



SUSTAINABILITY REPORT 2021

STADLER

SUSTAINABILITY AT A GLANCE IN 2021

565

VEHICLES DELIVERED IN 2021

Previous year: 465

51%

RECYCLING RATE IN PRODUCTION

224

KILOMETRES WITH BATTERY-POWERED
FLIRT MODEL WORLD RECORD WITH A
BATTERY

13,067

EMPLOYEES WORLDWIDE
(Ø FTE 01.01. – 31.12.2021)

Previous year: 12,303

2030 OBJECTIVES

–VOC

REDUCTION OF VOC EMISSIONS BY
15 PERCENT COMPARED TO 2021

1/2

HALVING OF EMISSIONS
FROM SCOPES 1 AND 2

0

CORRUPTION CASES

20%

REDUCTION OF CO₂ FOOTPRINT OF
STADLER TRAINS

CONTENTS

- 4** _ Foreword by the Group CEO
- 6** _ Company profile
- 12** _ Sustainability at Stadler
- 17** _ Areas of focus
 - 19** _ Ecological footprint of our products and services
 - 25** _ Significant contribution to net zero (decarbonisation)
 - 30** _ Responsible use of resources
 - 33** _ Regional roots and responsible management
 - 36** _ Attractive employer
- 42** _ Other important sustainability issues
 - 42** _ Governance
 - 43** _ Products and services
 - 45** _ Employees
 - 45** _ Environment
 - 46** _ Society
- 50** _ GRI content index
- 55** _ Data collection and evaluations
- 56** _ Notes – detailed data on selected GRI key figures
- 58** _ Glossary

FOREWORD BY THE GROUP CEO

Dear Reader

Stadler's DNA is green. As early as 1943, company founder Ernst Stadler built and sold a battery-powered vehicle. Today, we are one of the leading suppliers in the field of green drives with electric, battery and hydrogen drives. To achieve this, we have invested a great deal in the development of our vehicle portfolio over recent years.

Stadler decided early on not to focus on a single green solution, but to offer our customers a full range of green drive systems including everything from electric, battery and hydrogen to fuel-cell drives. We can also produce all these drives together with each other as hybrid solutions. Our aim and that of our customers is to make a significant contribution to the decarbonisation of rail transport.

We are in the fortunate position of being able to develop and build a product that is very sustainable per se. In terms of emissions per passenger kilometre, rail remains one of the most environmentally friendly mode of transport of all. However, further efforts are needed to achieve climate targets set by governments.

I see potential for this in digitalisation, among other things. Increasing driving automation not only optimises energy when operating trains, but also creates more capacity on the rail network, the most environmentally friendly way of travelling. Stadler runs an international competence centre for signalling solutions in Wallisellen near Zurich. It has been strengthened significantly over the past year through targeted acquisitions. Furthermore, groupwide expert teams are working on the digitalisation of vehicles and railways. Highly qualified engineers develop solutions for the partial and full automation of operations. We also support safe and efficient train maintenance with modern service offerings, such as the use of a digital twin – a virtual image of the train – which reliably predicts the maintenance requirements of the components.

With the further technological development of our vehicles and our digital solutions for train operation, as well as constant energy optimisations in production, we are an important driver for promoting sustainable mobility and for achieving net-zero emission targets. This is our ecological contribution towards a more sustainable future.

As an attractive employer, we also take social responsibility seriously. We are rooted in the region of each of our production sites and engage with local communities stakeholders. We ensure and promote diversity and equal opportunities at all our locations, across all areas of the business.



Now, we are keen to take further steps in the disclosure of our activities with regard to sustainability. In 2019, we published our first Sustainability Report. Since then, we have done a great deal to progress and professionalise this area. Since 2019, we have expanded sustainability management even further and identified the need for action based on a systematic materiality analysis. The steadily increasing demand for transport capacity is an opportunity for us to pursue our growth. We are shaping this growth sustainably, but are aware of the responsibility this entails.

We are committed to the net-zero emission targets and support the climate goals set by Switzerland and the Paris Climate Agreement. In addition, we help our customers to achieve their goals with our innovative products. We are convinced that together, we can inspire more and more people to travel by train and tram, thereby making an important contribution to the environment and society.

Learn more about our commitment on the following pages.

A handwritten signature in black ink, reading 'P. Spuhler'.

Peter Spuhler
Chairman of the Board and Group CEO a.i.

COMPANY PROFILE

Stadler has been building rail vehicles for 80 years. It also provides innovative solutions in the areas of service and signalling technology. The product range includes high-speed trains, intercity trains, regional and suburban trains, underground trains, tram trains and trams. Stadler also manufactures locomotives and passenger carriages, and is the world's leading manufacturer of rack railway trains.

Stadler has further expanded its signalling expertise with the acquisition of the two signalling companies Bär Bahnsicherung AG from Switzerland and BBR Verkehrstechnik GmbH from Germany. Stadler can now offer signalling solutions from a single source both on the vehicle and on the rail side. More than 500 specialists work at several locations in this growth area. At the beginning of 2022, a standalone Signalling division was created.

Customers want environmental sustainability

The "Service & Components" segment offers customers a host of services, ranging from the supply of individual spare parts, vehicle repairs, modernisation and overhauls to complete full-service packages. This ensures that after delivery, the vehicles continue to meet our customers' most demanding requirements in terms of reliability, availability and environmental sustainability over their entire life cycle. Stadler is committed to ensuring that passengers worldwide arrive at their destination safely, quickly, comfortably and sustainably.

With the growing population and the trend towards urbanisation, the need for environmentally friendly mobility solutions is increasing around the world. Stadler has been able to grow steadily over the past two decades thanks to its distinctive customer focus, expertise and reliability.



Global presence

Stadler operates a total of seven production sites: Bussnang, Rheintal (Altenrhein and St. Margrethen), Berlin, Valencia, Siedlce, Salt Lake City and Minsk. The company also has seven component plants in Środa, Valencia, Winterthur, Biel, Szolnok, Minsk and Berlin. The Service division boasts more than 70 service locations in 22 countries and is continuing to grow.

7

PRODUCTION LOCATIONS

7

COMPONENT PLANTS

70

SERVICE LOCATIONS

22

COUNTRIES WITH STADLER LOCATIONS



The head office is situated in Bussnang in eastern Switzerland. Stadler is a system provider, which means that only the most important components come from its own production plants. These include car bodies and bogies, for example. All other components come from a long, mostly multi-stage supply chain that stretches all over the world. Ensuring quality plays a key role. The various components must be delivered in excellent quality and on time. In addition, numerous standards must be complied with unconditionally.

Stadler has sold around 10,000 trains in 42 countries. Consolidated revenue amounted to 3.6 billion Swiss francs in the 2021 financial year. Order intake stood at a record 5.6 billion Swiss francs in 2021 while the order backlog reached a new record high of 17.9 billion Swiss francs, despite the fact that two orders worth billions of francs were blocked by the courts until the end of the year with the contract was not awarded until 2022.

Stadler has been listed on the SIX Swiss Exchange since 2019. PCS Holding and anchor shareholder Peter Spuhler hold a total of 41.5 percent of the shares. The remainder is in free float and owned by the management. The Stadler Group is divided into seven divisions, each of which is headed by a member of the Group Executive Board.

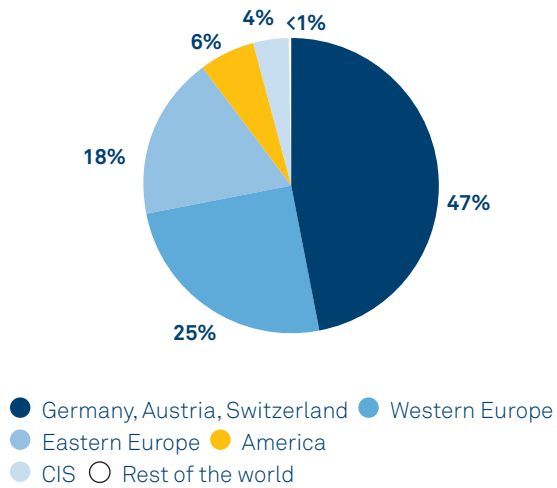
MARKET

The global rail vehicle market has a volume¹ of around 54 billion Euros with annual expected growth of around 3.5 percent (CAGR 2019–2024²). The market relevant to Stadler generates a volume¹ of around 27 billion Euros and includes high-speed trains, intercity trains, regional and suburban trains, underground trains, tram trains and trams. Stadler also manufactures main-line locomotives, shunting locomotives and passenger carriages. Europe is by far the strongest sales region in the rail vehicle market, with multiple units recording the highest demand. Stadler also operates Service and Signalling divisions, which have an annual volume of around 7 and 18 billion Euros respectively.

Stadler has continuously gained market share in recent years – both through acquisitions and as a result of its own growth. In the USA, Stadler opened a plant in Salt Lake City in spring 2019, where it employed around 380 people by the end of 2021. In Germany, the site expansion in Berlin-Pankow was completed during the reporting period. In our home market of Switzerland, we moved into a new production plant in St. Margrethen at the end of 2019. This investment increases our competitiveness, while at the same time represents a commitment to Switzerland as a

business location. In addition, Stadler has opened several sites in the last two years in countries including Switzerland, Germany, Finland, Denmark, Georgia and Turkey.

NET REVENUE BY GEOGRAPHICAL MARKET
in thousands of CHF



OUR VALUES

We build trains tailored to our customers' requirements. We listen to our customers and work with them to design and build the ideal vehicle. For us, each project is a personal challenge.

CUTTING-EDGE TECHNOLOGY

Stadler never stands still. We are continuously moving forward and developing further in order to get the perfect vehicle for our customers on the tracks.

EFFICIENCY

Stadler stands for productivity – thanks to high availability, low maintenance, energy efficiency and low life cycle costs.

PARTNERSHIP

From our first interaction to delivery and beyond, we support our customers as a powerful partner. Our many long-term business relationships attest to this.

RESPONSIBILITY

Stadler is aware of the responsibility that the company bears towards its numerous stakeholders, society and the environment.

RELIABILITY

You can count on Stadler. As an experienced expert partner, we provide top quality on time under the agreed terms and conditions.

FLEXIBILITY

Stadler stands for a clear stance: there is no such thing as no can do. Our engineers and designers listen to our customers' needs, and make the impossible possible.

¹ SCI, 2020, market volume based on the Euro value of equipment and services supplied

² 2019 market size defined as the average from 2018 to 2020, 2024 defined as the average from 2023 to 2025

VALUE CHAIN

Stadler places the priority on sustainability aspects along the entire value chain. The focus is on specific areas that the company can significantly help to shape. Stadler procures most components and systems from third parties. Only strategic components and systems are provided by the component plants within the Group. The rail vehicles are designed, built and put into operation in the final assembly plants. Signalling solutions are complemented by Stadler Signalling.

In most cases, the operation, the maintenance and the decommissioning of rail vehicles are carried out by the customer – unless they commission Stadler to undertake these tasks.

VALUE CHAIN

DEVELOPMENT
(front works)



Process steps

Research & development
Documentaion

SUPPLY CHAIN
(Suppliers and component plants)



Components and systems from internal and external suppliers
Procurement

Transport →

PRODUCTION
(Final assembly)



Development
Procurement
Production
Commissioning and testing
Warranty and reworking

Transport →

OPERATION
(Customer or Stadler)



Operation and maintenance (incl. service)
Disposal



BEST IN CLASS**HIGHEST SHARE
OF RENEWABLE
ENERGIES**

According to UN estimates, the world population is expected to increase by 27.6 percent by 2050. 70 percent of people will live in cities and will need more transport capacity. Compared to other means of transport, rail offers the greatest transport capacity for the same surface area, as well as higher transport speeds. At the same time, the CO₂ footprint of rail transport is significantly lower than that of other means of transport. This is partly due to the fact that, for example, the rail sector in Germany uses 62 percent of renewable energy, compared to only 41 percent for the population as a whole and as little as 7 percent for other means of transport.

Source: www.allianz-pro-schiene.de



SUSTAINABILITY AT STADLER

STRUCTURE OF THE SUSTAINABILITY REPORT

The Sustainability Report 2021 forms two parts. In the first part, we summarise our sustainability strategy and outline our areas of focus. These are the ones we wish to pay special attention to in the coming months and years. They are fields in which we have identified potential for improvement and want to tackle means of targeted measures.

In the second part of the report, we raise other important issues which have emerged from the materiality analysis conducted by Stadler for the first time. Our comments cover five areas: society, employees and leadership, products and services, environment and governance.

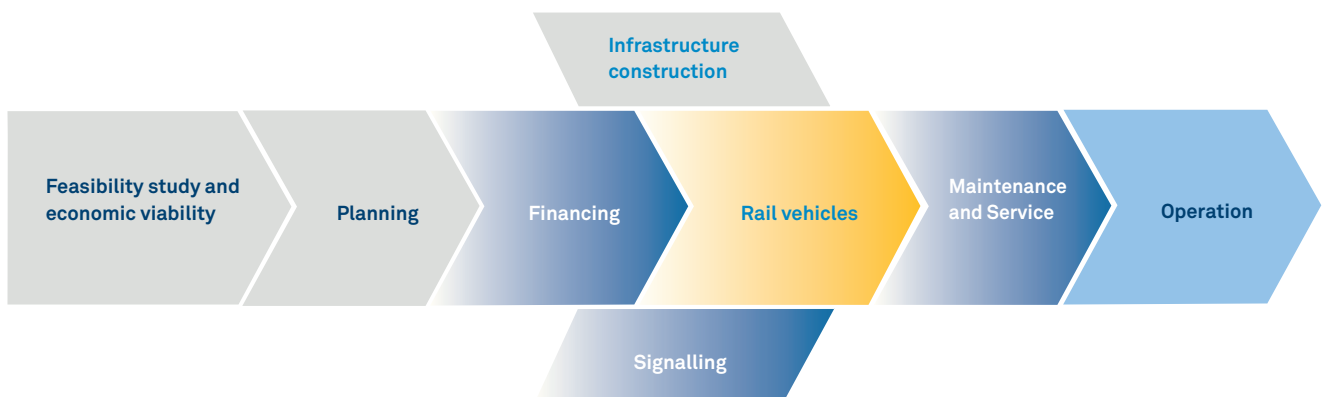
SUSTAINABILITY STRATEGY

Over the last few years, Stadler has invested a great deal in its product portfolio and is one of the leading suppliers of green drives in Europe. Digitalisation has brought together three previously separate areas: rolling stock, infrastructure, and signalling and interlocking technology. Stadler anticipated this development early on and transformed from a supplier of rail vehicles to a provider of sustainable mobility solutions. This includes digitalisation solutions for vehicles and rail as well as smart services.

Since the company's first steps towards building sustainable vehicles during the Second World War, Stadler has transformed itself into a large company with far-reaching impact. In view of the growth seen in recent years, Stadler is keen to accept responsibility for the increasing number of employees and business activities along the entire supply chain, as well as the resulting environmental impact. Stadler is committed to its corporate responsibility. In its activities, it strives to give balanced consideration to the three dimensions of sustainability – economy, ecology and society.

Our commitment to sustainability encompasses products and services, production sites, employees, business partners, suppliers and other stakeholders. By offering durable transport solutions, we are helping to ensure sustainable mobility for the future, thereby creating added value for the next generations. We fulfil our social responsibility by unconditionally complying with labour law, social standards and health protection in the workplace.

FROM RAIL VEHICLE MANUFACTURER TO MOBILITY SOLUTIONS PROVIDER



KEY STAKEHOLDER GROUPS



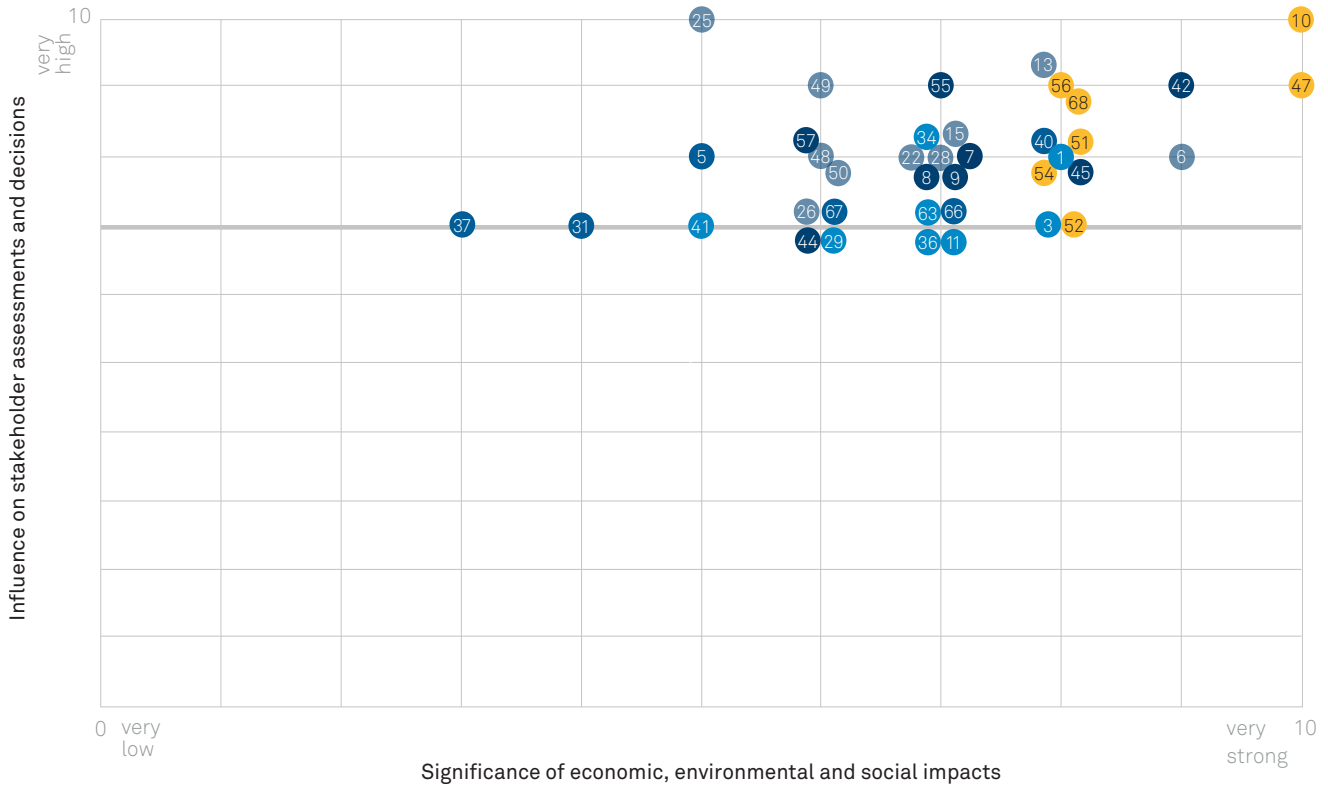
METHOD

This Stadler Sustainability Report is based on the first report from 2019. Since then, Stadler has taken numerous measures. Sustainability has been incorporated into Stadler’s established strategy process as one of the twelve strategic dimensions. As such, it has been assigned to the top management level. By clearly allocating responsibilities within the Group, the area has been upgraded and professionalised.

We have expanded our sustainability management since 2019. Carrying out a systematic materiality analysis based on GRI Standard 101 (2016), we have identified a need for action in five areas: society, employees and leadership, products and services, environment and governance.

We defined 68 topics during the preparation process. These are based on the GRI Standards and take sector-specific topics into consideration. They also take into account current global developments, the UN Sustainable Development Goals (SDGs) and supranational requirements for non-financial reporting. As part of the strategy process, the Board of Directors, the Group Executive Board and around 80 managers evaluated the materiality analysis, the relevance of these topics and the need for action. 39 material topics emerged from their assessment. Within these areas of activity, Stadler has defined strategic directions for the coming years and derived specific goals within the framework of the 2021 sustainability programme.

CLASSIFICATION OF THE 39 MATERIAL TOPICS ON THE BASIS OF THE MATERIALITY ANALYSIS



LEGEND OF THE 39 ESSENTIAL TOPICS AND SUMMARY OF THEM IN THE FIVE DIMENSIONS

Area of activity	Material topics
Employees and leadership	
7 8	Occupational safety and health protection
42	Human rights and labour law at all locations
9	Protection of intellectual property, access to workplaces
55	Involvement of employees in sustainability issues
57	Diversity and equal opportunities
45 44	Apprenticeships, training and education
Governance	
15 6	Transparency in sustainability reporting, climate reporting (sustainable finance)
13	Customer privacy
28	Active participation in sustainability ratings
22	Corporate-governance-principles
48 49 50	Integral, ethical business conduct (corruption and bribery, money laundering, antitrust law)
25 26	Governance (stakeholder engagement, risk and opportunity management)

Area of activity	Material topics
Products and services	
47	Customer relations and customer satisfaction
51 52	Technology development (green technologies and smart mobility)
54	Increase in the recycling rate of trains (circularity)
10	Product and operational safety of trains
56	Life cycle assessment, ecodesign
68	Ecological footprint of trains
Environment	
63	Contribution to climate neutrality (net zero)
3 11 36	Ecological footprint of the production plants (responsible management of waste and emissions, not GHG)
34 1	Responsible use of resources (energy efficiency, use of substances of concern)
29	Increase in the recycling rate of production (circularity)
41	Avoidance of transport (sustainable supply chain, local sourcing)
Society	
40	Regional roots, involvement of the neighbourhood
66 67	Investment in the region or in the local economy (sustainable supply chain, local sourcing)
31	Sustainable supply chain (compliance with human rights and labour laws by all suppliers)
5 37	Support for non-profit institutions and projects, cooperation with research and development (promotion of innovation)

Stadler wants its growth to be ecologically, economically and socially sustainable, and aims to protect the environment and resources as much as possible. We measure our impact on society and the environment wherever possible, and make it comprehensible to our stakeholders. We collect the relevant key figures systematically – and, if possible – for the entire Stadler Group. This makes improvements in the five topic areas more measurable and ultimately more controllable.

This sustainability report is based on the GRI Standards. It is already prepared in accordance with selected GRI indicators. (pages 50 to 54).

Stadler is taking a close look at its impact on the environment and society. Comparisons with other companies enable us and our stakeholders to identify further potential for improvement.

The next step will be for Stadler’s work to be measured from an external perspective as well. Discussions regarding sustainability will be intensified with external and internal stakeholders in the coming years. These are intended in particular to confirm the materiality analysis.

OUR CONTRIBUTION TO THE SDGS

The UN's 2030 Agenda with its 17 Sustainable Development Goals (SDGs) takes into account the economic, social and environmental dimensions of sustainable development in a balanced way and combines the fight against poverty with sustainable development within the same agenda. The aim is for the SDGs to be achieved globally and by all UN member states by 2030.

With its sustainability strategy, Stadler is playing its part towards achieving the SDGs. This concerns the following objectives in particular:



Stadler operates an active health management system and offers its employees various health-promoting activities. Hazards in the workplace are regularly reviewed and eliminated to make the working environment as safe as possible.



Stadler trains apprentices and offers employees comprehensive internal and external training and further education opportunities related to working in rail.



Stadler offers equal opportunities for all and guarantees equal pay for equal work.



We are continuously increasing the energy efficiency of our vehicles and production plants. As part of our commitment to net zero, we also promote renewable energy sources.



Stadler has grown steadily in recent years and has created jobs with attractive working conditions all over the world. The company has thereby made a significant contribution to improving employment opportunities in several regions. Compliance with human rights and labour law is a matter of course for us. We demand the same from our suppliers.



We create and operate modern, efficient manufacturing infrastructures and processes in the spirit of a green economy. In addition, we are constantly developing the technology of our trains.



Employees of a large number of different nationalities work at Stadler all over the world. We consider this diversity to be very enriching. Stadler offers equal opportunities for all.



By producing and maintaining trains, Stadler contributes to sustainable mobility in conurbations, rural regions and entire countries. Modern technology and digitally networked traffic concepts reduce emissions to a minimum.



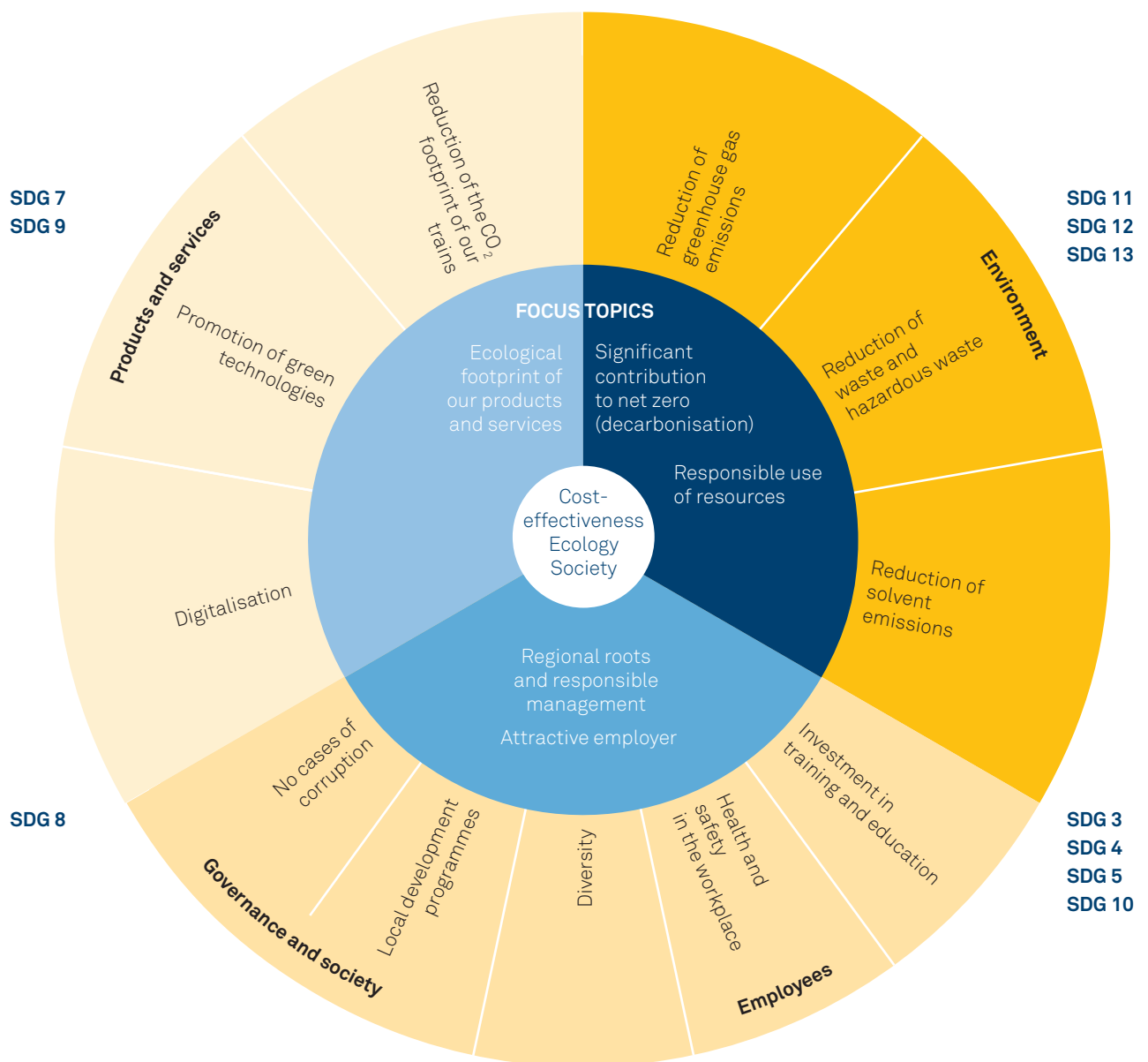
We implement eco-design processes in the construction of our vehicles. We consider the complete life cycle of the trains and implement a responsible approach to resources and the resulting waste and emissions.



By reducing the energy consumption of our production facilities and buildings every year through the implementation of measures both large and small, we are also reducing CO₂ emissions in our own operations. We will increasingly drive this forward through our commitment to net zero.

OUR AREAS OF FOCUS

In this Sustainability Report, we put an emphasis on environmental and social sustainability, and highlight five areas of focus. These five represent sustainable development goals. The Stadler Group can, and wants to, make a significant contribution towards achieving them.



Environmental sustainability:

– **Ecological footprint of our products and services**

Stadler's developers are committed to ensuring that our trains emit fewer and fewer greenhouse gases during operation, have a longer lifespan, and can be largely recycled at the end of their service life. Please see pages 19 to 24.

– **Significant contribution to net zero (decarbonisation)**

We are also constantly striving to minimise energy requirements in the production of our trains. We want to halve our emissions by 2030 and produce in a climate-neutral way by 2050. Pages 25 to 27

– **Responsible use of resources**

As with our products, we also want to keep the recycling rate in production as high as possible and reduce the amount of waste, including hazardous waste to a minimum. We are constantly striving to reduce solvent emissions. Pages 30 to 32.

– **Attractive employer**

As we operate in an extremely technical and specialised industry, training and education are particularly important to us. We are committed to diversity and equality. In addition, we continuously take measures to further improve occupational safety. We want our employees to come to work in good health and leave their workplace again in good health. Please see pages 36 to 39.

With its sustainability strategy,
Stadler is taking responsibility.
For the environment and for society.

Social sustainability:

– **Regional roots and responsible management**

Our focus is not only on sustainable growth, but also on creating social value. We are rooted in the region of each of our production sites, participate in social life and interact with the local population and authorities. We comply with all laws and rules and demand the same from our suppliers. In our 80-year history, there has not been a single case of corruption, bribery or money laundering. Nor have there ever been any breaches of antitrust law. Please see pages 33 to 35.

ECOLOGICAL FOOTPRINT OF OUR PRODUCTS AND SERVICES

2030 targets from our 2021 sustainability programme

REDUCTION OF CO₂ FOOTPRINT



Reduction of the CO₂ footprint of Stadler-trains by 20 percent.

PROMOTION OF GREEN TECHNOLOGIES



Ongoing optimization of green drive solutions (electric, hydrogen, battery, hybrid)

DIGITALISATION OF VEHICLES AND ROUTES



Commercial operation of the Stadler system for automated train operation (ATO) with automation level 2 used by several operators

REDUCTION OF GREENHOUSE GASES

By committing ourselves to a significant reduction of our CO₂ footprint by 2030, we as train builders are making an important contribution to environmentally friendly mobility and the reduction of greenhouse gases in rail transport.

Reduction of the CO₂ footprint of our trains

ACTUAL 2021

The average CO₂ footprint of our electric trains² is 3.1 g CO₂e¹ per passenger kilometre

2030 TARGET

Reduction of the CO₂ footprint of Stadler-trains² by 20 percent

The CO₂ footprint of our trains is formed by the energy consumption during manufacture and operation, and by the reuse of the materials that make up the trains. We want to reduce CO₂ emissions wherever it is in our power to do so. We have no influence on the CO₂ intensity (number of grams of CO₂ per kilowatt hour) of the electricity used by our customers. However, we can improve the ecological footprint of our trains in operation and after decommissioning with the following measures:

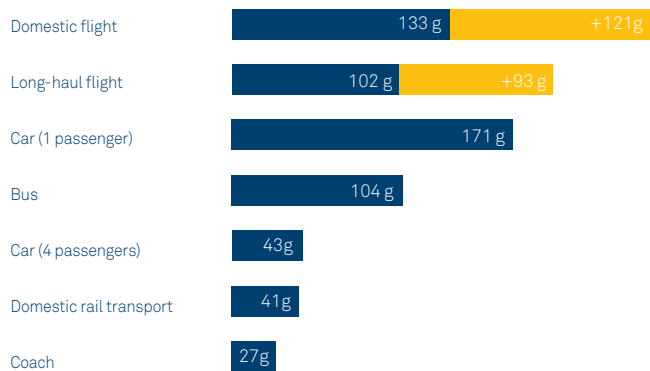
- Reduction of energy consumption per passenger kilometre, for instance through optimised design or increased energy efficiency
- Reduction of pollutant emissions from trains in operation, and conversion to alternative drive systems
- Further use of robust materials that increase product service life and reduce maintenance work
- Increase in the recycled content of trains

We are constantly working on these points. Technical advancements and innovations help us to make further optimisations. We strive to reach the best-in-class level with regard to the energy efficiency and climate neutrality of our trains in relation to their entire life cycle. The same applies to the recycling rate.

¹ Using renewable electricity in the operating phase
² Electric multiple units

We are pulling together with our customers to ensure that we are all working in the same direction. With every optimisation we make in terms of energy efficiency and climate neutrality, we are also helping our customers to achieve their ambitious sustainability goals. This enables us to develop together the best solutions as far as economic, ecological and social requirements are concerned.

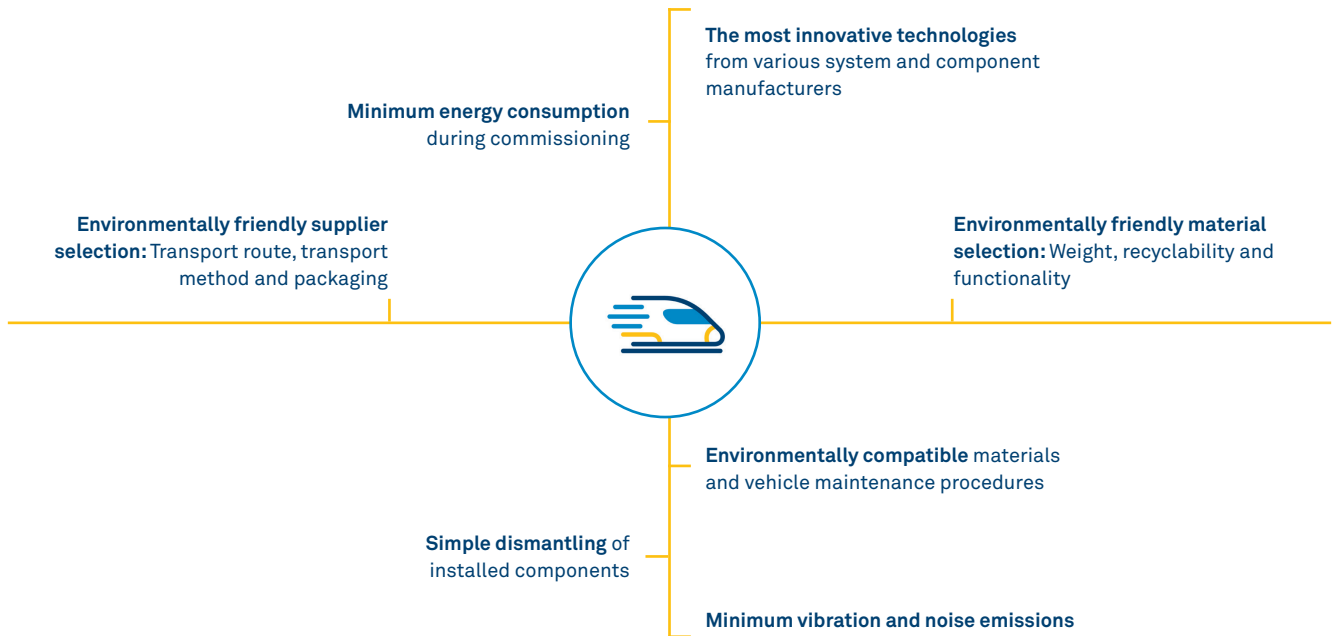
CO₂ EMISSIONS PER PASSENGER AND KILOMETRE TRAVELLED BY TYPE OF TRANSPORT



● CO₂ emissions
 ● Secondary effects of high altitude, non-CO₂ emissions

Source: bbc.com 2018; European Union, 2020

PRINCIPLES OF OUR ECO-DESIGN PROCESS



Travelling by train is many times more energy efficient than by car or plane. However, further measures are needed to achieve the 2050 climate targets. We are therefore constantly striving to reduce the impact of our trains on the climate and the environment even further.

Stadler has been applying the concept of eco-design for many years. It does this to reduce the impact of our trains on the climate and the environment over their entire life cycle and thus reduce greenhouse gas emissions and the environmental footprint per passenger kilometre. This process helps the company to use natural resources sparingly and carefully, to reduce emissions where possible, and to guide employees in the conscious selection of materials and early consideration of how to dispose of trains once they have been taken out of service. In this way, we can ensure that we only build trains that have a low environmental impact throughout all life cycle phases. Consequently, they will leave the smallest possible ecological footprint over their entire service life.

The ecological footprint can be shown with a Life Cycle Assessment (LCA) or in an Environmental Product Declaration (EPD). These ecological assessments analyse the impact of trains on the climate and the environment throughout their life cycle, from manufacture to dismantling. For each life cycle phase, cal-

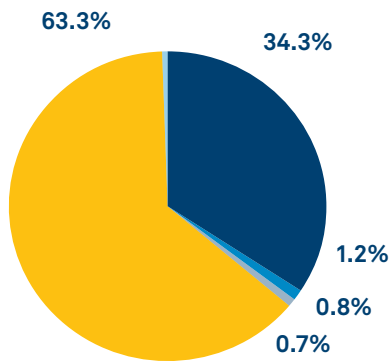
culations are carried out to evaluate the impact of the product in various environmental categories such as climate change, ozone pollution, nutrient and acid balance or consumption of fossil resources. In addition, raw material consumption is determined and broken down according to primary and secondary resources as well as renewable and non-renewable raw materials. This assessment method enables us to gain a better understanding of the relevance of processes and life cycles in terms of their environmental impact, to identify potential and to take targeted measures for improvement.

Stadler has set itself the goal of consistently reporting the environmental impact of its trains from 2024 onwards by means of life cycle analyses in accordance with ISO 14040 and ISO 14044, or EPD in accordance with ISO 14025, and making the results publicly available in agreement with customers.

RESULTS FROM LIFE CYCLE ANALYSES (LCA) FOR CERTAIN STADLER TRAIN TYPES

Train type	Climate impact in g CO ₂ e/Pkm	Environmental impact in Pt/Pkm
KISS electric vehicle (2019)	3.08	2.41E-04
FLIRT electric local transport (2021)	3.39	3.11E-04
FLIRT electric long-distance EMU (2022)	2.69	2.80E-04
FLIRT Diesel (2022)	41.4	12E-04

ENVIRONMENTAL IMPACT ACC. TO LIFE CYCLE PHASES



- Components and systems from internal and external suppliers (supply chain)
- Production (Stadler final assembly plants)
- Transport
- Operation and maintenance of rail vehicles
- Disposal (end-of-life) of rail vehicles

DEVELOPMENT AND INNOVATION: GREEN TECHNOLOGIES

As far as environmentally friendly and sustainable mobility are concerned, the energy consumption and CO₂ emissions of a rail vehicle’s drive system are of crucial importance – Stadler is the technology and market leader in the field of alternative drive systems and is continuously expanding this position thanks to products with low life cycle costs and a focus on sustainability.

CO₂e: CO₂ equivalents, i.e. the sum of emitted greenhouse gases converted to CO₂ as the base unit
 Pkm: passenger kilometre, i.e. per person and per train kilometre (capacity and intended km in operation)
 Pt: ReCiPe endpoints, calculation of damage to the protection targets for human health, ecosystem quality and resources
 Climate impact (in g CO₂e emissions per passenger kilometre (Pkm)) and environmental impact (according to ReCiPe endpoints per Pkm) for a single-decker FLIRT train and a double-decker KISS train, taking into account the entire product life cycle.

Our sustainability efforts are centred around the technological advancement of our vehicles and their operation. The aim is firstly to help our customers to convert to climate friendly fleets and secondly to make their rail operations even more sustainable in general, thereby contributing to the achievement of the 2050 climate targets.

As far as the technical enhancement of our trains is concerned, we are focusing our efforts on the development of low-emission drive technologies (and hence on the avoidance of diesel-powered trains). We want to offer our customers the opportunity to travel sustainably even on non-electrified routes and to drive forward decarbonisation.

In addition to electric trains, we currently offer our customers trains with drives based on battery technology (battery-powered FLIRT model) or hydrogen technology (FLIRT H₂ vehicle). In Germany, the battery-powered FLIRT train has already been sold several times for use on non-electrified or only partially electrified lines, with 55 two-car trains for Nahverkehrsverbund Schleswig-Holstein (ordered in 2019, to be commissioned in 2023), and 44 battery-powered FLIRT trains for DB Regio for use on the south-west German Palatinate network (ordered in 2021). The FLIRT H₂ vehicle is scheduled to start transporting passengers in San Bernardino County (California) in 2024.

Stadler is one of the leading suppliers in the field of green drives with electric, battery and hydrogen drives. Stadler also offers all drive options as hybrid solutions.

We are constantly optimising the energy efficiency of our vehicles. The current focus is on perfecting the efficiency of the cooling of the drive units, air conditioning and ventilation. In this way, the cooling of power converters, transformers and motors can be controlled according to demand and depending on the ambient conditions, and the energy demand in stand-by mode is reduced even further by switching off the transformer oil pumps.

Stadler is aiming to further establish itself in the field of green technologies by:

- offering and implementing alternative drive types in customer projects. We want to consolidate our status as market and technology leader and continuously optimise our solutions.
- advancing the digitalisation of trains and infrastructure as well as the automatic operation of trains.
- continuously developing further innovative technical applications.

Further information on alternative drives and digitalisation can be found in the Annual Report 2021 in the article focussing on “Networked sustainability”.

SUSTAINABLY ON TRACK

WORLD RECORD IN BATTERY-ONLY MODE

At the end of 2021, a new world record was set with the battery-powered FLIRT model in battery-only mode. The feat was officially documented by the “Guinness Book of Records”. The battery-operated FLIRT prototype covered 224 kilometres in battery-only mode in sub-zero temperatures and snowfall on the line between Berlin-Gesundbrunnen and Warnemünde.

FIRST HYDROGEN-POWERED FLIRT H₂ MULTIPLE UNIT FOR THE USA

The FLIRT H₂ vehicle will avoid emissions of around 200 kilograms of CO₂ equivalents per trip on the planned 14-kilometre route in California compared to the same vehicle configuration with a diesel drive. The project is funded by the State of California.

DIGITALISATION

The digitalisation of rail and vehicles can make a significant contribution to expanding the capacity of environmentally friendly rail transport and can increase efficiency in operation – Stadler is actively promoting digitalisation with its own systems and solutions.

ACTUAL 2021

The Stadler system for automated train operation with automation levels 1 and 2 is in test or pilot operation in five projects.

2030 TARGET

Development and sale of solutions for partial and full automation of rail operations

Digitalisation brings with it great potential for further improving the energy efficiency of the entire railway system. Stadler's Signalling division develops solutions for partial and full automation of operations. The aim of ATO is for trains to be guided according to an optimal speed profile, thus minimising the additional energy demand due to ineffective acceleration manoeuvres or unnecessarily high speeds. Studies using the Stadler solution for test operations in the Czech Republic showed that it can reduce energy costs by up to 20 percent.

In addition, the reduction in headway increases capacity and operational reliability. A smooth driving style without abrupt braking also increases passenger comfort, minimises wear and tear on the drive and braking systems as well as the tracks, and reduces noise emissions. The increase in capacity means that more passengers can be transported on the existing infrastructure without the need for expansion. Furthermore, punctual and reliable trains promote the attractiveness of train travel.

Stadler further expanded its signalling expertise over the past year thanks to the acquisition of the two signalling companies Bär Bahnsicherung AG from Switzerland and BBR Verkehrstechnik GmbH from Germany. Stadler can now offer signalling solutions from a single source both on the vehicle and on the rail side. More than 500 specialists work at several locations in this growth area, which was transferred to an independent division of Stadler at the beginning of this year.

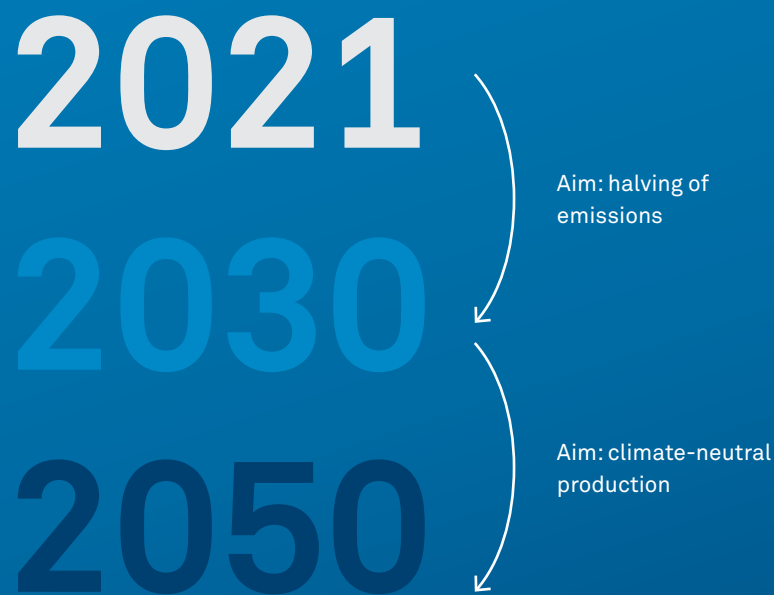
ENERGY-EFFICIENT TRAVEL BY RAIL

If a person in Switzerland travels 100 kilometres by car, they need almost nine times more energy and produce 27 times more emissions (according to mobitool emission factors v2.0.2) than if they had taken the train. Even if the car is occupied by four people, the journey by car still consumes more than twice as much energy per person, creating more than ten times as many emissions than by train.

SIGNIFICANT CONTRIBUTION TO NET ZERO (DECARBONISATION)

2030 to 2050 targets from our 2021 sustainability programme

CLIMATE NEUTRALITY



CLIMATE NEUTRALITY

Stadler wants to make a significant contribution to achieving the Paris 2050 climate goals with a clear commitment to net zero.

Reduction of greenhouse gas emissions

ACTUAL 2021

Scope 1 emissions total 22,400 tonnes of CO₂e, Scope 2 emissions amount to 32,000 tonnes of CO₂e

2030 TARGET

Halving of emissions from Scopes 1 and 2

2050 TARGET

Climate-neutral production in our plants

In recent years, we have reduced our energy requirements in relation to production, and increased CO₂-neutral energy sources such as photovoltaics and district heating for our production plants. To consolidate these efforts, we have concluded agreements with the Energy Agency of the Swiss Private Sector (EnAW) for Stadler Bussnang and Stadler Rheintal in which we commit ourselves to a specific CO₂ reduction. Cooperation with the EnAW enables us to achieve energy and CO₂ savings potential and to implement measures that are both ecologically and economically efficient.

In 2021, we were already able to save more than twice as much energy at these locations compared to 2020 thanks to energy-saving measures.

We report our contribution to climate neutrality using the following GRI indicators:

- GRI 302–1 Energy consumption within the organization
- GRI 302–3 Energy intensity
- GRI 302–4 Reduction of energy consumption
- GRI 305–1 Direct (Scope 1) GHG emissions
- GRI 305–2 Energy indirect (Scope 2) GHG emissions
- GRI 305–3 Other indirect (Scope 3) GHG emissions
- GRI 305–4 GHG emissions intensity

In 2021, thermal energy consumption across the entire Group increased by 12 percent compared to 2020 (+7.7 percent per employee). The increase is mainly due to the higher production output and to weather conditions. In relation to revenue, heating energy consumption declined by around 25 percent compared to 2020. As Stadler's thermal energy is mainly provided by natural gas, the higher thermal energy consumption also results in higher direct CO₂ emissions (Scope 1).

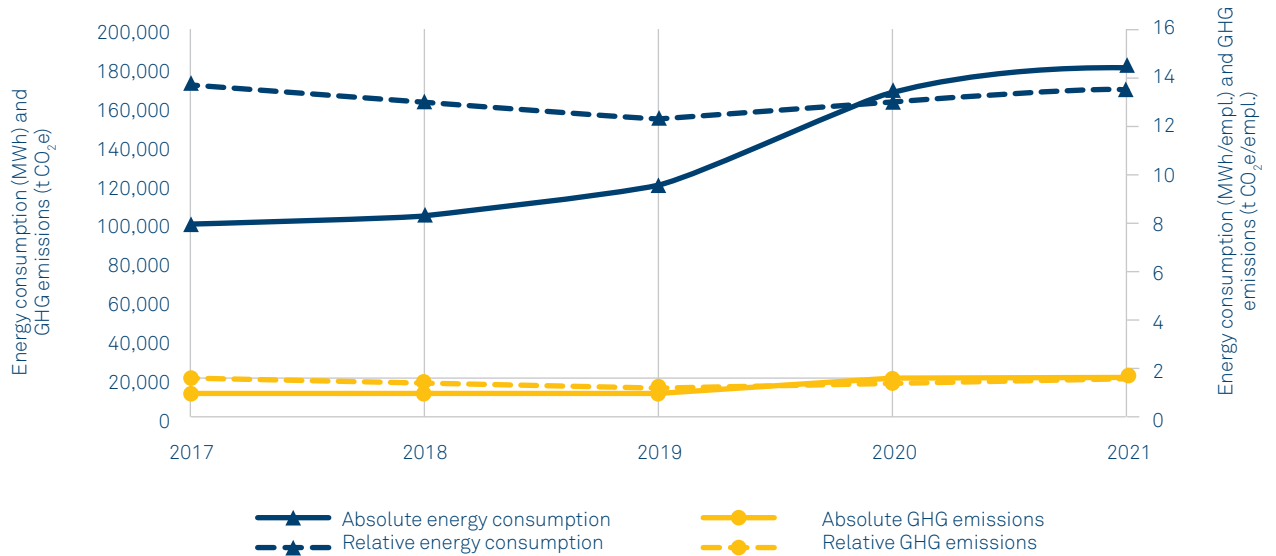
Thanks to the implementation of a series of measures, relative energy consumption and CO₂ emissions have been kept at the 2017 level over the past five years

Greenhouse gas emissions ¹	GRI	Emissions in t CO ₂ e/year	Change in %	Emissions in t CO ₂ e/(empl.*year)	Change in %
Direct (Scope 1) GHG emissions	305-1	22,400	11.4	1.7	7.11
GHG emissions (Scopes 1 and 2)	305-2	54,400	10.17	1.7	5.93
GHG emissions (Scopes 1, 2 and 3)	305-3	180,100	4.42	13.5	0.40

The equivalent GHG emissions for the energy supply of fossil fuels and electricity (ifeu 2019, Treeze 2021, AIB 2020) served as the basis for the calculation of Scope 2 emissions. Scope 3 calculations are based on an environmental product declaration for a KISS vehicle taking into account the European electricity mix for the operating phase and the number of car bodies produced across the entire Stadler Group.

¹⁾ Absolute and relative indicators for GHG emissions from Scopes 1, 2 and 3. Scope 1 emissions were calculated using the emission factors of the Federal Office for the Environment (FOEN) for natural gas, heating oil and diesel (FOEN 2018).

ENERGY CONSUMPTION AND GHG EMISSIONS (ABSOLUTE AND RELATIVE¹⁾)



GHG emissions from the use of refrigerants were also taken into account in the Scope 1 emissions (assumption: ten percent refrigerant loss per year, global warming potential of refrigerants according to the IPCC Report 2007²⁾).

In terms of electricity consumption, we recorded only a slight increase compared to 2020, despite the higher production output. Electricity consumption has a significant impact on indirect GHG emissions from the supply of energy (Scope 2), especially since the CO₂ intensity of our electricity mix is relatively high, at around 300 g CO₂e/kWh. This is due in particular to the electricity mix of individual locations. To calculate the CO₂ intensity of the electricity, the country-specific consumer mix of the locations and the proportion of renewable energy sources of the electricity purchased were taken into account.

We were able to increase the production of renewable energy by 20 percent compared to the previous year. At the St. Margrethen site alone, we were able to produce 1.2 million kilowatt hours of electricity in 2021 via a photovoltaic system. This corresponds to two thirds of the renewable energy production of the entire Stadler Group.

With our clear commitment to net zero, we want to take the next step and eliminate climate-damaging emissions in the long term.

As a first step, we are focusing on the further reduction of climate-damaging emissions in our own company (Scope 1), the emissions generated by our energy suppliers (Scope 2), and the emissions generated by the use of our products (Scope 3, downstream supply chain). Only then will we move on to the second step and start addressing the climate-damaging emissions that arise along the upstream supply chain (Scope 3), although we are already taking initial steps here, for example by using secondary raw materials instead of primary raw materials (for aluminium or seat covers, for instance). For better understanding: the production of one tonne of secondary aluminium requires only five percent of the energy needed for the production of primary aluminium.

The aim is to achieve the net-zero target by 2050 in line with the Paris climate goals. The focus is on reducing GHG emissions within the company as much as possible by achieving greater energy efficiency and by increasing the use of renewable energies. The initial measures will be implemented as early as 2023.

¹⁾ Total energy consumption (natural gas, heating oil, diesel and electricity) and direct (Scope 1) GHG emissions over the last few years, absolute values and relative values normalised to the number of employees. (Check figure – normalised to car bodies)

²⁾ IPCC 2007: Climate Change 2007 – The Physical Science Basis. Working Group I Contribution to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change.

TRAVEL GREENER

SAVE CO₂ BY TRAVELING BY TRAIN

The SMILE train connects the cities of Zurich and Basel with Milan for Swiss Federal Railways (SBB) under the name Giruno. While CO₂ consumption for an economy flight on the Zurich-Milan route is estimated to be an average of 111 kilograms, the same route by train utilises just 11 kilograms of CO₂ per person in 2 class. The actual flying time is 55 minutes. The journey on the Giruno takes 3 hours and 17 minutes. Taking into account check-in and check-out as well as the journey to the city centre, the flight does not save any time.

source: myclimate.org





RESPONSIBLE USE OF RESOURCES

2030 targets from our 2021 sustainability programme

REDUCTION OF WASTE AND HAZARDOUS WASTE



Increase in the recycling rate to over 60 percent

REDUCTION OF SOLVENT EMISSIONS



Reduction of VOC emissions by 15 percent

INCREASE IN THE RECYCLING RATE AT STADLER LOCATIONS

Stadler places great importance to conserving resources and avoiding waste and now recycles much more than previously.

Reduction of waste and hazardous waste

ACTUAL 2021

Recycling rate in production of 51 percent

2030 TARGET

Increase in the recycling rate to over 60 percent

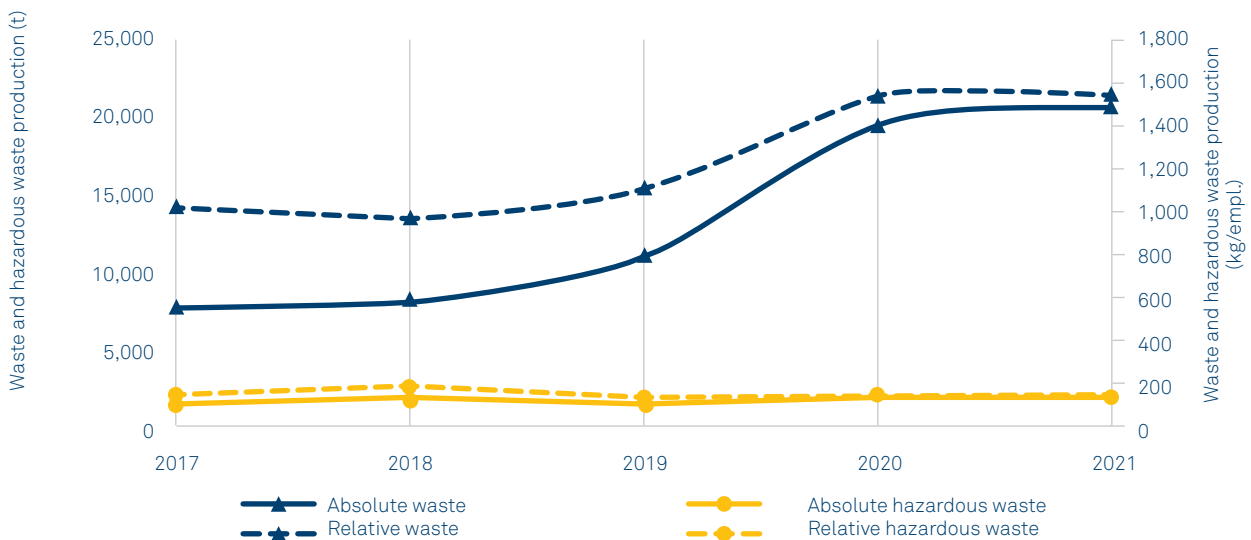
For ecological as well as for economic reasons, we want to recycle as much residual material as possible and dispose of as little as possible thermally or as hazardous waste. A stringent waste concept with a strict waste separation principle allows us to implement this. Packaging material, metal waste (sheet steel, aluminium and cables) and process residues (paint residues from coating and sand from sandblasting) are collected separately. These materials are disposed of professionally based on

the local legal requirements (e.g. ISO19001) and the disposal options available.

We are continuously reducing the use of raw materials to minimise waste generation. Even small steps are put into practice. Here is just one example: at St. Margrethen, since 2021 we have no longer used plastic bags for the sets distributed to employees for the various work steps on trains, but now give out reusable boxes instead.

In 2021, we collected key figures on waste generation from various waste categories and determined the corresponding recycling rate. Where no data on the recycling rate was available, we calculated it using the waste quantities for individual material categories and the recycling rates from Eurostat (Eurostat 2022) typical of each material. The upward trend is counteracted by the objective of reducing waste and hazardous waste. Compared to the previous year, there was a slight increase in waste volumes and a slight decrease in the amount of hazardous waste produced. Since 2018, waste and hazardous waste production have been growing in opposite directions in relation to the number of employees: the amount of waste is increasing, while the amount of hazardous waste is decreasing. The recycling rate has dropped compared to 2020, but at 53.1 percent, is still above the average recycling rate in the EU for municipal waste (Eurostat 2022). It is obvious that the recycling rate of waste at Stadler locations is much lower than the recycling rate of our trains, where we take care to use recyclable metals as far back as the product design and material selection stage. However, hazardous waste such as paint and coating residues cannot be completely avoided at our locations in the short term.

WASTE AND HAZARDOUS WASTE PRODUCTION (ABSOLUTE AND RELATIVE ¹⁾)



¹⁾ Development of waste and hazardous waste volumes in recent years. 20,400 tonnes of waste were generated in 2021 (+4.6 percent compared to 2020). Of this, 1,630 tonnes were hazardous waste (-1.1 percent compared to 2020). Per employee, this corresponds to 1,530 kilograms of waste (+0.8 percent) and 120 kilograms of hazardous waste (-4.7 percent).

REDUCTION OF SOLVENT EMISSIONS

Since 2017, we have been able to demonstrate a continuous reduction in emissions of air pollutants such as volatile organic compounds (VOCs) in relation to the number of employees. We are continuing to reduce these figures.

Reduction of waste and hazardous waste

ACTUAL 2021

VOC emissions amounted to 240 tonnes

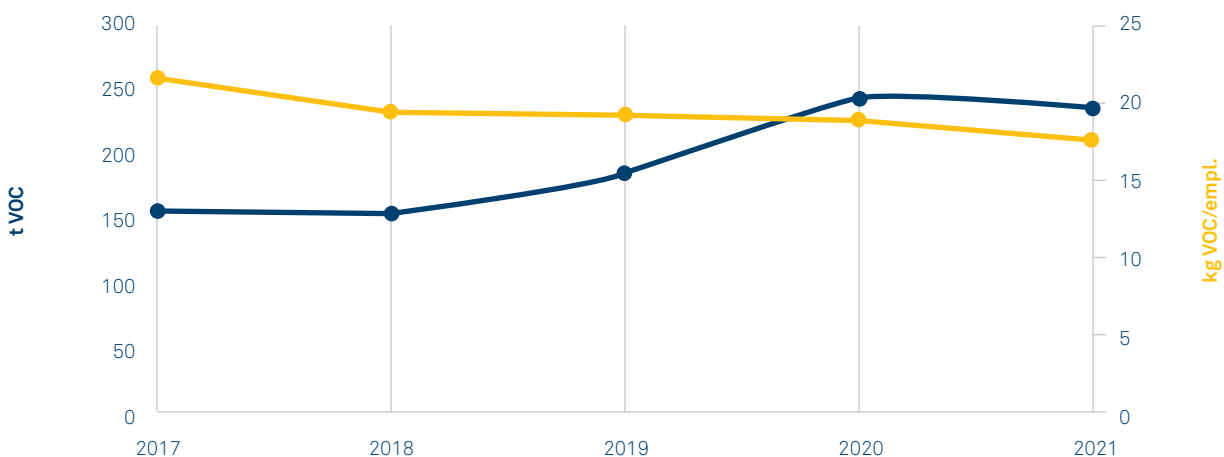
2030 TARGET

Reduction of VOC emissions by 15 percent (base year 2021)

Many internal and external components are coated to protect the trains from environmental effects, corrosion and mechanical stress, but also to customise them so that they are in line with the customer’s visual identity. At Stadler, solvent-based and water-based paints are used depending on customer requirements. VOCs are released into the environment when solvent-based paints, primers and certain cleaning products are applied.

We are continuously reducing VOC emissions through technical and organisational measures. In doing so, we are guided by the state of the art. We replace solvent-based products with others that contain less solvent wherever customer needs and quality requirements allow. In 2022, we will also analyse measures that will enable us to reduce VOC emissions in our waste airflows. The aim is to implement them in our production plants. In 2021, VOC emissions amounted to approximately 240 tonnes across the Group, a decrease of 2.4 percent compared to 2020. This is the first time since 2017 that we have achieved a reduction in absolute VOC emissions. The drop in emissions in relation to employees (-6.1 percent) and in relation to the number of car bodies (-6.7 percent) is actually even greater, given that the number of employees and the number of car bodies produced in 2021 were higher than in 2020.

VOC EMISSIONS¹



¹⁾ Development of VOC emissions in recent years, absolute and relative per employee (approx. 18 kilograms per employee and year or 110 kilograms per car body).

REGIONAL ROOTS AND RESPONSIBLE MANAGEMENT

2030 targets from our 2021 sustainability programme

LOCAL DEVELOPMENT PROGRAMMES AND EVENTS FOR THE POPULATION



Provide ongoing support for non-profit institutions and regional projects to strengthen the roots of Stadler locations in the region

0 CORRUPTION CASES



Adequate training of employees and increased involvement of suppliers

ROOTS IN THE REGION

As part of society, we support local associations and institutions and maintain our relationships with local stakeholders and long-standing partners.

Local development programmes and events for the population

ACTUAL 2021

Stadler provided around 100,000 Swiss francs of support to 20 local organisations

2030 TARGET

Ongoing support for non-profit institutions and regional projects to strengthen the roots of Stadler locations in the region

Stadler has grown into a globally active company since its foundation 80 years ago. We still see ourselves as part of the community at each of our locations and cultivate our regional roots. In the countries where we have production plants, we support local associations, organisations and social causes. We consciously address social issues that go beyond our business activities with the aim of making an appropriate contribution to the promotion of important social concerns and community cohesion.

Stadler is represented nationally and internationally in over 140 associations and interest groups. It is particularly important to mention the International Association of Public Transport (UITP). We are also a member of professional associations and interest groups in the public transport and rail industries, and belong to business and employer associations in Switzerland, Germany, the USA, Poland, Spain and Belarus. In addition, our employees are actively involved in a number of international technical associations and standards committees.

We strengthen the area surrounding our locations by using our know-how, manpower and financial resources to help promote the region. The focus is on encouraging young people and fostering young talent in culture, sport and business. The institutions to be supported are selected by the local units in each country. This guarantees local roots for our commitment and ensures that we give something back to communities where we cause local emissions.

In 2021, we supported more organisations and spent more on contributions than in the previous year.

The aim in the current year is to issue Group-wide guidelines for these support contributions. This should ensure that Stadler's impact becomes measurable.

Stadler is aware of its impact on the environment and therefore consciously fosters dialogue with the areas in which we have a presence, local politicians and local authorities. Your representatives should find our ears and doors open for questions, concerns or feedback. We also organise events for the local communities for this purpose. Stadler allows guided tours of its plants to a degree that is reasonable for employees and that preserves safety, and is very happy to answer visitors' questions on these occasions.

The number of events organised, such as visiting days for the public, public vaccination days or family celebrations, more than doubled in 2021 compared to 2020, and we recorded 42 percent more visitors at these events. However, this development should be taken with caution in the context of the coronavirus pandemic.

RESPONSIBLE MANAGEMENT

Stadler has never recorded a single case of corruption in its 80-year history.

0 corruption cases

ACTUAL 2021

The Stadler Group has never recorded any cases of corruption

2030 TARGET

Adequate training of employees, taking into account current developments and increased involvement of suppliers.

For Stadler, it goes without saying that we comply with the generally applicable rules on issues such as corruption, money laundering and antitrust law. We have set out these requirements in our Code of Conduct, which we review as part of our comprehensive Compliance-Management-System.

Stadler complies unconditionally with all local, national and international laws, guidelines and regulations in all of its business activities. Furthermore, the company holds itself to strict ethical principles and stands by its social responsibility. It is particularly important for our governance requirements to reflect the fact that a high proportion of rail vehicle procurements are financed with public money. Our Code of Conduct, which applies to all of our employees and our business partners, guides all of our actions. We have a zero-tolerance policy for breaches of applicable law or of the Code of Conduct.

The Code of Conduct sets out the business principles and values of our company across all locations. We take all the necessary steps to ensure that our business is conducted with integrity and legality. At Stadler, it is strictly prohibited to promise, demand, provide or receive undue advantages that could influence a decision to be made by the recipient. Furthermore, any market, price or other illegal agreements are prohibited. We do not disseminate false or confidential information about the company and its products or about competitors and their products. We take all the necessary steps to prevent money laundering. The Group complies with all requirements in this respect.

ACCEPTING AND GIVING GIFTS

The Code of Conduct also defines specific rules for accepting and giving gifts. Whether they are the giver or the recipient, employees can find guidelines here about which gifts and favours are acceptable and which are not. Moreover, the Code of Conduct provides rules regulating confidentiality and protection of Stadler's copyright and intellectual property rights. Lastly, the Code of Conduct also states that conflicts of interest will not be tolerated.

If any employee observes or suspects a breach of the Code of Conduct or the statutory provisions, they can contact their direct superior, their local Compliance Officer or the Chief Compliance Officer at any time. They can also report the information anonymously. Any breaches will be investigated and appropriately penalised. The Chief Compliance Officer reports directly to the Group CEO and to the Board of Directors and the Group Executive Board.

We have not had a single case of corruption in the Stadler Group to date. Nor have there ever been any breaches in the fields of antitrust law or money laundering. To ensure that this continues, we treat governance issues with the utmost respect and continue to take all necessary precautions. We pay special attention to employee training and awareness raising.

CORE PRINCIPLES OF OUR CODE OF CONDUCT

INTEGRITY AND LEGALITY

Stadler recognises and complies with all applicable legislation and internal regulations. Requesting or accepting undue benefits ("passive corruption") or promising or granting undue benefits ("active corruption") is strictly prohibited, as are all forms of inappropriate business practices such as, for example, practices that are prohibited under competition law. Moreover, employees must also avoid conflicts of interest. Confidential information must be treated as such.

ETHICAL BEHAVIOUR

Stadler not only creates connections in a geographical sense, but it also wants to encourage harmonious partnerships at an interpersonal level. Stadler employees are expected to treat others with respect, tolerance and courtesy. Discrimination and all other forms of dismissive behaviour will not be tolerated.

SENSE OF RESPONSIBILITY

Stadler is aware of its responsibility towards its employees, business partners and shareholders, but also of its responsibility to protect the environment. Stadler is a reliable business partner that meets its obligations in a conscientious and timely manner. All individual employees contribute to this positive overall impression.

ATTRACTIVE EMPLOYER

2030 targets from our 2021 sustainability programme

INVESTMENT IN TRAINING AND EDUCATION

+20%

Increase in training hours per employee
by 20 percent.

HEALTH AND SAFETY IN THE WORKPLACE

-50%

Reduction in occupational accidents with absence¹
by 50 percent.

¹⁾ An occupational accident with absence is defined as an accident related to the occupational activity of the injured person that results in at least one day of absence

INVESTMENT IN TRAINING AND EDUCATION

Stadler is an attractive employer for more than 13,000 employees; we train apprentices, focus on further training throughout our employees' careers and offer above-average social benefits. We also promote diversity and equal opportunities.

Promotion of training and education

ACTUAL 2021

An average of 21 hours of training per employee

2030 TARGET

Increase in training hours per employee by 20 percent compared to 2021

Stadler operates in an extremely technical and specialised industry. Our excellently trained specialist employees form the backbone of the company. It is only thanks to them that we are able to thrive on such highly competitive markets. Since there are only very few manufacturers of rail vehicles, and given the complex interactions of individual areas within the rail system as a whole, it is almost impossible to find fully trained specialists on the labour market. For this reason, training takes a long time in all areas – engineering, production, commissioning and management.

Focus on apprenticeship training

We therefore focus on apprenticeship training and, as an apprenticeship company, ensure comprehensive training in various professions in the machine and metal industry. We also see this as a measure to combat the widespread shortage of skilled workers throughout Europe.

In Switzerland, in association with the training centre based at each site, we contribute to dual vocational training and run our own training workshop at each production site (Bussnang and Rheintal). Among other things, we offer apprenticeships in plant and equipment engineering, automation, industrial painting, business administration, design, logistics, IT and production mechanics. The Swiss model for vocational training was introduced at our plant in the USA in 2019.

We currently offer 535 apprenticeships in Switzerland, Germany, Spain, Poland and the USA. Stadler seeks personal contact with educational institutions in order to find suitable trainees. Our vocational trainers take part in parents' evenings, career exhibitions and job fairs. We select our apprentices carefully. Most of them complete a trial apprenticeship before we sign an apprenticeship contract. Stadler treats apprentices largely like permanent employees. External training options and courses are endorsed and supported by the company.

Training and education	GRI	Absolute values	Change in %	Relative values	Change in %
Number of programmes	404-2	1580 Qty/year	46%	0.12 Qty/ (empl.*year)	40%
Investments	404-2	3'821'000 EUR/year	21%	286 EUR/ (empl.*year)	16%
Performance appraisals (men)	404-3	9610 Qty/year	6.3%	83%	2.3%
Performance appraisals (women)	404-3	1540 Qty/year	6.6%	89%	1.3%

Networking in higher education

Stadler also networks with the university sector in its search for highly qualified specialists. We take part in numerous university conferences and events, especially in German-speaking countries, where we present the company to student bodies and students.

Training and education are measured using GRI indicators 404-1 (Average hours of training per year per employee), 404-2 (programs for upgrading employee skills and transition assistance programmes) and 404-3 (percentage of employees receiving regular performance and career development reviews).

As the result of the high degree of specialisation and the investment in specialist training, it is in our interest to hold on to our employees for as long as possible. An annual qualification interview is held between each employee and their direct manager to evaluate the employee’s development and discuss individual measures such as training opportunities. Stadler supports the personal development of its employees. A wide range of internal and external courses is available to all employees on everything from railway technology to negotiation tactics. Our human resources department also pursues an in-house personnel development plan and starts succession planning for key employees well in advance. Particularly qualified employees are identified at an early stage and supported with individual development plans for filling these key positions.

Stadler operates internationally and is also dependent on employees from abroad due to the high, specific technical requirements at most locations. We support the equal treatment and integration of foreign employees at all levels, in particular through the promotion of language skills, as well as in terms of remuneration, training and education, and promotions. We see a great advantage in the fact that Stadler employs people from various nations.

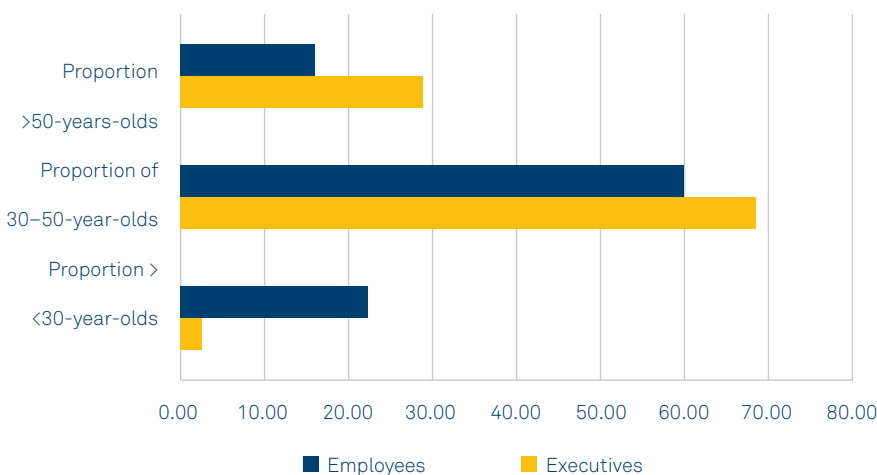
DIVERSITY AND EQUAL OPPORTUNITIES

The proportion of women in technical professions is small, especially in Switzerland. We therefore want to facilitate women’s access to apprenticeships in the machinery industry, promote their further development and offer them opportunities for advancement. Employees with family responsibilities should be offered new forms of work and adapted working hours, within the limits of the company’s possibilities, and it should be made easier for them to return to work. In 2021, the proportion of women at Stadler was 10.5 percent, 10 percent of whom held management positions. Both the proportion of women in the workforce and the proportion of women in management positions have increased compared to 2020 (by 4.5 and 10.5 percent respectively).

We measured diversity and equal opportunities with basic key figures as well as with the GRI indicators 401-3 (Parental leave). A positive trend can be seen regarding parental leave, especially among male employees.

Stadler spent just under 2,000 Swiss francs per employee on employee appreciation in 2021. This includes benefits, Christmas bonuses and budgets for team events. In other words, Stadler spent 16 percent more on its employees than in 2020. Stadler wants to offer its employees the possibility to opt for

AGE STRUCTURE AND EXECUTIVE STATUS



part-time working models designed to improve their work-life balance (in 2021, 5.5 percent of jobs at Stadler were part-time positions; this figure is 3 percent higher than in 2020). This should also promote employee satisfaction and independence and ensure a harmonious working environment. The aim is to achieve the highest possible level of equal treatment in all areas.

OCCUPATIONAL HEALTH AND SAFETY

Stadler attaches maximum importance to health and safety in the workplace so that employees arrive at work healthy in the morning and leave it equally healthy in the evening.

Health and safety in the workplace

ACTUAL 2021

466 occupational accidents

2030 TARGET

**Reduction in occupational accidents with absence¹
by 50 percent in relation to 2021**

Stadler is constantly striving to further reduce occupational accidents. The management teams at the production sites set the reduction of occupational accidents as an annual target for everyone. We also comply with all national and international safety standards and labour practices that apply to the rail industry.

Direct responsibility for occupational safety lies with the workers and with their respective supervisors. They are assisted by dedicated occupational safety specialists. Every accident is analysed. In the event of clusters of accidents with a common cause, the occupational safety specialists organise campaigns to prevent the type of accident concerned. Accident statistics are openly communicated at each site. In addition, the occupational safety specialists work with the supervisors to preventively analyse workplaces and carry out hazard analyses. These aim to reduce unsafe conditions and situations to a minimum. Issues from audits, inspections or findings from the industry are included and addressed.

All employees are trained in topics related to occupational safety and health. Employees can anonymously report unsafe situations or installations and make suggestions for improvement at any time via a suggestion system. This enables the company to react quickly to hazards.

¹ Development of occupational accidents (corresponds to GRI 403–9) over the last few years (absolute and in relation to the number of employees). The accident figures per employee are at a lower level in 2021 than in the years 2017 to 2019. An occupational accident with absence is defined as an accident related to the occupational activity of the injured person that results in at least one day of absence



WORLD RECORD HOLDER

FOR A FUTURE WITHOUT DIESEL

The best-selling FLIRT vehicle can be equipped with various drive solutions. The FLIRT Akku model operates in battery mode while the FLIRT H₂ version is powered by hydrogen. Following its development in 2017, the battery-powered FLIRT Akku model very quickly established itself on the market and was immediately ordered by several customers for non-electrified routes in Germany. At the end of 2021, a FLIRT Akku vehicle travelled 224 kilometres in battery-only mode in the snow and sub-zero temperatures. It set a new world record documented by the “Guinness Book of Records”. Stadler designed and built the first hydrogen-fuelled multiple unit for California in the USA.



OTHER IMPORTANT SUSTAINABILITY ISSUES

In the following sections, we provide information on other important sustainability issues which were not our focus in 2021, but which are nevertheless highly relevant to our sustainability efforts. The sections are structured according to the fields of action introduced in the 2019 report: Governance, Products and Services, Environment, Society, and Employees and Leadership.

GOVERNANCE

DATA PROTECTION

Stadler treats personal data with the utmost care and, where possible, provides information on the processing of personal data within the company. An additional internal data protection directive also ensures compliance with the Data Protection Act. It governs the handling of all personal data and its disclosure to third parties. The directive serves in particular to ensure the secure and transparent processing of personal data for data subjects, the protection and security of the data files managed and the protection of the personality of data subjects.

The Data Protection Officer reports directly to the Group CEO. They are supported by the Chief Information Security Officer (CISO), who is responsible for data security at Stadler. Data security includes physical data security as well as the security of electronic IT data.

In 2021, we certified central areas of the Group according to ISO 27001. This standard specifies the requirements for establishing, implementing, operating, monitoring, evaluating, maintaining and improving documented information security management systems in relation to the organisation's general business risks. It also sets out specifications regarding the introduction of security checks to help protect information. The certificate is published on Stadler's website.

ISO 27001 certification aims to further consolidate information security. The same requirements apply to areas that are not currently certified. Furthermore, IT security systems are continuously adapted to the latest findings. In addition to actual data protection, Stadler secures and guards its buildings and properties appropriately and controls access with modern technology.

TRANSPARENCY IN REPORTING

Stadler attaches great importance to consistent, transparent and comprehensible reporting. Regular disclosures include the following reports:

- Annual Report with financial report, management report, remuneration report and corporate governance report
- Annual reporting with annual media conference
- Half-year reporting with media conference
- Media releases on important news topics
- Reporting in relation to the General Meeting

This list will be supplemented by a Sustainability Report, starting with this report. This ensures transparency and provides relevant proof of our principles, activities and key figures, as well as our potential for improvement and the improvements already achieved. We are committed to continuously expanding our sustainability reporting. As a first step, we are focusing on environmental indicators and social indicators..

RISK AND OPPORTUNITY MANAGEMENT

The aim of risk and opportunity management is to identify and avert risks and opportunities at an early stage. Stadler wants to integrate sustainability risks and opportunities into the established risk considerations – as far as it is possible and makes sense to do so. Relevant risks for Stadler are, in particular, the risks of climate change as well as risks relating to the impact of business activities on society and the environment.

Relevant opportunities arise due to society's growing environmental awareness and the demand for green technologies and for green and healthy mobility.

PRODUCTS AND SERVICES

Stadler has been building rail vehicles for 80 years, promoting reliability, precision and first-class service for the benefit of our customers. Thanks to its broad product portfolio that incorporates alternative drive solutions, Stadler is a pioneer in sustainable mobility. We pay particular attention to the safety of our trains right from the design phase. We provide proof of safety as part of the approval and commissioning processes. The table below shows the certifications and standards covering the areas of quality, the environment, occupational safety and data security, established at each location.

We measure the product and operational safety of our trains using the following GRI indicators:

- GRI 416–1: Assessment of the health and safety impacts of product and service categories
- GRI 416–2: Incidents of non-compliance concerning the health and safety impacts of products and services

In 2021, there were no incidents that had an impact on the health and safety of passengers on our trains when in use by our customers. Nor were there any breaches of regulations (either in the form of warnings or fines) related to health and safety impacts in 2021.

The high level of product and operational safety is to be maintained and the topic is to be continuously integrated into our sustainability measures and reporting. We are committed to strengthening communication on these issues in the community.

CUSTOMER RELATIONS AND CUSTOMER SATISFACTION

Customers are at the centre of our thoughts and actions when it comes to technology, innovation, product development and sustainability. Ever since the company was first founded, we have responded to specific customer wishes as closely as possible in every project. We are also able to produce vehicles in very small series. The quality and reliability of our vehicles must meet the highest standards. We do our utmost to always live up to our good reputation for meeting deadlines.

Stadler has a centralised sales team that nonetheless conserves strong local roots. It addresses the concerns of our customers in a personal, reliable and focused manner. The manufacturing plant is responsible for ensuring that the customer's wishes are incorporated and implemented into the development and production process. The production plant assists the customer during commissioning and the subsequent warranty period, guaranteeing quality and reliability. At the customer's request, our service teams ensure after commissioning maximum reliability and availability.

One of the central requirements of IRIS (ISO/TS 22163) is customer satisfaction, which we evaluate at least once a year. The high quality and reliability of our vehicles represent the main drivers of customer satisfaction. We achieve these high standards by applying proven processes and supporting systems, and thanks to a comprehensive quality management system.

CERTIFICATIONS

	ISO	9001	22163	14001	45001	50001	27001	ECM
Final assembly plants								
Stadler Rheintal AG		•	•	•	•		•	
Stadler Bussnang AG		•	•	•	•		•	
Stadler US Inc.		•		•	•			
Stadler Deutschland GmbH		•		•		•		
Stadler Rail Valencia S.A. U.		•	•	•	•			
Stadler Polska Sp. z o. o.		•	•	•	•			•
CJSC Stadler Minsk		•		•	•			
Component plants¹								
Stadler Winterthur AG		•		•	•			
Stadler Stahlguss AG (Biel)		•		•	•			
Stadler Szolnok Kft.		•	•	•	•	•		
Stadler Środa Sp.z o.o.		•	•	•	•			
Other								
Stadler Signalling AG		•					•	
Stadler Service AG		•	• (partial)	•	•		• (UK)	• (partial)

¹⁾ The component plants in Germany, Spain and Belarus have the same certificates as the final assembly plants in the same country.

CONTRIBUTION TO CIRCULARITY

When it comes to recycling our trains, we try to close the material cycle as best we can – we follow the circular economy approach. This means that even during the initial vehicle design stage, we specifically try to avoid material mixtures in components in order to facilitate the process of dismantling, sorting and collecting these materials at the end of their service life. In this way, the materials can be reused in the most effective way. **Calculations have shown that we achieve a recycling rate of more than 96 percent for our vehicles.**

We calculate this based on ISO 22628 and on the UNIFE recycling calculation method (UNI-LCA-001:00) from detailed material declaration lists. These also contain information on the dismantlability of components.

We want to increase the recycling rate even further. New findings on recyclable materials are constantly integrated into our processes.

MATERIAL COMPOSITION OF A KISS DOUBLE-DECKER TRAIN¹ (DATA IN PERCENT)

● Metals: 84.2 ● Polymers: 5.4 ● Elastomers: 0.5 ● Glass: 2.7 ● MONM: 3.0 ● Electronics: 2.4 ● Other: 1.8



¹⁾ Material composition of a KISS double-decker train (total weight: 242 tonnes). More than 80 percent of the total mass consists of metals, which have a high recycling rate.

REDUCTION OF AIR TRAVEL AND COMMUTER CAR TRAFFIC

Stadler reduces its emissions under Scope 3 even further by avoiding air and car travel. In 2020 and 2021, the coronavirus pandemic helped in distinguish necessary from unnecessary flights and replacing non-essential air travel with video-conferencing.

In addition, mobility concepts have been introduced at certain locations to promote the use of public transport or carpooling for the commute to work. For example, at the St. Margrethen site, only employees who need more than 35 minutes to travel to work by public transport are entitled to a rented parking space. In addition, Stadler promotes the use of public transport for private purposes by covering part of the subscription costs for our employees in several countries.

EMPLOYEES

HUMAN RIGHTS AND LABOUR LAWS

It goes without saying that we comply with all legal provisions and the requirements of human rights and labour laws at all locations. These include the UN Universal Declaration of Human Rights (including children's rights) and the conventions of the International Labour Organization (ILO). In addition, our company is committed to meeting the requirements of the UK's Modern Slavery Act and is expressly opposed to exploitative and unethical practices such as modern slavery, human trafficking, forced or child labour.

Any breaches of human rights, labour laws, or breaches of the Code of Conduct, are reported within the framework of the Sustainability Report. In 2021, no such breaches were recorded.

The Code of Conduct, which is binding for all employees, also defines the rules of conduct with regard to integrity and legality, ethical behaviour and a sense of responsibility.

In many countries we have a collective bargaining agreements in place, negotiated with the social partners, that go further than the legal requirements in many areas. In Switzerland, for example, this is true of maternity leave or the number of days of holiday. The collective bargaining agreements are accessible to the public. They include the principle of equal pay for equal work. In addition, equal pay was assessed in accordance with the requirements of the Federal Office for Gender Equality (FOGE) for the reference month of February 2021 and equal pay was certified. The results and procedure were confirmed by the external auditors in June 2022.

Employees can take advantage of various reductions, for instance on leisure activities, insurance, mobile phone contracts and a range of shopping opportunities, as well as receiving discounts on public transport.

The secondment of employees abroad for extended periods of time is carried out in accordance with specially drawn up regulations, which ensure the integration of the employee in the destination country and continued health coverage by the social system of their home country.

INVOLVEMENT OF EMPLOYEES IN SUSTAINABILITY ISSUES

Our employees should be able to become more involved in discussions regarding sustainability in the future. We want to integrate their ideas and needs on the topic of sustainability and implement them in a manner that is specific to each location. At present, individual campaigns are implemented at Stadler locations to involve employees in sustainability issues.

ENVIRONMENT

RESPONSIBLE USE OF RESOURCES

The reduction of our carbon footprint also depends on the use of resources in our production plants. This includes:

- implementing the circularity principle for disposal (see focus topic from page 30)
- limiting emissions of air pollutants (non-GHG) such as volatile organic compounds (VOCs) from the use of solvent-based products like paints (see focus topic from page 30)
- using sustainable materials and products (secondary raw materials, pollutant-free and ESC-certified materials, non-environmentally hazardous products)
- reducing water consumption
- reducing waste generation thanks to improved planning and use of know-how in the design phase
- preserving biodiversity on the site areas
- reducing transport distances by giving preference to local suppliers

Stadler aims to continuously reduce the use of substances of concern in production and maintenance, and monitors technological developments and new findings on the safety of substances. Problematic substances are replaced as far and as quickly as possible. The European REACH regulation (Registration, Evaluation, Authorisation and Restriction of Chemicals) and the associated national regulations are of course complied with.

When working on vehicle projects, the relevant proof is provided via the detailed and updated substance list of the umbrella organisation of the European rail industry (UNIFE). Individual divisions continue to use the services of experts to keep abreast of the latest international, national or even local regulations on the handling of substances of concern.

All employees are trained in the handling of hazardous substances and chemicals. Employees who come into contact with dangerous goods receive additional regular training in accordance with the relevant legislation.

Stadler uses water primarily as drinking water to operate its sanitary facilities and partly to clean its products. The water usually comes from the local drinking water network. We dispose of effluents via the public sewage system. The goal is to gradually reduce water use even further.

The QEHS division at each site is responsible for implementing environmental measures. All production plants have held ISO 14001 certification (environmental management) for several years. In connection with the ISO 14001 certification of our plants (see table on page 44), the environmental relevance of the processes and procedures at our sites is regularly evaluated. If necessary, the plants take measures to reduce or eliminate risk. Recurring internal and external audits guarantee conformity with the requirements.

Stadler Valencia is also certified according to EMAS (Eco-Management and Audit Scheme). The German sites and the Hungarian component plant in Szolnok are certified according to ISO 50001 (energy management system).

SOCIETY

HUMAN RIGHTS AT SUPPLIERS' SITES

The Stadler Group selects its suppliers with care, knows them personally and relies on long-standing, local business relationships.

Stadler's social responsibility is not limited to its own employees, processes and locations, but also extends to our upstream supply chain. We expect our business partners – whether suppliers, subcontractors or other partners, in turn to comply with the principles on which Stadler's business activities are based. This also applies to their supply chain. In the event of breaches, Stadler reserves the right to impose appropriate penalties. This can culminate in the termination of the business relationship. All our suppliers must sign the "Code of Conduct for Business Partners". Among other things, this confirms compliance with the fundamental human rights of our suppliers' employees. Suppliers must sign the "Quality, Environment and Safety Agreement", in which they commit to providing workplaces that meet the legal requirements regarding safety and the environment.

Furthermore, our suppliers must comply with legal provisions and requirements in the area of human rights and children's rights as well as labour law, such as the UN Universal Declaration of Human Rights and children's rights and the conventions of the International Labour Organization (ILO). Compliance with human rights is verified during the initial supplier assessment.

COOPERATION WITH RESEARCH AND DEVELOPMENT

As a technology leader with highly qualified development departments, Stadler continually generates knowledge and findings that ultimately lead to an improvement in sustainable travel and in economic, environmental and social decisions.

As a responsible company, Stadler ensures the transfer of knowledge. Stadler's specialists work as lecturers at technical colleges and universities, and as experts they also frequently share their knowledge during public speeches and in specialist articles. The aim of these activities is to provide local social benefits and to invest in the quality of education.

Stadler seeks cooperation with local, regional and national research and development facilities at all of its manufacturing locations. This manifests itself in various research projects and partnerships. Stadler also supports students writing bachelor's and master's theses.

This cooperation with research and development facilities allows the latest developments in the fields of green technology and digitalisation to be taken advantage of and put into practice early on. It also helps to inspire young talent at a young age both for the railway industry in general and for Stadler in particular.

In 2021, we worked on 28 research projects and provided assistance with 70 bachelor's and master's theses.

Stadler wants to maintain this commitment and continue to support students writing bachelor's or master's theses and participate in research projects with practical applications.



DIGITALISATION

AUTOMATED AND NETWORKED

Automated, networked driving offers huge potential for greater energy efficiency. Assistance systems help drivers to save energy when operating trains. Intelligent systems ensure that vehicles are air-conditioned and heated according to their capacity utilisation. This reduces energy consumption, irrespective of the drive technology. The digitalisation of the railway helps to condense train frequency. This enables tighter train sequences can be implemented on the same route and allows more people to be moved around by rail in an environmentally friendly way.



GRI CONTENT INDEX

GENERAL DISCLOSURES

GRI Standard	Disclosures	Publication/page or URL	Page
GRI 101: Foundation 2016			
Organizational profile			
GRI 102: General Disclosures 2016	102-1 Name of the organization	Stadler Rail AG www.stadlerrail.com	
	102-2 Activities, brands, products, and services	Sustainability Report	6 – 9
	102-3 Location of headquarters	Sustainability Report	7
	102-4 Location of operations	Annual report	6 – 7
	102-5 Ownership and legal form	Sustainability Report Annual report	7 68
	102-6 Markets served	Sustainability Report	8
	102-7 Scale of the organization	Sustainability Report	2, 6 – 9
	102-8 Information on employees and other workers	Sustainability Report	2, 37 – 39
	102-9 Supply chain	Sustainability Report	9
	102-10 Significant changes to the organization and its supply chain	Sustainability Report Annual report	4, 7, 24 42
	102-11 Precautionary Principle or approach	Sustainability Report	43
	102-12 External initiatives	Sustainability Report	34 – 35
	102-13 Membership of associations	Sustainability Report	34
Strategy			
GRI 102: General Disclosures 2016	102-14 Statement from senior decision-maker	Sustainability Report Annual report	4 – 5 42
	102-15 Key impacts, risks, and opportunities	Sustainability Report	43
Ethics and integrity			
GRI 102: General Disclosures 2016	102-16 Values, principles, standards, and norms of behavior	Sustainability Report	8, 34 – 35
	102-17 Mechanisms for advice and concerns about ethics	Sustainability Report	34 – 35
Corporate governance			
GRI 102: General Disclosures 2016	102-18 Governance structure	Annual report	32 – 56
	102-20 Executive-level responsibility for economic, environmental, and social topics	Sustainability Report	13
	102-21 Consulting stakeholders on economic, environmental, and social topics	Sustainability Report	13, 15
	102-29 Identifying and managing economic, environmental, and social impacts	Sustainability Report	14 – 15
	102-31 Review of economic, environmental, and social topics	Sustainability Report	14 – 15

GRI Standard	Disclosures	Publication/page or URL	Page
Stakeholder engagement			
GRI 102: General Disclosures 2016	102-40 List of stakeholder groups	Sustainability Report	13
	102-41 Collective bargaining agreements	Sustainability Report	45
	102-42 Identifying and selecting stakeholders	Sustainability Report	12 – 13
	102-43 Approach to stakeholder engagement	Sustainability Report	13
	102-44 Key topics and concerns raised	Sustainability Report	14 – 15
Reporting practice			
GRI 102: General Disclosures 2016	102-45 Entities included in the consolidated financial statements	Annual report	95 – 96
	102-46 Defining report content and topic Boundaries	Sustainability Report	12
	102-47 List of material topics	Sustainability Report	17, 42 – 48
	102-50 Reporting period	Sustainability Report	12
	102-51 Date of most recent report	Sustainability Report	13
	102-54 Claims of reporting in accordance with the GRI Standards	Sustainability Report	15
	102-55 GRI content index	Sustainability Report	50 – 54

MATERIAL ENVIRONMENTAL TOPICS – GENERAL DISCLOSURES

GRI Standard	Disclosures	Publication/page or URL	Page
Energy			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Sustainability Report	25 – 27
	103-2 The management approach and its components	Sustainability Report	25 – 27
	103-3 Evaluation of the management approach	Sustainability Report	25 – 27
GRI 302: Energy 2016	302-1 Energy consumption within the organization	Sustainability Report	25 – 27, 56
	302-3 Energy intensity	Sustainability Report	25 – 27, 56
	302-4 Reduction of energy consumption	Sustainability Report	25 – 27, 56
Water and effluents			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Sustainability Report	46
	103-2 The management approach and its components	Sustainability Report	46
	103-3 Evaluation of the management approach	Sustainability Report	46
GRI 303: Water and Effluents 2018	303-5 Water consumption	Sustainability Report	56
Biodiversity			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Sustainability Report	46
	103-2 The management approach and its components	Sustainability Report	46
	103-3 Evaluation of the management approach	Sustainability Report	46
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Sustainability Report	56

GRI Standard	Disclosures	Publication/page or URL	Page
Emissions			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Sustainability Report	19 – 30
	103-2 The management approach and its components	Sustainability Report	19 – 30
	103-3 Evaluation of the management approach	Sustainability Report	19 – 30
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	Sustainability Report	26
	305-2 Energy indirect (Scope 2) GHG emissions	Sustainability Report	26
	305-3 Other indirect (Scope 3) GHG emissions	Sustainability Report	26
	305-4 GHG emissions intensity	Sustainability Report	56
Waste			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Sustainability Report	30 – 32
	103-2 The management approach and its components	Sustainability Report	30 – 32
	103-3 Evaluation of the management approach	Sustainability Report	30 – 32
GRI 306: Waste	306-3 Waste generated	Sustainability Report	31
	306-4 Waste diverted from disposal	Sustainability Report	31

GRI Standard	Disclosures	Publication/page or URL	Page
Supplier environmental assessment			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Sustainability Report	46
	103-2 The management approach and its components	Sustainability Report	46
	103-3 Evaluation of the management approach	Sustainability Report	46
GRI 308: Supplier Environmental Assessment 2016	308-1 New suppliers that were screened using environmental criteria	Sustainability Report	46

MATERIAL SOCIAL TOPICS

GRI Standard	Disclosures	Publication/page or URL	Page
Employment			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Sustainability Report	37 – 38
	103-2 The management approach and its components	Sustainability Report	37 – 38
	103-3 Evaluation of the management approach	Sustainability Report	37 – 38
GRI 401: Employment 2016	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	Sustainability Report	45
	401-3 Parental leave	Sustainability Report	45
Occupational health and safety			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Sustainability Report	39
	103-2 The management approach and its components	Sustainability Report	39
	103-3 Evaluation of the management approach	Sustainability Report	39
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	Sustainability Report	39, 57
	403-2 Hazard identification, risk assessment, and incident investigation	Sustainability Report	39, 57
	403-5 Worker training on occupational health and safety	Sustainability Report	39, 57
	403-6 Promotion of employee health	Sustainability Report	39, 57
	403-9 Work-related injuries	Sustainability Report	39, 57

GRI Standard	Disclosures	Publication/page or URL	Page
Training and education			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Sustainability Report	37 – 38
	103-2 The management approach and its components	Sustainability Report	37 – 38
	103-3 Evaluation of the management approach	Sustainability Report	37 – 38
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	Sustainability Report	37 – 38
	404-3 Percentage of employees receiving regular performance and career development reviews	Sustainability Report	37 – 38
Diversity and equal opportunities			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Sustainability Report	38
	103-2 The management approach and its components	Sustainability Report	38
	103-3 Evaluation of the management approach	Sustainability Report	38
Non-discrimination			
GRI 103 Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Sustainability Report	38 – 39
	103-2 The management approach and its components	Sustainability Report	38 – 39
	103-3 Evaluation of the management approach	Sustainability Report	38 – 39
GRI 406 Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	Sustainability Report	38 – 39
Child labor			
GRI 103 Management Approach	103-1 Explanation of the material topic and its Boundary	Sustainability Report	45
	103-2 The management approach and its components	Sustainability Report	45
	103-3 Evaluation of the management approach	Sustainability Report	45
GRI 408 Child Labor	408-1 Operations and suppliers at significant risk for incidents of child labor	Sustainability Report	45
Forced or compulsory labor			
GRI 103 Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Sustainability Report	45
	103-2 The management approach and its components	Sustainability Report	45
	103-3 Evaluation of the management approach	Sustainability Report	45
GRI 409: Forced or Compulsory Labor 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	Sustainability Report	45
Human rights assessment			
GRI 103 Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Sustainability Report	45
	103-2 The management approach and its components	Sustainability Report	45
	103-3 Evaluation of the management approach	Sustainability Report	45
GRI 412 Human Rights Assessment 2016	412-1 Operations that have been subject to human rights reviews or impact assessments	Sustainability Report	45
	412-2 Employee training on human rights policies or procedures	Sustainability Report	45

GRI Standard	Disclosures	Publication/page or URL	Page
Supplier social assessment			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Sustainability Report	46
	103-2 The management approach and its components	Sustainability Report	46
	103-3 Evaluation of the management approach	Sustainability Report	46
GRI 414: Supplier Social Assessment 2016	414-2 Negative social impacts in the supply chain and actions taken	Sustainability Report	46
Customer health and safety			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary	Sustainability Report	43
	103-2 The management approach and its components	Sustainability Report	43
	103-3 Evaluation of the management approach	Sustainability Report	43
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	Sustainability Report	43
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	Sustainability Report	43
Customer privacy			
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its Boundary		42
	103-2 The management approach and its components		42
	103-3 Evaluation of the management approach		42
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data		42

DATA COLLECTION AND EVALUATION

DATA COLLECTION

For the Sustainability Report 2021, we collected indicators according to GRI standards for all locations in the Stadler Group using a structured form once in January 2022.

The data collected includes both manufacturing sites (final assembly and component plants) and engineering sites, as well as service depots. We have checked the data for plausibility. We validated or, if necessary, corrected non-plausible data in association with the locations concerned. We then harmonised the data (standardisation of units) and extrapolated it to the entire Stadler Group (normalisation to 100 percent of the number of employees). In addition to the data, we also identified the associated data coverage. Data coverage represents the feedback

rate of the data and is an indicator of the accuracy and credibility of the data collected. For the 2021 reporting, we only used data with a data coverage of more than 60 percent. We used the normalised data to determine absolute and relative key figures as well as changes compared to the previous year.

From 2023 onwards, data will be collected regularly throughout the Group, in a similar way to financial data, in order to ensure better completeness, reliability and traceability of data.

NOTES – DETAILED DATA ON SELECTED GRI KEY FIGURES

BASIS OF DATA ON ENERGY AND THE CLIMATE

	GRI	Quantity	Δ 2021–2020 (%)	Relative quantities	Δ 2021–2020 (%)
Thermal energy consumption	302–1	108,727,000 kWh/year	12.05	8,100 kWh/(empl.*year)	7.73
Electricity consumption	302–1	72,624,000 kWh/year	4.79	5,400 kWh/(empl.*year)	0.75
Total energy consumption	302–1	182,847,000 kWh/year	9.23	13,700 kWh/(empl.*year)	5.02
Renewable energy production	302–1	1,835,000 kWh/year	23.57	138 kWh/(empl.*year)	18.81
Reduction of energy consumption (operations)	302–4	1,613,000 kWh/year	133.27	121 kWh/(empl.*year)	124.29
Proportion of renewable energy sources in the electricity mix	302–1			48.4%	2.30
Energy intensity	302–3			0.037 EUR/kWh	–25.65
CO ₂ intensity of electricity	305–2			303 g CO ₂ e/kWh	2.78
GHG emission intensity	305–4			298 g CO ₂ e/kWh	0.87

Absolute and relative key figures on energy and the climate.

Energy intensity is the quotient of total energy consumption (thermal energy and electricity) and revenue. The revenue figures are published in the Annual Report.

BASIS OF DATA ON WATER AND BIODIVERSITY (RESPONSIBLE USE OF RESOURCES)

	GRI	Absolute data	Δ 2021–2020 (%)	Relative data	Δ 2021–2020 (%)
Water consumption	303–5	136,000 m ³ /year	4.48	10.2 m ³ /(empl.*year)	0.74
Site area		1,296,000 m ² /year	16.86	97.1 m ² /(empl.*year)	12.36
Green areas		207,000 m ² /year	8.16	15.5 m ² /(empl.*year)	3.99
Protected areas	304–1			46.6%	10.80
Biodiversity value	304–1			0.00%	0.00

Key figures on water consumption and biodiversity.

2021 results in slightly higher water consumption compared to 2020. In relation to 2020, the total area of the site grew faster in 2021 than the green area, resulting in a lower proportion of green space. The percentage of protected areas increased by 10 percent.

BASIS OF DATA ON EVENTS (ROOTS IN THE REGION)

	GRI	Number per year	Δ 2021–2020 (%)	Number per 1,000 employees and per year	Δ 2021–2020 (%)
Events for the population	413–1	24	140%	1.78	130%
Visitors at events organised	413–1	7,240	42%	540	37%

BASIS OF DATA ON EMPLOYEE HEALTH AND SAFETY

	GRI	Abs. data	Δ 2021–2020 (%)	Rel. data	Δ 2021–2020 (%)
Number of safety officers	403–1	89 Qty/year	5.03	6.7 Qty/ (1,000 empl.*- year)	0.98
Number of hazard analyses	403–2	475 Qty/year	12.47	35.6 Qty/ (1,000 empl.*- year)	8.14
Employee training courses on occupational safety and health protection	403–5	9,600 Qty/year	154.35	718 Qty/ (1,000 empl.*- year)	144.55
Health promotion for employees: number of services and programmes	403–6	125 Qty/J	14.97	9.3 Qty/ (1,000 empl.*- year)	10.54
Health promotion for employees: investments	403–6	879,000 EUR/year	–4.08	114,000 Qty/ (1,000 empl.*- year)	–7.78
Work-related injuries	403–9	466 Qty/year	8.36	34.9 Qty/ (1,000 empl.*- year)	4.18
Number of work-related illnesses	403–10	21 Qty/year	24.53	1.6 Qty/ (1,000 empl.*- year)	19.73

Stadler did more in the area of employee health and safety in 2021 than in 2020. The number of safety officers also increased slightly (+5 percent) and more precautionary risk analyses were carried out (+12.5 percent). The number of services and programmes also increased (+15.0 percent). The number of staff training courses even registered an increase of 154 percent compared to 2020. These efforts are not yet reflected in the accident figures. Stadler will continue to closely monitor the development of work-related accidents and illnesses and initiate additional preventive measures if necessary.

GLOSSARY

ABAKABA	Analytical valuation of work activities according to Katz and Baitsch
AIB	Association of Issuing Bodies; umbrella organisation of the European registers of guarantees of origin
ATO	Automatic Train Operation
FOEN	Swiss Federal Office for the Environment
CAGR	Compound Annual Growth Rate
FOGE	Swiss Federal Office for Gender Equality
EMAS	Eco Management and Audit Scheme, management instrument developed by the EU to improve the environmental performance of companies
EnAW	Swiss Energy Agency for Industry
EPD	Environmental Product Declaration; document provided by manufacturers giving data about the environmental impacts of their products
GRI	Global Reporting Initiative; international reporting standard
IPCC	Intergovernmental Panel on Climate Change
IRIS	International Railway Industry Standard
LCA	Life Cycle Assessment
mobitool	Swiss platform for mobility management tools and specially edited environmental data
Net zero	Climate neutrality
QEHS	Quality, Environment, Health and Safety; (internal departments within Stadler)
ReCiPe	Life cycle impact assessment method.
SBTi	Science-Based Targets Initiative; association of several organisations to develop methods and criteria for effective climate protection
SDGs	Sustainable Development Goals
TCFD	Task Force on climate-related Financial Disclosures; body created to identify information needed by investors, lenders and insurance companies to adequately assess and evaluate climate-related risks and opportunities.
GHG	Greenhouse gas
UNIFE	Union des industries ferroviaires européennes; Association of European Railway Industries
VOC	Volatile organic compounds; gaseous and vaporous substances of organic origin in the air

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