



On the way to sustainable material handling

The warehouse of the future – for your success

Jungheinrich AG
March 2025

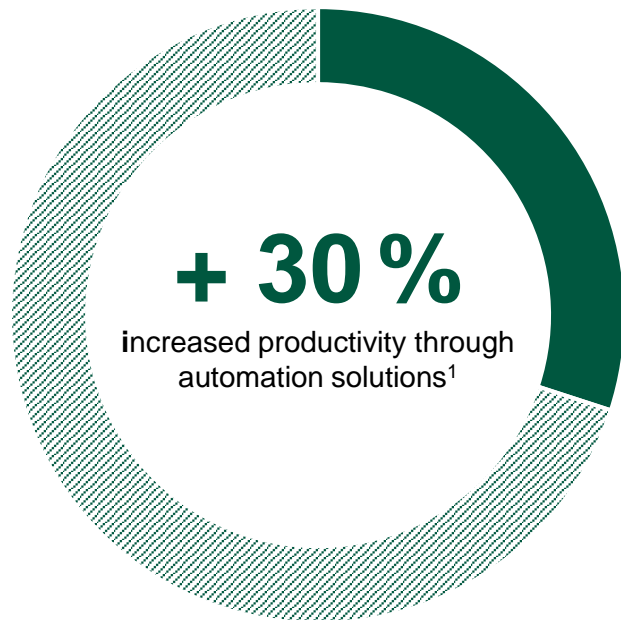
JUNGHEINRICH

Seize opportunities, minimise risks

Why sustainable material handling is now essential for you

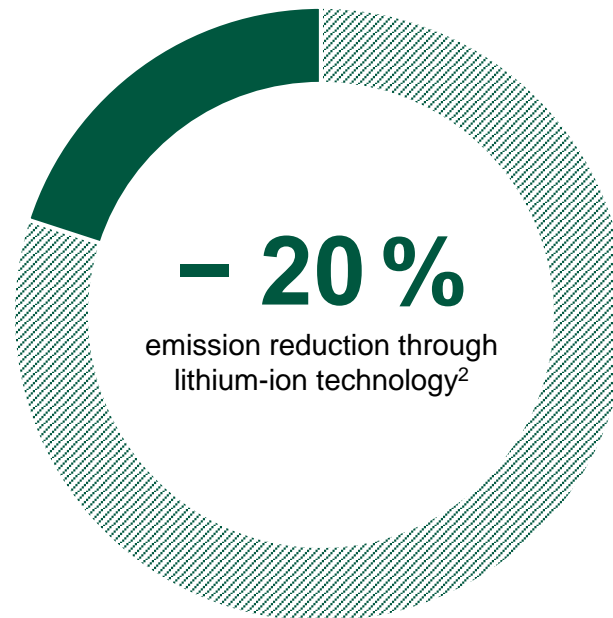
Increase efficiency

Because sustainable solutions allow you to permanently increase your efficiency and reduce operating costs.



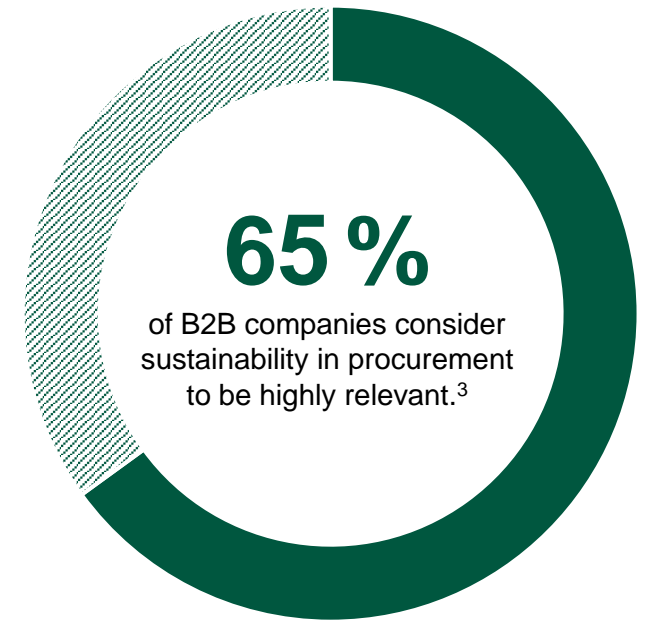
Reduce emissions

Because energy-efficient technologies make a decisive contribution to achieving your climate targets.



Secure competitive advantages

Because you fulfil regulatory requirements and the expectations of customers, investors and employees.



¹ [Customer Reference DB Schenker](#) | ² [Lithium-Ion Technology](#) | ³ [Jaro Insitute Study 2023](#)

100 % electric, 100 % future-proof

Our mission: sustainable material handling

With our products and solutions, we enable **sustainable material handling**. We make our customers' warehouses efficient, circular-ready, and safe.

As a "**Sustainability Enabler**", we are part of the solution to a global challenge – together with our customers.

What we can do for you

With Jungheinrich, your warehouse of the future becomes:

Optimum utilisation of
space and resources

efficient

circular-ready

Efficient use of materials and energy,
promotion of reuse, and waste reduction.

All-round safety for your
employees and sensitive goods

safe

Products and solutions for your warehouse of the future

Optimum use of space and resources



efficient

circular-ready

safe

Electrically powered

Since our founding, we have relied on **electric drives for you** – and since 2023, all our trucks have been 100% electric. We manufacture trucks, controls, software, batteries, and charging technology ourselves. This complete system ensures maximum efficiency in your low-emission warehouse operations.



Pioneer in lithium-ion technology: Our lithium-ion trucks produce on average around 10 % less CO₂e over their entire life cycle and consume around 20 % less energy in the utilisation phase compared to lead-acid batteries.¹



Our compact li-ion trucks with integrated lithium-ion batteries increase your floor space productivity by 4 %²



Our highly efficient chargers optimise energy use. The active load management also saves resources as it can be integrated into higher-level energy management systems and can eliminate the need to extend the electrical installation.

efficient

Transparency for informed decisions: We are calculating the **product carbon footprint (PCF)** for more and more products so that you can make sustainable decisions. Simply enquire!

efficient

circular-ready

safe

¹ [Lithium-Ion Technology](#) | ² [Lithium-Ion Trucks](#)

Digital & automated

Digital and sustainable transformation go hand in hand. Complete end-to-end digitalisation of your warehouse makes processes transparent, allowing you to fully exploit efficiency potential and use automation solutions effectively.



Digital solutions such as the Jungheinrich WMS save paper and offer greater transparency for inventories, commissioning and transport, which makes the material flow more efficient.



Automated in a connected overall system: Software solutions, ASRS and mobile robots optimise processes, reduce space requirements and thereby energy consumption. They also reduce the risk of accidents to almost zero.



Predictive fleet management: With the Jungheinrich FMS, you can monitor and optimise the productive use of your fleet.

efficient

Errors are minimised, leading to savings in consumables, for example.

Avoiding empty runs, traffic jams and detours saves energy.

All resources are used optimally – from working hours to trucks, as well as space and area.

Holistic consulting

With our **material flow and energy consulting**, we support you in planning and optimising your sites for efficient operation with a reduced CO₂e load. We help you get started and ensure optimised processes and technologies in the long term.



An **intelligent, expandable warehouse layout** minimises space requirements, thereby saving heating and cooling, as well as lighting costs.



Our local energy consultants provide **tailored energy concepts and consulting** on site.



A **demand-oriented sizing** avoids overcapacity, enables the maximisation of machine efficiency, and allows for the use of scalable solutions.

efficient

Transform together:

In our [Green Site Guide](#), we share tips for the sustainable transformation of your sites.

efficient

circular-ready

safe

Products and solutions for your warehouse of the future
Preserve and use resources wisely



efficient

circular-ready

safe

Well-thought-out & long-lasting

We think about the end of our products right from the start – and ensure that it is as far away as possible. The longer products, components or raw materials are used, the more sustainable they are – both ecologically and economically. The same quality promise applies to our refurbished trucks as to new ones.



The refurbishment process of our **JUNGSTARS** saves around **80 % CO₂e** compared to new production.



Thanks to forward-looking product development, our used trucks achieve a **reuse and recycling rate of up to 99 %**.



Our **customer service** is increasingly going electric, actively contributing to maintenance and thus extending the service life of your warehouse equipment.

Our vision for the **battery life cycle**: first use in new trucks, second use in used trucks, and then in stationary storage facilities, before the cells are recycled.



circular-ready

efficient

circular-ready

safe

Positioned to meet your demand

Having only what is truly needed helps conserve natural and financial resources. Our short- and long-term rental and leasing models offer you flexibility to optimally adjust and utilise your fleet. Additionally, the product carbon footprint of the rented trucks only impacts your CO₂e balance proportionally.



Our **rental fleet** includes particularly energy-efficient trucks, around 30 % of which are equipped with lithium-ion technology.



Over 150 rental outlets worldwide ensure a comprehensive distribution network and short transport routes.



95 % of our refurbished trucks come from our rental fleet and thus contribute to a circular business model.

circular-ready

efficient

circular-ready

safe



A solution for every need with models such as our “forklift subscription” Full Flex Rental or the flexible rental of an entire fleet with Rental Fleet Management.

Products and solutions for your warehouse of the future

Protection of people and goods



efficient

circular-ready

safe

All-round protection

Our safety solutions protect employees, materials and goods, fulfil the requirements of fast processes and automated warehouses and at the same time promote an ergonomic, healthy workplace design.



Assistance systems regulate driving and lifting speed, increase stability in bends and prevent collisions.



360° personal protection thanks to safety sensors in our mobile robots.



AI reversing camera for pedestrian detection – a clear view even in tight spaces.



Intelligent **danger zone management** with the radio-based assistance system zoneCONTROL.



Safety is not just digital: Robust components, good visibility, and ergonomic design are a matter of course.



Less violent damage thanks to (semi-)automatic journeys with our connected assistance systems.

safe

Tested & optimised

Safety first: Proactive damage prevention and safety measures reduce accidents and damages while increasing efficiency through lower downtime. Investing in a safe work environment also strengthens your employer brand and demonstrates appreciation for your employees.



The **Jungheinrich FMS** increases safety in the warehouse through the pre-operational check, the reporting of shock events and an access control system that regulates driver authorisation and truck speed.



With our **SAFWalk**, you can systematically enhance warehouse safety by inspecting all areas during a walkthrough – from truck operators and material handling equipment to the overall warehouse environment.



Significantly fewer damages through **qualified rack inspections** according to ISO EN 15635, conducted by our certified inspectors.



Thanks to regular testing and optimisation according to a standardised checklist, the **number of safety incidents** at our customer **Hellmann** has been reduced to zero.

safe

efficient

circular-ready










safe

WE ENABLE SUSTAINABLE MATERIAL HANDLING FOR YOU



Successfully implemented

A selection of our sustainable successes

<p>100 %</p> <p>Electric product portfolio</p>	 <p>Efficient and flexible concept for the pharmaceutical and healthcare logistics company MSK</p>	 <p>Conversion to Li-Ion for the Werner & Mertz GmbH</p>	<p>80 %</p> <p>CO₂e saving by refurbishing used products compared to new production</p>	 <p>Energy-efficient and CO₂e-optimised plant in Chomutov</p>	<p>80,000 m²</p> <p>Area-wide switch to Li-Ion at toy manufacturer Simba</p>
 <p>Highly efficient trucks with li-Ion technology</p>	<p>> 98 %</p> <p>Reuse rate for our refurbished trucks</p>	 <p>100% electricity from renewable resources for all production processes</p>	 <p>More efficient use of space thanks to new shelving systems and automation at Coca-Cola</p>	 <p>Sustainability trainings for all team members</p>	<p>17 %</p> <p>less energy consumption through automation solution for customer Bohus</p>
<p>400,339</p> <p>hours of investment in the training of our team members annually</p>	<p>4 x Platin</p> <p>in a row in the EcoVadis rating</p>	<p>x 2</p> <p>the number of installed assistance displays for increased safety in warehouses</p>	 <p>78 % of the Group's global purchasing volume is Sustainable Spend</p>	 <p>Internal sustainability platform for more information, motivation and exchange.</p>	<p>> 99 %</p> <p>Material recycling rate</p>

Less energy consumption through automation

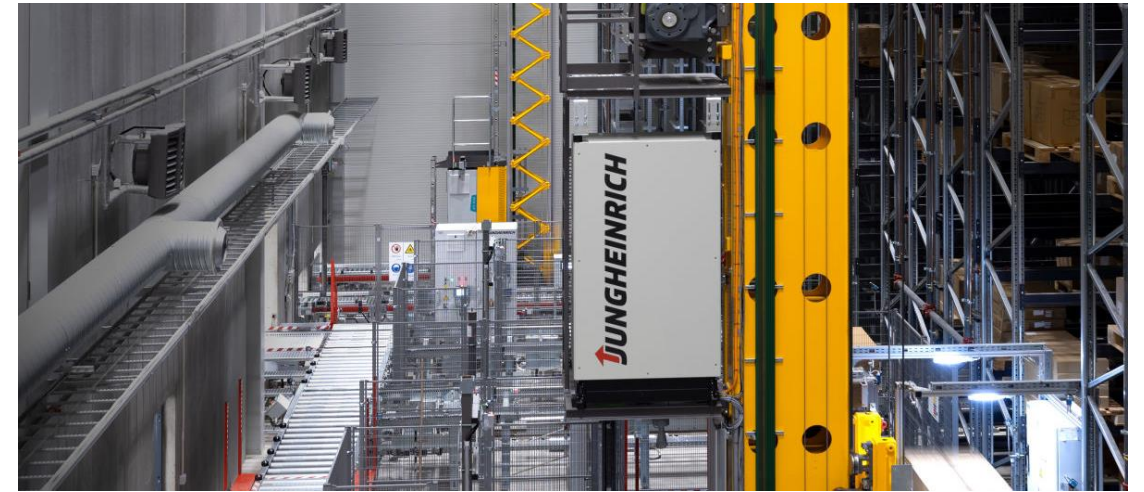
Central warehouse renovation for the furniture retailer Bohus, Norway

The Challenge

- ▶ Long transport routes result in high emissions and costs
- ▶ Permanent expansion of inventory requires flexibility and sustainability

The Solution

- ▶ Automated high-bay warehouse for containers, pallets and special pallets
- ▶ Lithium-ion trucks for efficient material handling
- ▶ Stacker cranes with energy recovery in the automated small parts warehouse



Sustainably successful

17 % energy savings

Maximum storage capacity and reduced transport thanks to optimised flows of goods

Increasing efficiency for sustainable logistics services

Switch to lithium-ion at CEVA Logistics, Belgium



Sustainably successful

More sustainable management with lithium-ion technology

Greater efficiency, safety and cost benefits thanks to lithium-ion technology and centralised charging infrastructure

The Challenge

- ▶ Realising the customer's sustainability targets
- ▶ Reduce energy consumption and CO₂e emissions
- ▶ Optimise inefficient and time-consuming battery replacement processes

The Solution

- ▶ Conversion of over 50 trucks to efficient lithium-ion technology
- ▶ Installation of 20 power banks with direct solar connection for sustainable energy and optimised charging processes
- ▶ Efficient lithium-ion trucks enable a reduced fleet and save space and costs in the long term

More safety with automation solution

New warehouse processes for automotive supplier Brose, Thailand

The Challenge

- ▶ Sustainable further development and optimisation of warehouse processes for higher volumes
- ▶ Error reduction in storage

The Solution

- ▶ Flexible software system with automated process optimisation for greater safety & damage-free handling
- ▶ Automated EKS 215a mobile robot with lithium-ion technology for greater efficiency and safety



Sustainably successful

Innovative technologies increase safety and potential savings

Automated processes reduce risks for employees and picking errors

Reducing emissions with lithium-ion technology

Fleet conversion for manufacturer Werner & Mertz, Germany



Sustainably successful

42,000 EUR cost savings

Longer service life, fewer changes, less maintenance – lithium-ion batteries save time and money

The Challenge

- ▶ Intensive operations with high demands on equipment
- ▶ Long distances and cumbersome charging processes due to storage conditions

The Solution

- ▶ 96 % of the fleet converted to lithium-ion trucks for better performance with reduced emissions
- ▶ Intelligent load management for optimal utilisation of the charging infrastructure
- ▶ Overview and analysis of operating hours and shocks that have occurred in the vehicle fleet

Energy-efficient for healthy nutrition

Sustainable energy concept for Reichenau-Gemüse, Germany

The Challenge

- ▶ Limited energy resources on site
- ▶ Cooling systems with high energy requirements
- ▶ Sustainable requirements of the customer

The solution

- ▶ 41 high-performance lithium-ion trucks with reduced emissions
- ▶ State-of-the-art battery technology with fast and intermediate charging via 23 SLH 700i chargers
- ▶ Optimised energy distribution in the warehouse thanks to the SLC 700 load management control centre



Sustainably successful

Using resources efficiently with an energy concept

Greater energy efficiency and increased sustainability through individual and holistic advice

Future-proof warehouse solutions

With pioneering spirit and innovation for your projects

>70

years of experience

in electrification and more than ten years of pioneering spirit in lithium-ion technology are driving your sustainable transformation.

10 – 1,500,000

employees

work for our customers. Whether small, medium, or large – we offer the right solution for your warehouse of the future.

>60

years of customer relations

already maintained by us with our most loyal clients. Long-term thinking and future-oriented planning are the foundation of a sustainable partnership for us.



Infinite possibilities

for an efficient, circular-ready, and safe warehouse. With our customised special solutions, we meet more than just standards.

SUSTAINABLE TRANSFORMATION FROM THE INSIDE OUT





For us, sustainability is more than just a vision – it is the compass for the transformation of material handling, combining ecological innovation, social responsibility and economic success.

Dr. Lars Brzoska
Chairman of the Board of Management

Globally local

Our impact

~ 21,000
team members

5.4 bn €
revenue

1 million
electric trucks

42
countries

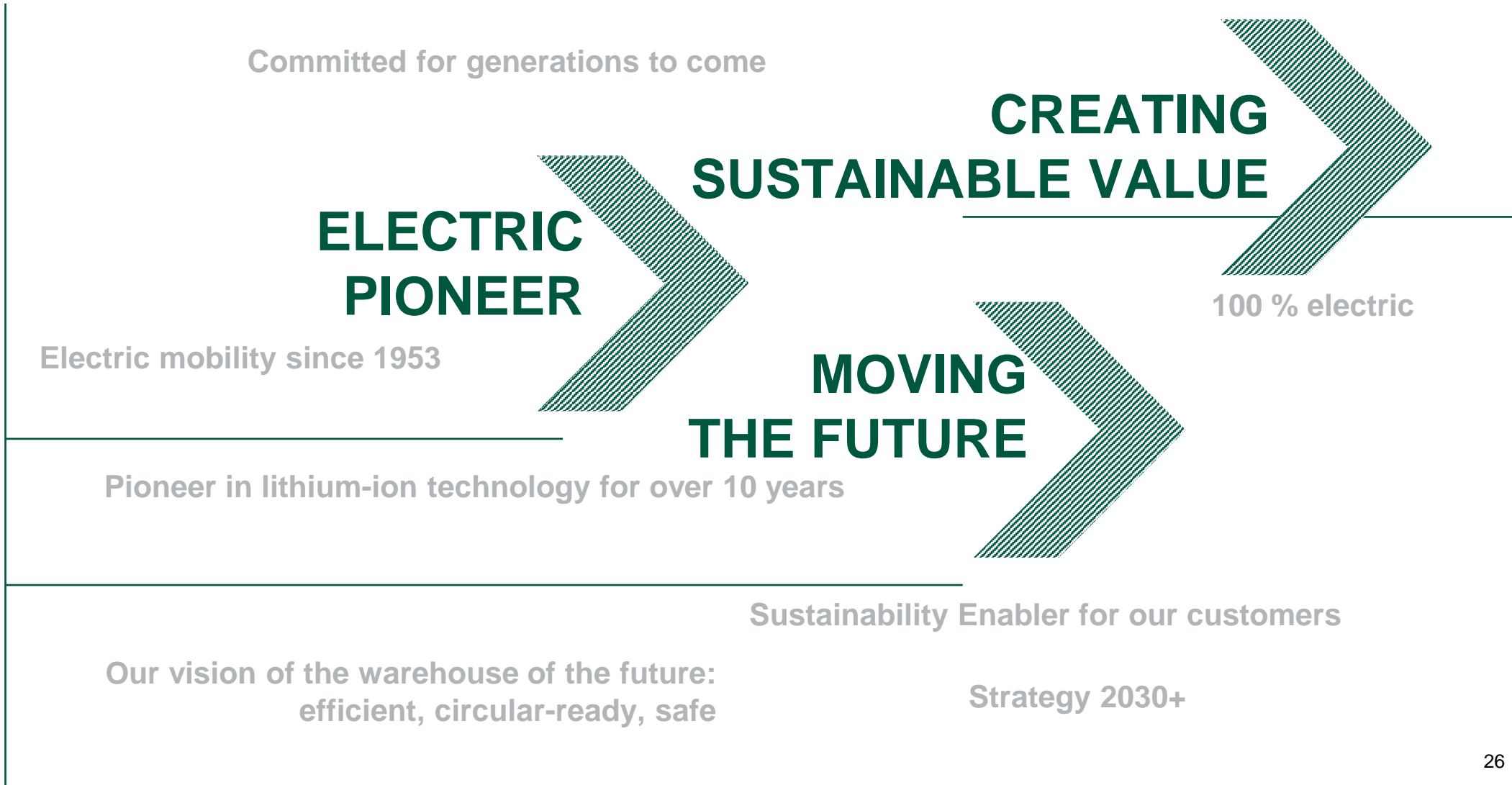
> 300,000
customers



Our contribution to the UN Sustainable Development Goals

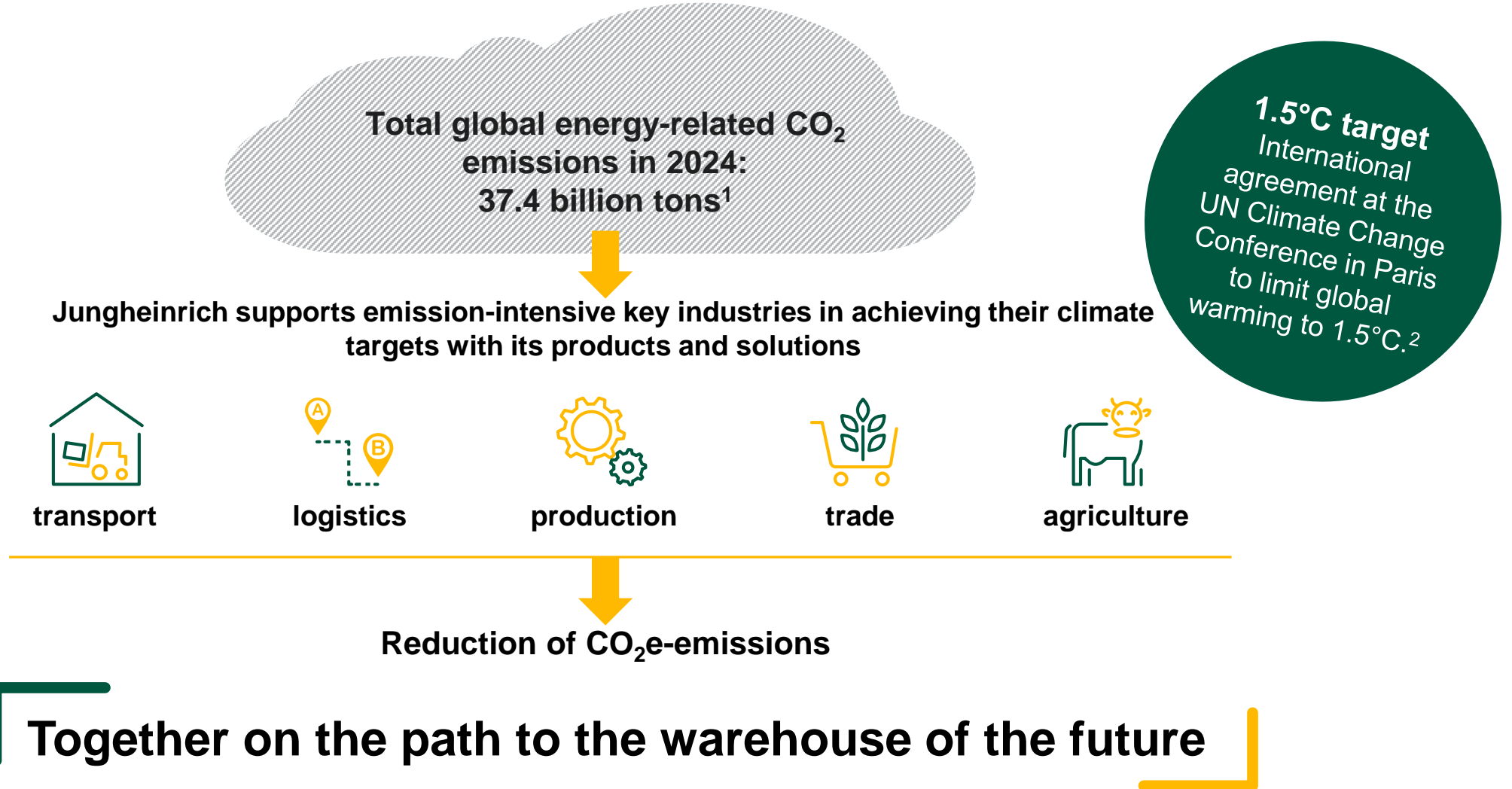
By conviction

Our attitude, origin, and vision



Cross-industry

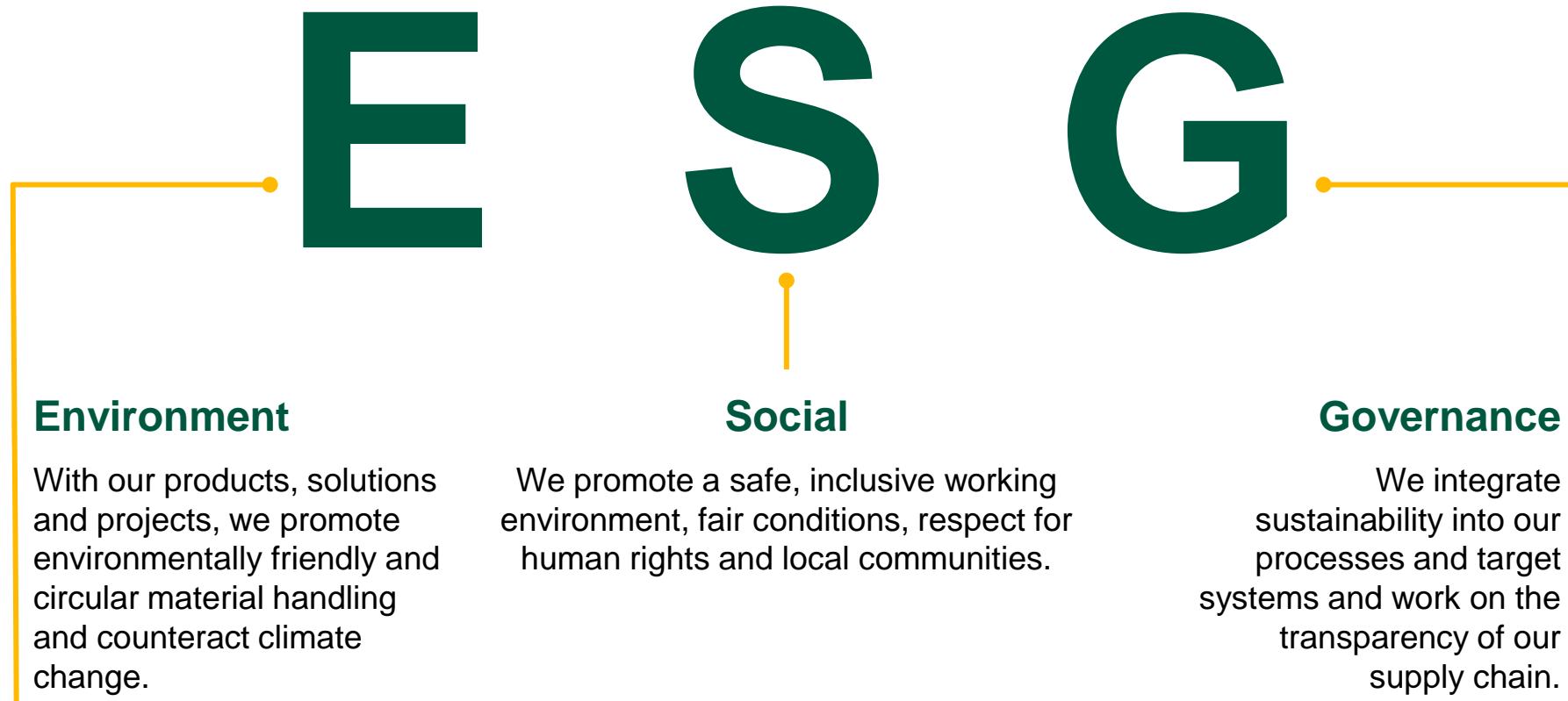
Our contribution to climate protection



¹ [Global Carbon Budget Org](#) | ² compared to the pre-industrial age

Internationally recognised

Our structural basis



Strategically anchored

Our sustainability targets

Sustainability is a fundamental part of our corporate strategy.

2025+ STRATEGY

- SUSTAINABILITY**
- Automation**
- Digitalisation**
- Energy Systems**
- Efficiency**
- Global Footprint**



Our part to combat climate change

- By 2030: Net zero emissions in Scopes 1 and 2
- By 2050 in Scopes 1 to 3
- Reduction targets in accordance with SBTi
- No severe climate-related business interruptions



Reduce resource consumption

- By 2025: no landfill waste in German plants and reducing the global share by one-third
- By 2030: 0% at sites with recycling systems
- Maintaining the high reuse and recycling rates



Creating a safe and fair working environment for our team members

- By 2025: Improve the accident rate (LTIR) to 12.5
- By 2025: 14 % women in management positions
- Securing employability and personal development



Ensuring transparent and sustainable procurement

- By 2025: 80 % of the relevant global purchasing volume is Sustainable Spend



Providing our customers with sustainable products and solutions

- Designing our customers' warehouses to be efficient, circular-ready and safe
- Increased safety for customers, e.g., through the growing use of assistance systems



Strengthening value-oriented corporate governance

- Strategically relevant top ratings from EcoVadis, CDP, Sustainalytics, and ISS ESG
- No fines for data protection violations

Our path to net zero emissions: defining ambitious targets

Direct CO₂e emissions from own business activities

e.g. gas, gasoline, diesel, etc.

Indirect CO₂e emissions from the purchase of energy

e.g. electricity or district heating

Indirect CO₂e emissions from upstream activities

e.g. purchasing of components, logistics or flights

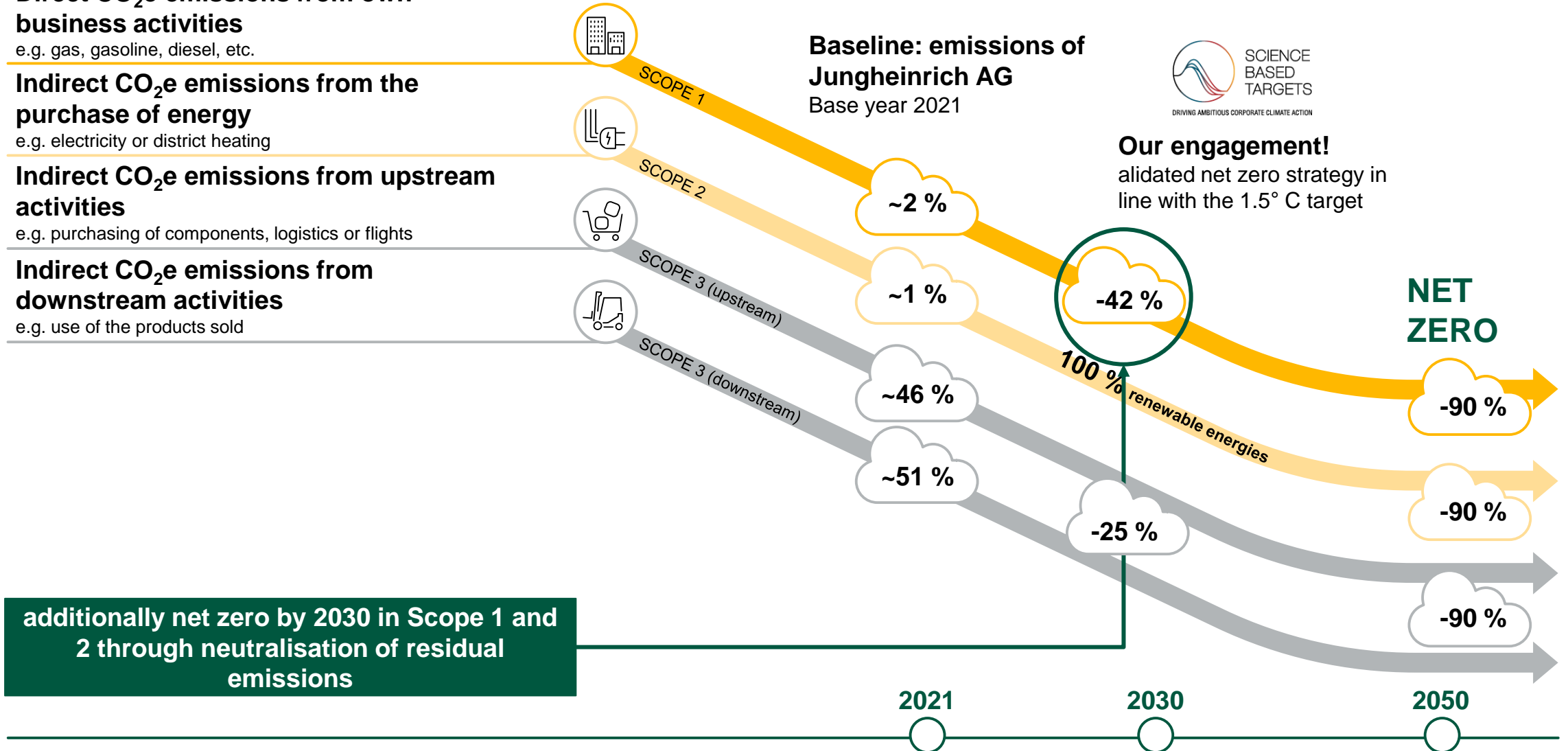
Indirect CO₂e emissions from downstream activities

e.g. use of the products sold



Baseline: emissions of Jungheinrich AG
Base year 2021

Our engagement!
Validated net zero strategy in line with the 1.5° C target



Learn more: [Our road to net zero emissions](#)

Enabling transformation

Our products and solutions



New Products

In line with eco-design, we take energy efficiency and material recycling into account right from the development stage.



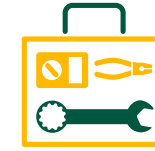
Energy Solutions

Compared to lead-acid batteries, our lithium-ion technology consumes around 20 % less energy in the utilisation phase.



Rental

Our rental models improve our customers' carbon footprint and promote the circular economy. 95 % of our used equipment comes from rental fleets.



Customer Service

Our first-class service extends truck life, reduces new purchases and cuts emissions by electrifying the service fleet.



Used Products

Our JUNGSTARS save up to 80 % CO₂e through refurbishment compared to new production.



Consulting Services

Advice on energy efficiency and optimal warehouse design.



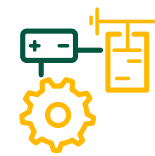
Digital Solutions

Efficient and secure flow of goods and use of resources with digital products.



Automation

Automated systems increase safety in the warehouse and can save up to 17 % energy during operation.



Powertrain Solutions

We are also electrifying other sectors – such as agriculture – with our drive solutions.

Stable value creation

Our contribution to the security of our – and your – supply chain



Lived corporate culture

Our diversity is your advantage

The *Jellow Way* provides **guidance** in our daily work and encourages **reflection, feedback, and exchange**. It defines our shared understanding of *how* we want to shape our collaboration with each other, as well as with **our partners and customers**.

we work

THE ELLOW WAY

WE ARE

&

OPEN

... for new ideas, changes and cross-functional collaboration.

ACTIVE

... by taking responsibility, driving our topics forward and bringing them to life.

EFFICIENT

... by finding lean solutions, being mindful of resources and staying focused.

WE CARE!

... for each other, for our customers and our environment, by trusting each other and acting with respect.

Training and development is essential for us so that our team members can develop their full potential.

We promote **work-life balance** with mobile working and teleworking, fitness and mental health offers, as well as attractive part-time models.

For us, **inclusion** means thinking about all people from the outset and not discriminating against anyone.

For us, **diversity** means, among other things, having an above-average share of female team members, filling management positions locally and employing people of different nationalities.

> 21,000 Sustainability enabler

Our team members become your experts

To enable our team members to actively support your sustainability targets and help shape sustainable material handling, we offer them a **global sustainability platform**, **trainings**, **best practices** and other resources.



Learn more: [Your sustainable impact](#)



We regularly put ourselves to the test and have joined selected initiatives for a sustainable transformation based on partnership.

Gabriele Maurer
Vice President Sustainability Jungheinrich

Confirmed sustainable

Our rankings, ratings und certifications



Stronger together

Our initiatives and memberships



 ***JUNGHEINRICH***