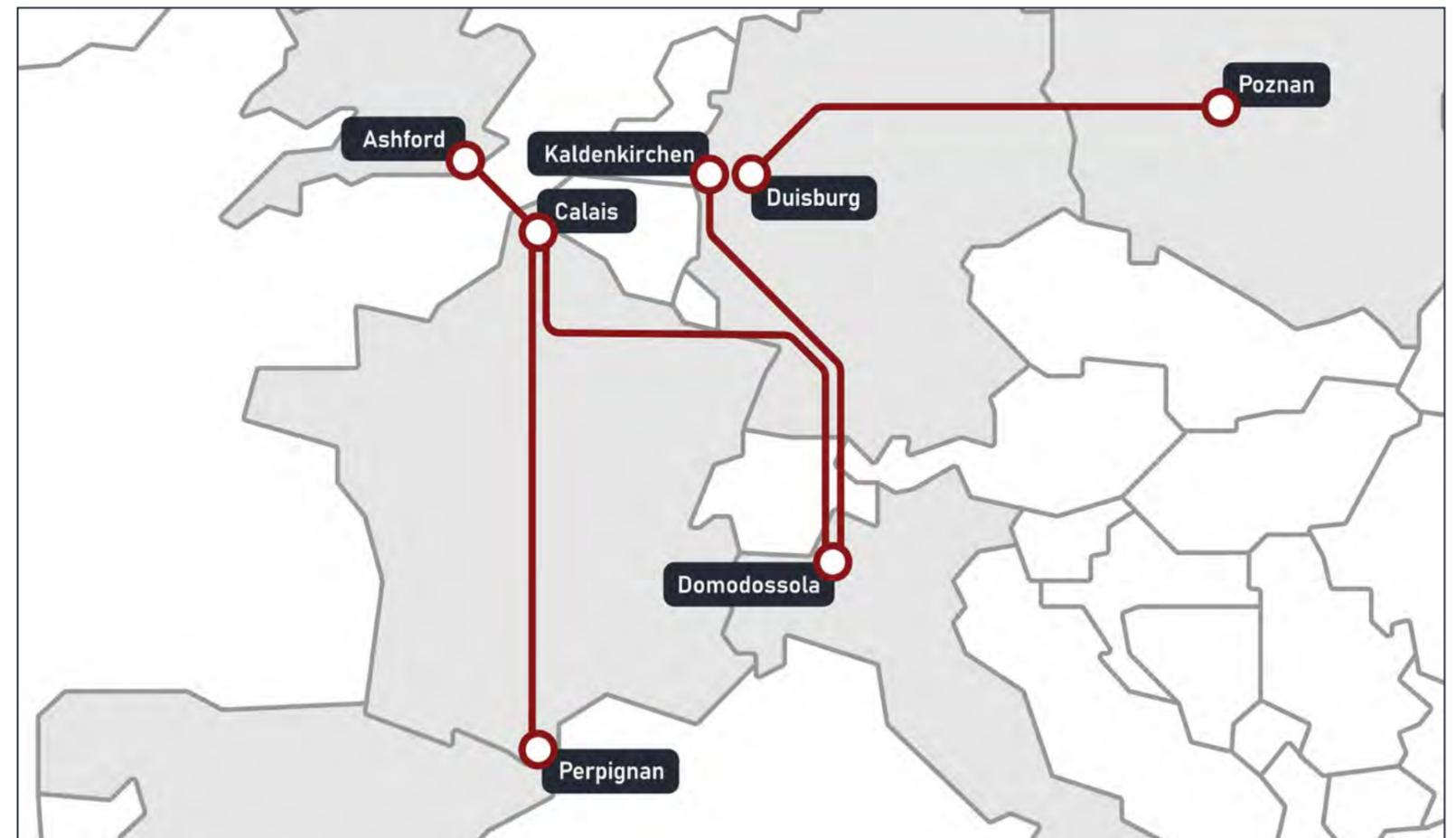
- Duisburg (Germany) - Poznan (Poland) from June 2021,
- the first connection between our terminal in Calais (France), which opened in June, and Perpignan (France) starting in July 2021,
- a transit between Calais (France) and Ashford (UK) in cooperation with Getlink/Eurotunnel, and
- a connection between our terminal in Calais (France) and Domodossola (Italy) started in December 2021.

By becoming one of the largest operators of combined traffic on the European market, we want to enable low (and net zero) carbon transport throughout Europe and beyond:

With our CBoXX, we have been developing a ready-patented addition to our technology for several years: a wagon body optimized for the space profile in freight transport (140 m3 compared to 68m3 provided by a container). The CBoXX has its focus on the whole LTL market in Europe - in order to rev-

olutionize unit cargo (such as standard palletized goods) and to introduce automation and rail to LTL transports. The CBoXX also reduces transport costs on long distance - by about 40% along the Silk Road, for example.

Lively interest from almost all continents strengthens our conviction to align our business model internationally, which is conceivable through licensing models in addition to expansion on our own.



**3,725 km**  
 railroad distance between  
 our sites



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# Three core elements of our sustainability strategy



## Climate-friendly innovation:

Our technology enables us to cut carbon dioxide emissions by up to 90% compared with road transport. Beyond, we save around 70% SOx emissions and 83% NOx emissions on average. In terms of energy efficiency, rail is unsurpassed: it requires at least 50% less energy for transport than road. Compared to conventional combined traffic, the CargoBeamer system requires around 60% less energy for handling. Due to faster handling, CargoBeamer terminals save more than 50% of the space for the same output as a crane or reachstacker terminal. Our goal is to become net carbon neutral as a company and offer a carbon neutral service by 2022.

## Automation:

Traditional combined transport technologies have not evolved significantly in the last decades. Our system enables the loading and unloading of a full train in 20 minutes, whereas the industry average is between 3 and 4 hours. Our goal is to be the most efficient (and thus the most resource-saving), and most customer satisfying combined transport experience on the market.

## Digitization:

CargoBeamer is an intermodal operator with proprietary railcars, terminals and a booking software (eLS) we developed in-house. The system tracks all data in real time, e.g., the wagons' current location, it's loading type or next maintenance interval. The client books a transport online or by phone, just like reserving a train or plane ticket. He checks in digitally to our terminals and drops off the semi-trailer in the departure terminal and picks it up at the arrival terminal with no waiting time. Our goal is to build the best digital solutions in order to create the most efficient and customer friendly product.



Load and unload  
**36** railcars  
in 20 minutes

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# Management and values

## Corporate management

The highest control authority is the Supervisory Board, which has 6 members. The Supervisory Board monitors and examines the Executive Board and the activities of CargoBeamer.

The Executive Board of CargoBeamer AG consisted of three members in 2021<sup>2</sup>: Dr. Hans-Jürgen Weidemann (Founder and CEO), Dr. Markus Fischer (CFO) and Nicolas Albrecht (CBDO).

CargoBeamer's main operational activity is carried out by its subsidiaries. CargoBeamer intermodal operations GmbH is responsible for our core business, the transportation of goods on rail. The development and construction of terminal land is managed by CargoBeamer Terminal GmbH and the procurement and maintenance of CargoBeamer railcars is carried out by CargoBeamer Rolling Stock GmbH.

We started the year 2021 with 23 employees and grew by about 150% within 12 months. With such growth, it is particularly important that our values and our sustainability goals are also shared by the workforce.

## Values and principles

Our mission is to improve the environment with innovative and cost-effective solutions to shift freight transport from road to rail. Sustainability is thus at the core of our mission. We share the conviction that a sound global economy can only flourish if planetary boundaries are considered and talents are qualified and motivated. It is also essential that the management shares common values, shares them transparently with the workforce, and develops appropriate processes for achieving goals.

In order to shape and foster our company culture, we regularly organize management workshops in which we will further detail our sustainability strategy in the future. In 2021, our employees worked in 4 different countries, many of them largely from home offices. Against this background, the active further development and communication of our values and goals is of particular importance.

We attach the highest importance to compliance with all legal requirements. In our dealings between and with our employees, we value respectful and transparent communication. We train all employees on the regulations that are most important to them, such as confidential handling of data, workplace

safety, or other safety and environmental regulations. We strictly reject any form of discrimination and stand for equal opportunities.

Because we also see ourselves as a disruptor in an industry that has so far not been conspicuous for its innovativeness, we will continue to look for talent that goes beyond the beaten track.

For 2022, we have decided to introduce a dual control principle. This relates to the future power of representation in the various Group companies, which will only be shared, but also to the decision-making levels below. We expect this to result in a low error rate.



Notes: 2) Boris Timm joined CargoBeamer as COO and Board Member in 2022.

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# Materiality Matrix

In light of our conviction that a sustainable business model is of interest to all stakeholders, we have laid three essential foundations in 2021 to adequately address the importance of the topic:

1. At the beginning of the year, we created the competence of a **sustainability management** for the first time within the framework of the position "Senior Manager Strategy & Business Development".
2. For the first time, we have drawn up a **corporate carbon footprint (CCF)** for 2020.
3. In Q3/22 we held a **sustainability workshop**, parts of the results of which form the basis for this report.

Our two-day workshop was attended by managers of the Executive Board, HR, Controlling, Strategy & Business Development and Marketing. We identified the following key stakeholders our strategy focusses on:

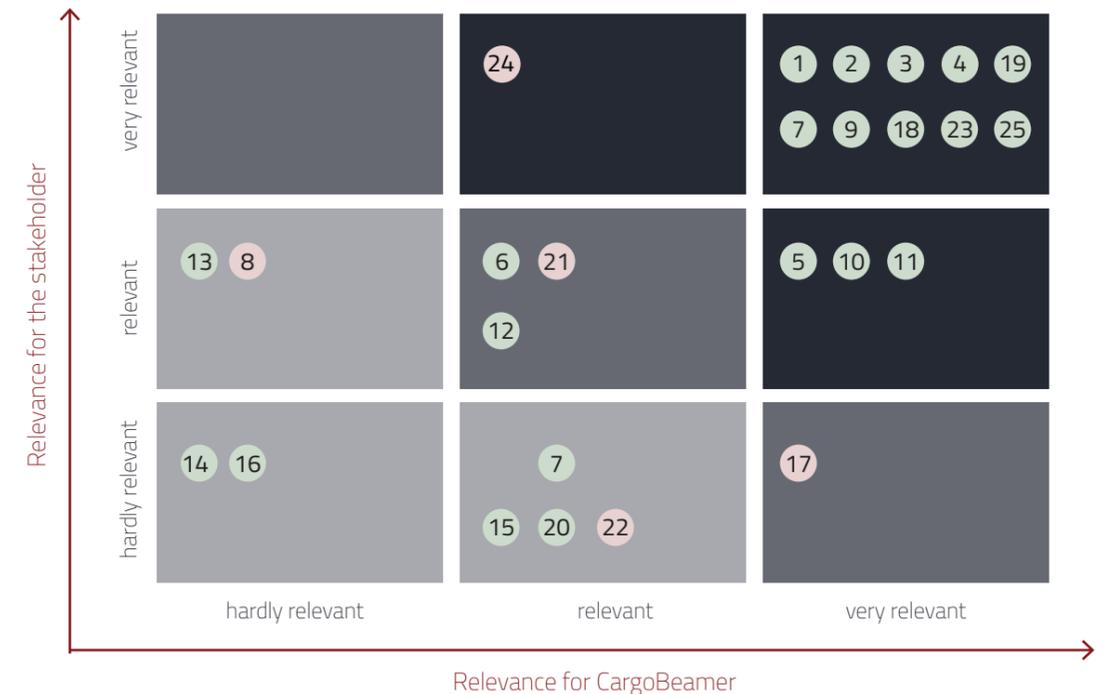
- Our **clients**, including their clients (**shippers**) eager to find low carbon transport solutions
- Our current and future **investors** in search of sustainable, responsible and lucrative investments
- Current and future **talents** working for us, looking for both personal progress and a purpose in what they do

- In the context of the important construction of new CargoBeamer terminals: the **local public and decision-makers**, who ideally share our interest to enable low-emission freight transport.

The accompanying materiality matrix shows how we subsequently ranked the ESG both **risk** and **opportunities** relevant to our business model from our company's perspective and that of our stakeholders.

On the next pages and in the E-, S- and G-Chapters, we will dive deeper into these topics, explain what we did in 2021 already and show our evolving roadmap for the next years.

	Environment	Social	Governance
	1. Climate mitigation 2. Modal shift 3. Innovations 4. Own carbon balance 5. Subsidies/state support in ecological modes of transport 6. Land use of terminals 7. Ecology in everyday life 8. Electricity mix renewable/fossil	9. Digitization 10. Employee recruiting 11. Employee satisfaction 12. Diversity 13. Improvement for truck drivers 14. Social commitment 15. Employee engagement 16. Cooperation with universities 17. Occupational safety	18. Compliance 19. Transparency 20. Awareness creation at CargoBeamer
Others	21. Rail capacities 22. Production conditions of the suppliers	23. Fast transshipment 24. Development of new truck technologies	25. Own capacities



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# Public Relations

Our marketing efforts represent a key component of our ESG strategy. Only through press and public relations, participation in studies or trade show work do we ensure that customers, investors, industry insiders, talent or decision-makers, whether local or (supra-)national, hear about the benefits of our transportation solution.

So it was fitting that there was a lot to talk about in 2021 to draw attention to ourselves: Our reports on our terminal opening in Calais, the commissioning of new routes (e.g. Calais-Perpignan, Kaldenkirchen-Perpignan, Duisburg-Poznan), cooperations such as the transfer solution with Getlink/Euro-

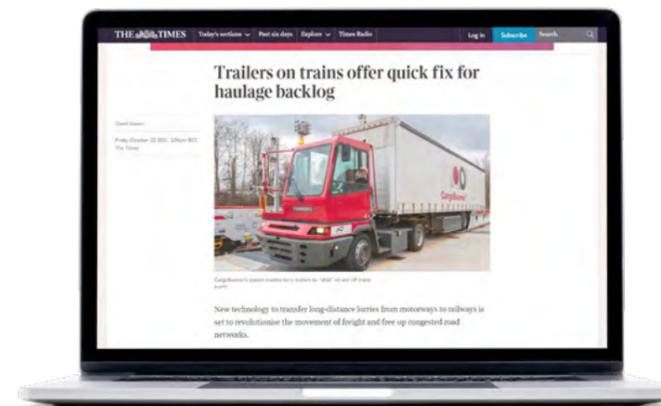
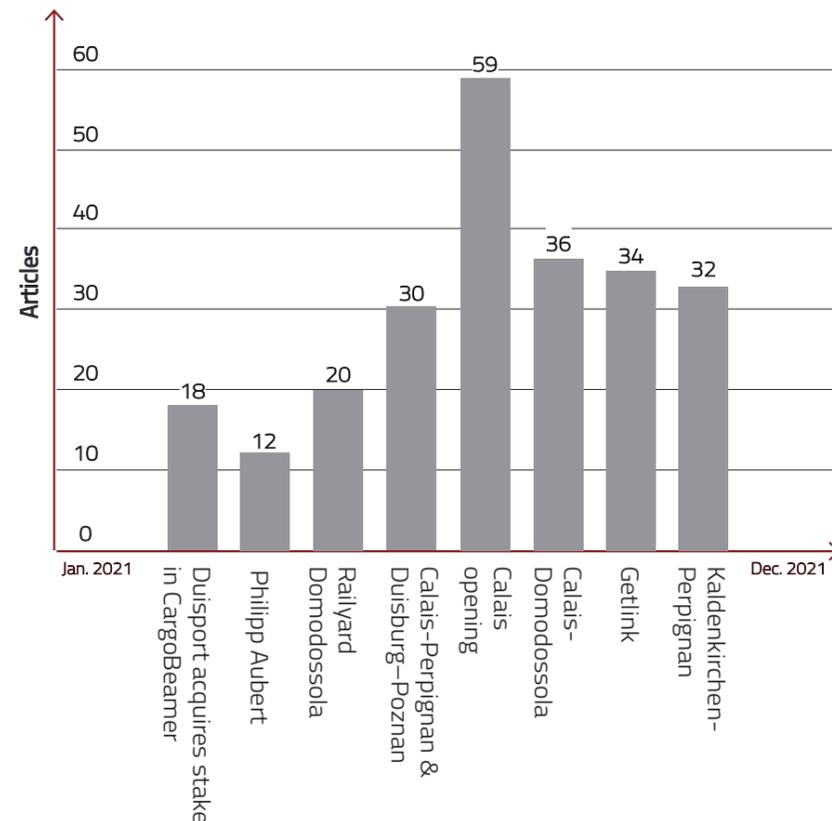
tunnel between our terminal in Calais and Ashford (UK), new personnel and investors brought us an unprecedented press presence.

While we increased business activities in our traditional markets of Germany and Italy and entered new markets in France, the UK and Spain, we also succeeded in increasing or gaining the corresponding media traction in these and other countries. Over the year we had a total of 251 press mentions, so about 5 per week or 30 per press release. CargoBeamer was discussed very prominently in the Times in October, for example, see ["Trailers on trains offer quick fix for haulage backlog."](#)

Our social media channels all had strong growth in 2021. In addition to our main communication channel LinkedIn, we manage accounts on YouTube, Twitter and Instagram. End of 2021, we had 1,823 followers on LinkedIn (end of 2020: 448). Compared to other market players (VIA, Kombiverkehr, Hupac), we have the biggest annual growth rate on LinkedIn.



**400%**  
LinkedIn growth in 2021



Another major milestone was the launch of our new website in Q1/21. After a complete redesign, we have clearly summarized the most important information on the home page. On the new sustainability page, we communicate our key environmental KPIs, among other things, and offer a calculator that customers can use to roughly calculate their CO<sub>2</sub> savings compared with road transport.

As icing on the cake, we recommend our video ["A CargoBeamer Terminal: This is how it works"](#), published in 2021. More videos will follow in 2022, also on the topic of sustainability.



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# ESG: What happened in 2021 – and what is next?

We identified a range of measures we want to work on to sharpen our ESG-profile, some of which we want to share on this page:

This first **CargoBeamer Sustainability Report** is one of them. It is our first step to lay the groundwork for future reporting. As we will report according to the Corporate Sustainability Reporting Directive (CSRD) in the future and this framework is currently under revision, we decided to opt for a leaner version for our 2021 reporting – the one you are looking at the evidence right now.

In light of our rapid growth and many milestones achieved in 2021, our marketing department achieved a great deal of **press and social media attention**, a summary of which you can find on the next page.

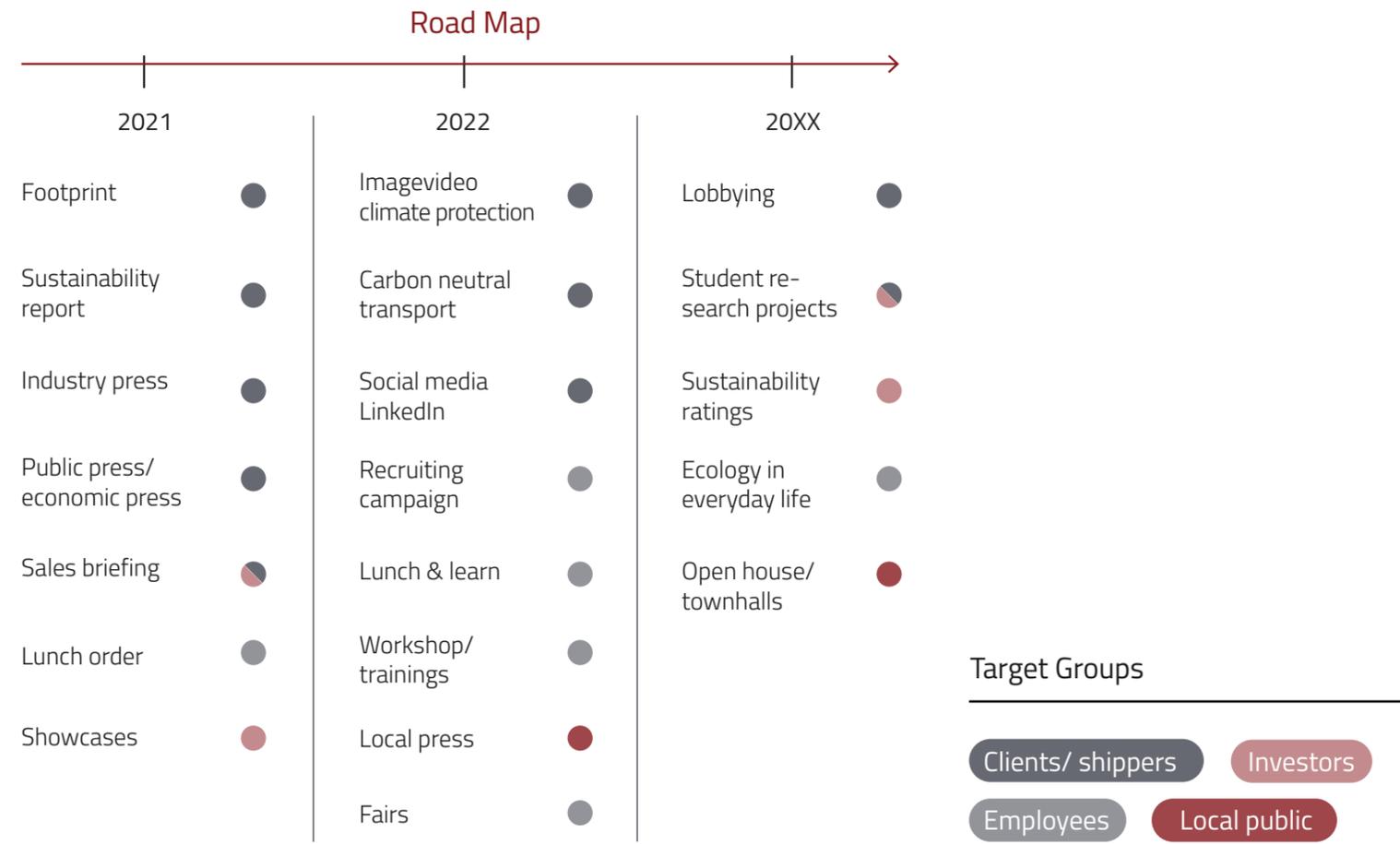
We want to **further reduce our already low carbon footprint**. As the green share of traction electricity gets bigger with each year, part of the work is done without our action, but there are still many means left foster this goal, see subchapter "Climate change (Adaption)" in the Environment chapter.

Consecutively, our salesforce needs to be equipped with the sustainability know-how to fully communicate the benefits of our product to our customers. This includes emissions and reductions per relation, funding opportunities, sustainability Q&A and other talking points. We will create a document and conduct regular **sales sustainability workshops** for this purpose.

In addition to our summer and Christmas parties, from 2022 we will meet quarterly with the entire workforce for the new **"Lunch & Learn"** format. On this occasion, internal or external speakers will address a topic relevant to our organization and then take questions. This will be accompanied by a vegetarian buffet.

We also strive to present **showcases for zero carbon transport chains** in the future. Whereas first and last leg with hydrogen or e-truck are possible already today, we need two CargoBeamer-Terminals with electrified horizontal transshipment at both ends. So far, we have one Terminal in Calais with one E-Terberg, so we are already halfway there.

We also see the need to demonstrate the benefits of our technology even more clearly to policymakers. The EU's planned full internalization of external costs, for example, is a right step, but the timetable to 2050 is far too unambitious. We therefore want to step up our **association and lobbying work**. In this context, we will also join forces with other like-minded companies, e.g., as part of [The Climate Pledge](#).



# Environment

Climate Protection (Mitigation)

Climate Adaptation

Water and waste management

Biodiversity



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# Climate Protection (Mitigation) - 1/2

We see our technology as a indispensable contribution to achieving European and national climate protection targets. In the 2011 white paper on transport, the European Commission set the goal to shift 30% of road freight over 300 kilometers to other modes of transport by 2030 (2019 actuals: 20%), and over 50% by 2050. As the overall transport market is expected to further grow and traditional rail freight (e.g., transport of coal, petroleum, agriculture) is declining (-11% between 2004 and 2019), combined transport must roughly triple its volume within ~10 years in order to achieve the required emission reductions in the transport sector.

As European long-distance road freight transport is predominantly carried out by means of semi-trailers, more than 90% of which are unsuitable for classic intermodal transport due to a lack of gripping edges, a solution is needed that also allows non-craneable semi-trailers to access the railways: CargoBeamer.

Our most important KPIs are the emissions we cause and those we save compared to road transport. For the year 2021, we have calculated both values with the help of the industry leader for emissions calculations in the logistics sector, EcoTransIT World, by integrating a corresponding tool into our eLS via API interface. When speaking of CO<sub>2</sub> in this report, we always refer to CO<sub>2</sub>-equivalents (CO<sub>2</sub>e) that include other greenhouse gases like methane.

In addition, we have calculated our Scope 1 and 2 emissions and non service related Scope 3 emissions with our partner Climate Extender. The result: over 99% of our emissions fall under Scope 3 and are thus in principle allocated to other responsible parties in the value chain under the GHG Protocol.

In more detail, the CargoBeamer Group is accountable for around 68t CO<sub>2</sub> Scope 1 emissions (10 percent buffer included in all figures), mainly due to the use of the company car fleet. Scope 2 emissions from electricity and heat sum up to 76t CO<sub>2</sub> in 2021. The majority of our emissions (99.5% or 38,479t CO<sub>2</sub>) were Scope 3 emissions, mainly the traction current of our service, the construction of our terminal in Calais and the steel production for 192 CargoBeamer wagons delivered

in 2021. Other Scope 3 emissions from travel, commuting, waste, water and website power only accounted for a share of 0,4% of Scope 3 emission (138t).

The adjacent table explains our emissions and savings, where data are available also for energy and particulate matter. The 2020 data on CO<sub>2</sub> are only comparable to a very limited extent due to the changeover to the EcoTransIT World system in 2021.

Key KPIs	Unit	2020	2021	Delta	Savings (2020)	Savings (2021)	Delta	Savings in % of road transport (2021)
CO <sub>2</sub> Emissions (Scope 1+2)	(t)	48	144	+200%	(n.a.)	(n.a.)	(n.a.)	(n.a.)
CO <sub>2</sub> Emissions (Scope 3, traction)	(t)	7,768	5,256	-32.3%	8,288	18,936	+128,5%	78%
Transport performance	(Mio. tkm)	223.9	362,5	+61.9%	(n.a.)	(n.a.)	(n.a.)	(n.a.)
CO <sub>2</sub> /tkm	(g CO <sub>2</sub> /tkm)	34.7	14.5	-58.2%	(n.a.)	(n.a.)	(n.a.)	78%
CO <sub>2</sub> (Scope 3, other)	(t)	36	29,713	+82,436%	(n.a.)	(n.a.)	(n.a.)	(n.a.)
Energy	(GJ)	(no data)	158,741	(n.a.)	(no data)	185,708	(n.a.)	54%
SOx	(kg)	(no data)	5,756	(n.a.)	(no data)	2,951	(n.a.)	34%
NOx	(kg)	(no data)	6,151	(n.a.)	(no data)	16,943	(n.a.)	73%
NMHC	(kg)	(no data)	515	(n.a.)	(no data)	6,605	(n.a.)	93%
PM10	(kg)	(no data)	529	(n.a.)	(no data)	116	(n.a.)	18%

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# Climate Protection (Mitigation) - 2/2

To further mitigate the existential threats caused by climate change, we have assessed where we can further improve our emissions-related advantage both in favor of the market and the environment. Together with Climate Extender, we identified various means:

We identified various options to use and produce **green power**:

- With the move into the new premises in Leipzig and Frankfurt am Main, we changed our **electricity tariffs** to ecologically produced electricity and now obtain our green energy through eOptimum and Vattenfall.
- Wherever possible, we will change our **traction contracts** to green electricity. Due to long-term contracts, this can take up to 2 years.
- We will assess options to **produce green energy**, e.g., by means of solar panels, on all our current and future terminal sites.
- We aim to offer **zero carbon transport solutions** to the market. All that is missing is a second CargoBeamer terminal (which we are already planning) and hydrogen or e-trucks for the first and last mile.

With our first Carbon Footprint, independently assessed by Climate Extender, we also had the basis for making the following three strategic decisions:

1. We will offer a **certified carbon neutral service** from 2022 onwards. As we are already in the low carbon business and can further reduce our small footprint, the costs to compensate for the rest via Goldstandard certificates are lower than 1% of our revenue. This we consider a good invest into our stakeholder relations. It also incorporates the costs of pollution into our business model. E.g., 1km track distance in Poland (with a high proportion of coal-fired power) causes as many emissions as 100km track distance in Switzerland does. Compensating for emissions thus costs x100 more in Poland as compared to Switzerland. We therefore have to take into account the cost of compensation as early as the route selection stage.
2. We will also become a **carbon neutral company** in 2022 regarding our Scope 1 and Scope 2 emissions. We will also compensate for all Scope 3 emissions (e.g., for commuting, business travel, website) that are not part of our third decision.
3. We want to become **100% net carbon neutral (Scope 1-3) in line with or ahead of the Paris Climate agreement**, including emissions generated by the construction of our terminals (especially for concrete and steel production) or by our railcar production.

We will follow the principle of giving preference to the reduction of greenhouse gases over compensation wherever possible. Purchasing green steel or concrete, for example, is not economically viable at present. We will continue to monitor these and other developments closely.



## 18,936 t

CO<sub>2</sub> saved compared to road transport



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# Climate Adaptation

Climate change poses a steadily increasing challenge for intermodal rail freight transport in two respects: First, low-lying terminal sites close to the sea are threatened in their functionality by rising sea levels in the medium to long term. We can mitigate this risk without effort by selecting **terminal sites** that are high enough. However, our selection process for inland terminals also includes an assessment of the local hazards that could result from heavy rain, rising groundwater or falling trees, for example. As a rule, these risks are low and the damage is only a temporary loss of service.

More challenging are the **effects on the rail infrastructure**, for example if trees fall on the tracks or overhead lines, the ballast bed is washed out, or the rail itself is deformed as a result of intense heat. This part of the infrastructure is out of our hands and we depend on its functionality.

The *Adaptation of Railway Infrastructure to Climate Change* partners with DB, SBB, ÖBB and others to assess and mitigate risks for the railway infrastructure that are caused by climate change. One easy solution for the rail getting too hot could be to paint them white, for example. Heat can also be dangerous for bridges: If a movable bridge expands too much it can no longer close. Heat can also cause failures by overheating installations, such as relay boxes. Research projects are already being carried out in order to find efficient means for mitigation.

It is true that these weather hazards, which are increasing as a result of climate change, also affect other means of transport: Rivers that contain less water can carry less cargo. Road traffic is affected, too, when the tar bursts open or heavy thaws in alpine areas trigger debris avalanches. But the road is considerably more flexible when detours are necessary.

So far, weather-related incidents are responsible for only a small proportion of train cancellations. In the future, however, it may become more important, for example, in route selection, which respective climate risks are imminent. For Dutch rail, heat and flooding are the most imminent climate change threats, for example.



**+192**

new wagons  
in 2021



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# Water and waste management

The business model of CargoBeamer AG has no significant points of contact with the topic of water and marine resources, which is why we have not developed any measures at the product level.

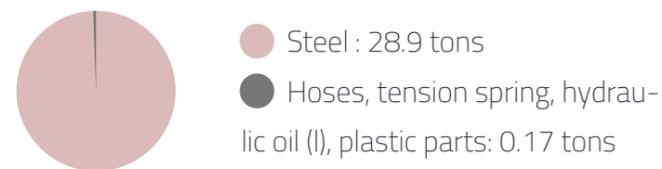
For our offices, we have determined a water and wastewater consumption of 34m<sup>3</sup> at our locations in Zurich and Leipzig as part of our CO<sub>2</sub> balancing. We installed water dispensers for employees at both our headquarters in Leipzig and our office location in Frankfurt am Main in mid-2021. By the end of the year, this measure led to saving 3,655 bottles of water.

The absolute majority of our business processes already are digital. We calculated a remaining paper use of around 92kg for all our offices in 2021. This figure should further decrease as we are planning to become a paperless office.

Most of our office waste in fact came from disposable packaging of the lunch that our employees usually had brought to the office by delivery service. This source of waste was almost completely eliminated through an employee initiative: Through a cooperation with a neighboring canteen, employees can now choose from 4 different dishes under €5 until 10 a.m. the same day, delivered in reusable assiettes.

Our CargoBeamer railcars are mainly made of robust steel. This allows a service life of 36 years or more. If the wagons are taken out of service, the steel can be recycled. The recycling rate is expected to be around 90% in the future.<sup>1</sup> Our terminals are made of weather-resistant concrete and steel, which also ensures a long service life. The materials used can subsequently be recycled.

Main components for one CargoBeamer railcar in tons



1) Source: The impact of climate targets on future steel production - an analysis based on a global energy system model | Elsevier Enhanced Reader; S.477

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# Biodiversity

Along with climate change, rapid species extinction poses the greatest current threat to people and nature. Logistics, while not the main culprit, contributes to the problem in two ways:

- **Land sealing** for transportation routes and stops
- Fuels for transportation are obtained by exploiting ecosystems, and their combustion **contributes to climate change**, to which more and more species are unable to adapt

Rail transport is inherently superior to road transport on both counts. According to the European Handbook on the external costs of transport, the cost to society per tonne-kilometer due to noise, particulate matter, land use or with a view congestion are much higher on roads.

E.g., freight transport volumes on the highways have exceeded their nominal capacity for heavy goods traffic (around 350 billion tkm p.a.) since 2010. Since this "tipping point" was passed, the congestion figures have multiplied. The basic analyses for the Federal Transport Infrastructure Plan ("BVWP") forecast further growth in the volume of heavy goods traffic on German highways to around 500 billion tkm p.a. by 2030.

The overall external costs for road are 4.2 cents per ton kilometer. For rail, it is 1.1 cents, a difference of 3.1 cents. This means that a single CargoBeamer train (36 slots, average load weight 18t, 900km travel length, 3 round trips per week, 40 operating weeks per year, at 85% capacity utilization) saves more than 3.6 million euros in external costs for society.

By increasing our share of green electricity even further and offsetting the low greenhouse gas emissions that also exist in rail transport, our contribution to climate protection and thus also species protection will be even greater in the future.

As far as land consumption is concerned, CargoBeamer terminals have a decisive efficiency advantage over conventional intermodal transport: they have a capacity that is 3-4 times higher due to the faster turnaround time (864 loads and unloads per day). At the same time, they are only about half the size (around 6 hectares). Thus, land use per

transshipment is about a factor of 6-8 times lower with our technology.

Our horizontal terminal transshipment technology is furthermore likely to be the quietest on the market - an advantage that benefits both nature and people.



# Social

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# Introduction: Our employees are our main asset

At the beginning of the year 2021, we had 28 people working for CargoBeamer – a figure that more than doubled within one year. Our HR department, which was still staffed with one FTE in 2021, has therefore spent most of its work on the preparation and implementation of a total of 41 new employees. The average age of all employees was around 38 years EOY 2021, approximately 27% of the employees were women, 73% were men. Additionally, we employed five working students and one intern. Two of the working students finished their master and started their first full-time employment with us. We employed four part-time employees and one person within the inclusion aspect.

We plan to again approximately double in size in 2022. To achieve our ambitious growth plans with motivated and healthy talent, we have defined a whole range of measures for 2022:

- First, our HR department will increase by **1-2 additional FTEs** to accommodate the high task spectrum.
- We are transferring our current annual feedback meetings to a **digitally supported feedback process**, which will have a better guidance for feedback providers and receivers and a higher frequency, especially in the first year.
- An **onboarding website** will make it easier for our new recruits in particular to get started. Among other things, it will provide an organizational chart, a picture gallery of new colleagues, and other introductory documents.
- An **onboarding week** including e.g., a tour of our prototype terminal, a joint evening event and an onboarding meeting, as this is the best possible basis for a smooth start with us.
- Our Marketing Department is going to publish a **regular newsletter** to get everyone in the company on the same page regarding important developments.
- **Contributions** to employee pensions and health insurance are provided, depending on the local business practices.

As an agile company with a comparatively large number of young employees, it is important to us that we exemplify an open corporate culture. Flat hierarchies facilitate internal communication and enable continuous improvement of many processes, as well as the contribution of own ideas and improvements.

In planning further development, the focus is on equal opportunities in recruitment and employment, so that qualifications

are the only decisive factor and diversity, equal treatment and inclusion are promoted regardless of origin, gender, sexual orientation or religious affiliation. In addition, the Instagram channel was upgraded to increase the company's visibility as an equal employer and now serves as a regular information channel both internally and externally.



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# Working conditions & benefits

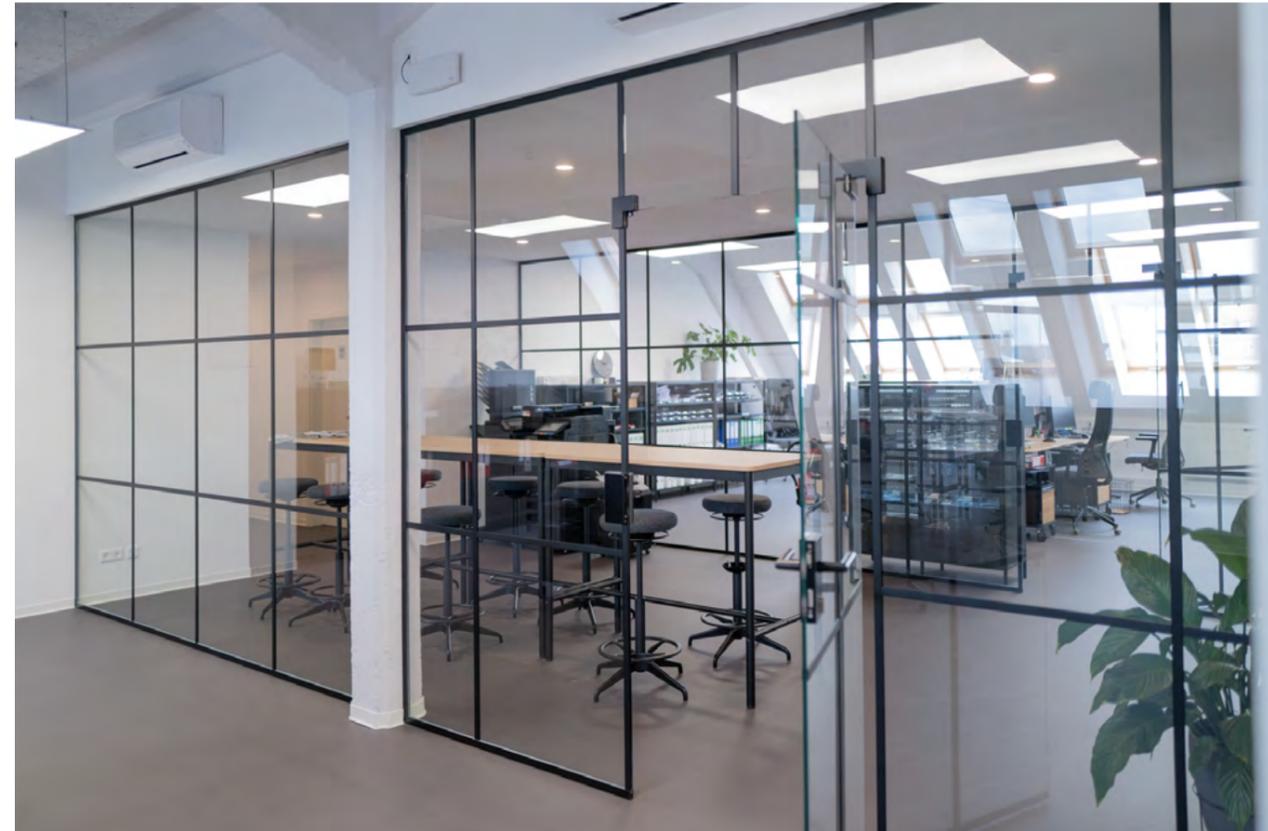
Health and safety at work are our top priority and we continuously work to improve our working conditions. For example, our employees take part in regular training courses to promote safety-conscious behavior and prevent accidents at work.

Beyond health and safety, it is important for us that our employees feel good at work. After all, the results of their work are significantly better if they enjoy coming to work.

With a view to dealing responsibly with the Corona pandemic situation in 2021, this meant further increasing the option of **working from home**. At the same time, flexible working time models, mobile working and employment concepts such as working **part-time** at CargoBeamer are central components of our corporate culture. We enable various corporate benefits, such as a **free public transport ticket, bike leasing (JobRad)** and for high-frequency travelers a **BahnCard50 or 100**. Employees can furthermore opt for **capital-forming benefits** of 40 € per month.

With the opening of our first own terminal in Calais, but also the company's moves to the new offices in Leipzig and Frankfurt, the need to further focus on working conditions grew. Operating a terminal requires appropriate staffing plans to adequately staff the terminal, while complying with the general occupational **health and safety laws** in France.

The move of our Headquarter from an outer district to the City center of Leipzig at the middle of the year was a gamechanger. The office space at two floors in Kreuzstraße 12 was newly renovated, redesigned and furnished in consultation with our HR Department and an Architect. The new central location allows for better use of **public transportation** and **shorter travel times** for external parties. The large, light-flooded rooms are **air-conditioned**, equipped with **large, height adjustable desks** and **eye-safe** screens, and offers a health-friendly working environment



thanks to **optimal desk orientation**. Furthermore, both floors have a **kitchenette**. The office has **barrier-free access**.

The Frankfurt office was added in the autumn of 2021 and is also centrally located in Lyonerstr. 20, on the 10th floor of a high-rise building. It has large glass fronts and is thus also flooded with light, along with a view over the city. The office space there is also equipped with height-adjustable, large desks and at least two monitors, which again allows us to ensure **health-conscious working**. Employees can also drink **water and coffee** or make lunch there at any time. In 2021, we introduced **Office fruit** at both sites.



# 59

employees



# 6

locations



CargoBeamer®

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# Personnel development and recruiting

We firmly believe that the further development of our employees is in both their interest and ours. That is why we offer **personal development programs** to help our employees create personalized development plans tailored to their own goals, their job role and learning priorities.

In day-to-day business, junior and senior-level employees are working together closely to **foster hands-on experience** and helping to develop a stronger community and better company culture. **Social learning** enables employees to learn new skills and develop a better understanding of the company overall.

Various **training measures** ensure that employees can develop according to their wishes and the company's possibilities. For 2022, we plan to introduce regular **employee and feedback meetings** to discuss what career goals employees are pursuing, what position they see themselves in in the future, and what skills they possess.

Our **recruiting strategy** is derived from our corporate goals. With the help of our all-in-one HR software, we have digitized the entire process and regularly evaluate which channels work well for us. We are planning to adapt our career page and our job advertisements so that the sustainability of our work will have a central and visible place. We are already advertising our positions on sustainable job platforms such as Good Jobs. CargoBeamer has already attracted various talents who are looking for a social purpose in what they do.

Our **hiring process** is divided into three steps, with the first step asking about the importance of sustainability for the applicant and discussing CargoBeamer's contribution to sustainability in detail. Of course, we ensure an unbiased and non-discriminatory recruitment process at all times.



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# Diversity and Human Rights

EOY 2021, 59 employees from five nationalities worked for CargoBeamer in four countries (D, It, Fr, CH). We hired 41 people in 2021, whereas 9 employees left us. In the reporting year 2021, 83% were men and 17% women on the Supervisory Board. The Executive Board was made up of 100% men.

The challenge of our rapid growth is not only to take into account the individual circumstances of each country, but also to adapt workplaces and work concepts to the rapidly changing world of work. Due to the digital transformation, which we meet with our automated all-in-one HR software, among other things, or the demographic change, the attractive design of workplaces as well as the long-term retention and continuous development of employees is a central component of CargoBeamer. This further development is to be promoted in the future through the introduction of regular employee discussions, in which CSR topics such as sustainable everyday life or social commitment are also highlighted.

We want to create fair jobs, shaped by mutual trust and respect and with dignified interaction between all employees. This includes wages well above the minimum wage. We are committed to performance-related remuneration and benefits, reasonable working hours, paid vacation, maternity leave and parental leave.

With a fair recruiting process - without discrimination based on ethnic background, gender, age, religion, national or social origin, disability, marital status, sexual orientation, gender identity or other criteria that are prohibited by law - we contribute to diversity in our company. Non-discriminatory job advertisements and standardized recruiting processes help us to not exclude anyone and to focus on the skills and competencies of the applicants. Our HR marketing is also to be professionalized in the coming months so that a broad target group feels addressed by our presence.



# Governance

Quality Management

Data protection and IT Security

Anti-corruption



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# Quality Management

CargoBeamer AG has maintained a quality manual since 2015, which is revised annually and has group-wide validity in the context of certain defined core processes. The main objectives are:

- Safe operational handling;
- Orientation to quality and punctuality,
- Basic service principles for our transport customers,
- Economic sustainability;
- Ecological sustainability;
- Technical sustainability;
- Social sustainability.

In our server area "Quality Management" the core processes of the CargoBeamer group can be sorted by assignment to the chapters of ISO 9001ff. The implementation of the ISO standard in the daily work processes of CargoBeamer thus becomes structurally visible.

We set individual quality targets for the companies and regularly monitor their achievement. For example, the targets for the parent company CargoBeamer AG include patent protection, information obligations to shareholders, and securing liquidity. The operating subsidiary CargoBeamer intermodal operations has specific punctuality and capacity utilization tar-

gets. CargoBeamer Rolling Stock, also ECM, for example, has a goal of wagon availability of more than 98%. CargoBeamer Terminal GmbH's first priority is to obtain building rights on new terminal land.

The documentation of the quality management takes place on the project management server of the CargoBeamer group in the folder quality management. The documentation of the core processes in the QM area of the CargoBeamer project management server serves not only the continuous monitoring and improvement of the quality of all company processes but also the training and further education of the employees.



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# Data Protection and IT Security

## Data Protection:

The compliant handling of legal requirements in the area of data protection, especially the handling of personal data and security in the area of IT, is integral part of our sustainability strategy.

Even though the internal need for consulting on data protection-related topics is currently very low and manageable due to our customer base in the B2B area and can therefore be covered by the currently appointed internal data protection coordinators, we are currently implementing a project in which we involve external data protection expertise. To this end, we are planning to switch to support and advice from an external data protection team, which will start work seamlessly with the appointment of the external data protection officer in the first quarter of 2022, in order to continue to meet the data protection requirements according to the GDPR. This in turn underscores the importance and seriousness of how we handle information worthy of protection, especially if we are going to expand our business activities also and above all in other European countries.

Within our digital training platform, we want to continuously raise the awareness of our employees and management for this topic. The appointment of the external data protection officer also marks the start of the establishment of a professional data protection management system, the aim of which will be to ensure a continuously high level of data protection. No complaints of breaches of data protection was received in the year 2021. We did have one successful phishing attack that led to the theft of email addresses of one of our managers. All recipients of consecutive fraudulent mails have been warned quickly. To our knowledge, there have been no other negative consequences.

## IT Security:

Our IT management defines our IT security goals together with the business and implements them on an ongoing basis. Our level of protection is characterized by regular backups and their geographical distribution as well as the implementation of software updates to close security gaps at an early stage and other measures. To this end, we work closely with service

providers who support us with both advisory and operational services. Access to our systems is limited to a very restricted group of people known by name.

We are aligning with the industry standard family ISO 27001 and will prepare the ITC in the direction of certification so that we can sustainably and demonstrably achieve our goals and further reduce omnipresent IT risks to a minimum.



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# Anti-corruption

CargoBeamer is clearly committed to the fight against corruption. The central principles with regard to dealings with customers, employees, service providers and shareholders at CargoBeamer are that relationships are conducted in mutual respect and agreements are always made with fairness and with the intention that they will be concluded.

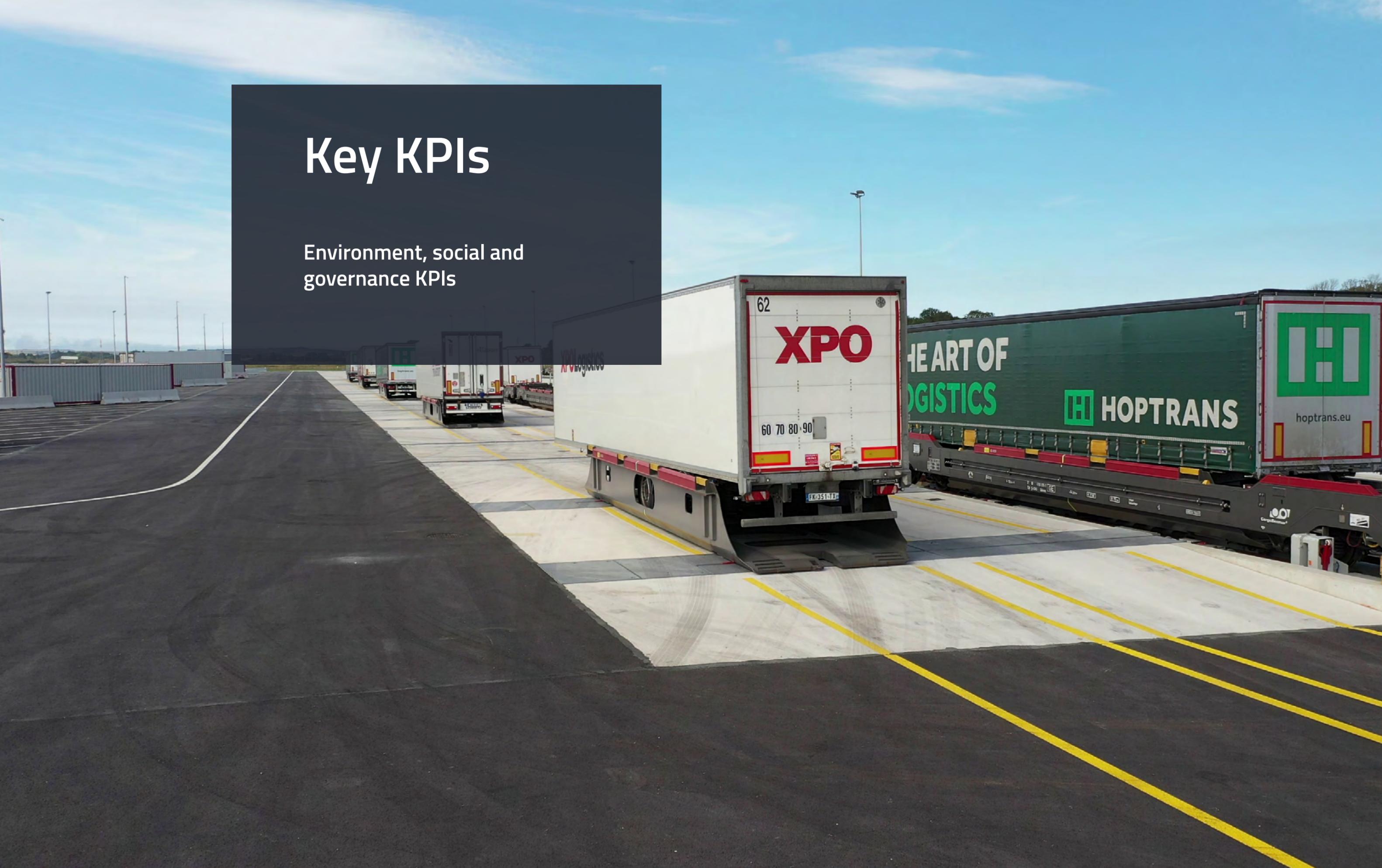
Our activities in so-called "high-risk countries" such as China or in countries along the new Silk Road are on a preparational level thus far. Transparency International rates the risk of corruption in the public sector as particularly high in these countries. Our efforts to counteract such risks will rise proportionally to our business activities in these countries. Currently, the future is unforeseeable as the geopolitical uncertainties are high.

A strict ban on corruption applies to both staff and suppliers and is firmly anchored in both the internal Code of Conduct and the Code of Conduct for Partner Companies.



# Key KPIs

Environment, social and governance KPIs



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# Key KPIs

	Key KPIs	Unit	2021	2020	Delta
Environment	Energy consumption	kWh	36,208	7,124	+408%
	CO <sub>2</sub> in Scope 1 and 2	t	140	47	+198%
	CO <sub>2</sub> in Scope 3	t	34,971	7,817	+347%
	Amount of waste	t	3.2	3	+7%
	Water consumption	m <sup>3</sup>	661	34	+1,844%
	Transport performance	Mio. tkm	362.5	223.9	+62%
	Corporate carbon footprint (CO <sub>2</sub> )	t	35,112	7,864	+346%
	Product carbon footprint (CO <sub>2</sub> )	t	5,256*	7,768*	-32%
	Total CO <sub>2</sub> savings compared to road transport	t	18,936*	8,288*	+129%
	CO <sub>2</sub> emissions per tkm	g CO <sub>2</sub> /tkm	14.5*	34.7*	- 58%

	Key KPIs	Unit	2021	2020	Delta
Governance	Reported compliance incidents	#	1	0	+1
	Complaints regarding the violation of data protection	#	0	0	0

	Key KPIs	Unit	2021	2020	Delta	
Social	FTE (end of year)	#	56	24.6	+128%	
	Share of women	%	27	31	-4 pp	
	Average age	years	38	45.3	-7.3	
	Accident frequency	#	0	1	-1	
	New employees	%	41	10	+31	
	Average duration of employment	years	1.75	3.14	-1.39	
	Personnel throughput rate (joining/leaving)	#	2.96	1.91	1.05	
	Departing employees (as share of Total)	# (%)	9 (13.8)	8	-1 pp	
	Nationalities					0%
	Sick days per employee	#	1.9	4.1	-2.2	
	Share of employees with physical impairments	%	2	4	-2 pp	
	Share of employees working part-time	%	7	8	-1 pp	

\* Since 2021, we have been calculating our product carbon footprint as well as our savings compared to road using EcoTransIT Wold, the industry leader for calculating emissions in the logistics sector. The values from 2020 and 2021 are therefore only comparable to a very limited extent.

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