



Environmental policy 2024



Polarteknik

MISSION

Together with our customers, we work towards a green future for transport by ensuring that rail travel is the world's most comfortable way to get from one place to another.

VISION

We create the smartest, safest, smoothest and most sustainable solutions to ensure that passenger transport flows seamlessly far into the future.

BUSINESS IDEA

We deliver reliable, sustainable and efficiently produced interior door systems for the world's leading train manufacturers. Our business blends efficient basic production and forward-looking innovation.

Polarteknik's values



GREEN FUTURE

Railway transport plays an important role as an environmentally friendly mode of public transport across the globe. We want to do our part and promote rail travel that is comfortable and efficient in all aspects.



INTERACTION

Grand goals are achieved through many smaller measures. We want to be approachable, accessible and available for discussion to our customers and co-workers. Fundamentally, we are people working for people.



COMMITMENT

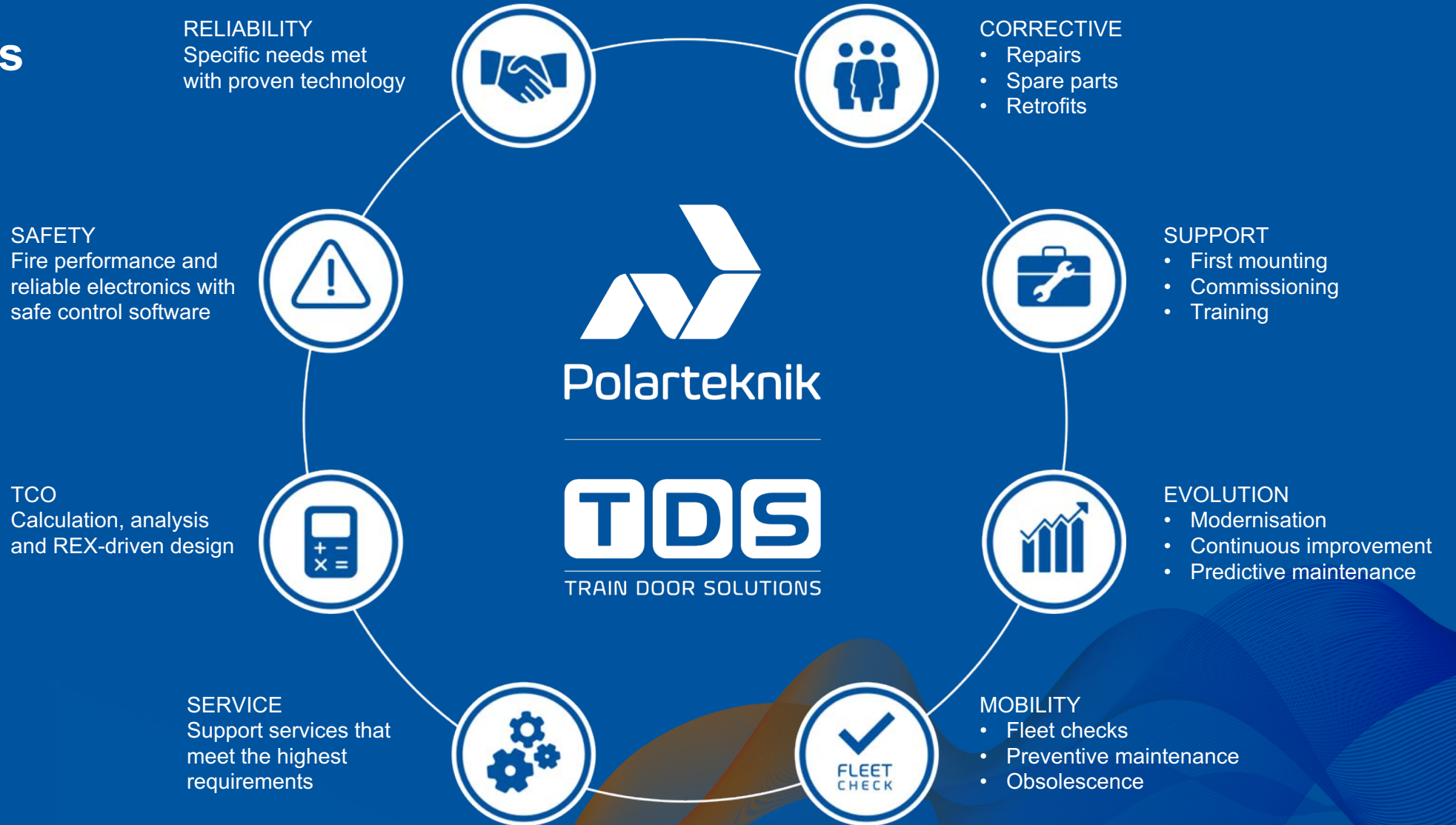
We are committed to promoting the best interests of our customers and staff in the long term. We also design and manufacture our products to be sustainable, safe and traceable.



PIONEERING

In the 2020s, the combination of smart technology and continuous learning provides new opportunities for many areas, including rail transport. In our industry, it can be used to promote ecology, safety and comfortable travel.

We provide many services to extend the lifecycle of the fleets



Competitive advantages

LENGTH

- We have served the world's leading OEMs for over 30 years
- Long-term commitment to customers and projects
- Expertise accumulated over a long period of time
- Long-term environmental commitment: our value chain persistently aims to build a more sustainable and ecological future

BREADTH

- Our employees have a good basic education and wide-ranging expertise that extends beyond their own duties: every one of our employees is an expert
- Broad perspective on travel comfort: ease, speed, relaxation, safety and ecological comfort
- Consideration of all interest groups all the way to the end users – railway passengers
- An extensive understanding of market requirements

DEPTH

- In-depth understanding of customers and the industry
- Our work requires an in-depth analysis of a complex set of factors: technical requirements, solution-related frameworks and any opportunities emerging from them
- We have built a specialised ecosystem around us

Drivers for sustainability policy

Polarteknik has been an ISO14001 certified company for years

Some customers have required an external rating for environmental and working conditions. Ecovadis – sustainability rating systems was selected, and it is based on a yearly re-certification. Management systems covered are Environment, Labor & human rights, ethics and sustainable procurement.

Finnish legislation has historically been very advanced in considering many ethical aspects of sustainable management e.g. child labor, slavery and working hours.

Customer requirements are more and more taking into account environmental aspects

- Product recyclability
- Ratio of recycled materials in the products
- Ratio of recycled materials in the supply process
- End of life and obsolescence management
- ISO22628 recyclability and recoverability calculation

Sustainable development goals from United Nations

- Agenda 2030 – 17 goals and 169 targets
<http://sdgs.un.org/goals>





SUSTAINABLE DEVELOPMENT GOALS

3 GOOD HEALTH AND WELL-BEING



13 CLIMATE ACTION



5 GENDER EQUALITY



8 DECENT WORK AND ECONOMIC GROWTH



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

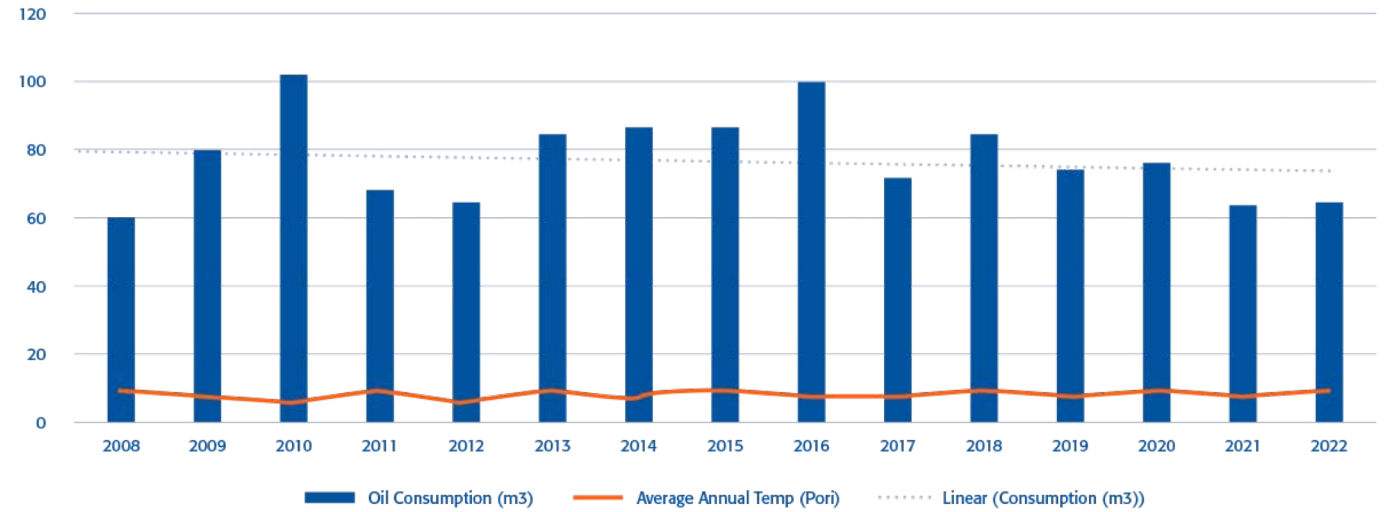


2023-2024

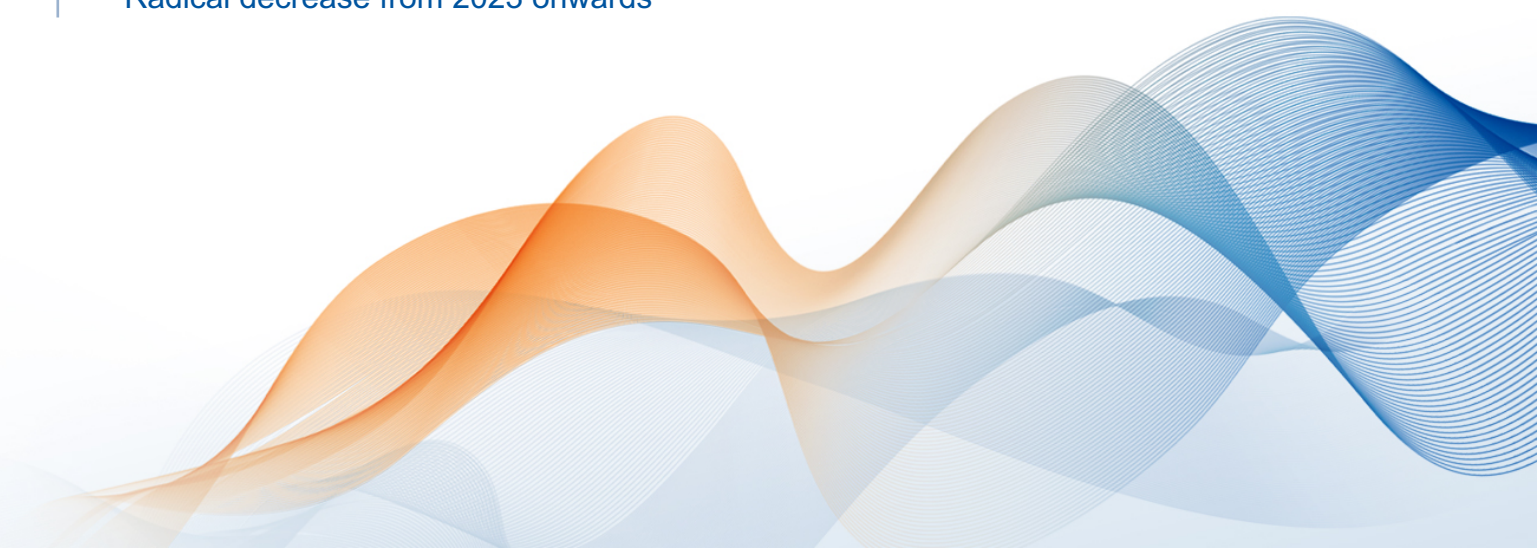
Environmental target	Action	Status
Oil consumption reduction 60-70%	Optimization of heating system control in Huittinen	1. New heating system implemented. Oil consumption (similar winter) should go down from 80k litres to 25-30k litres per annum
Electricity consumption	LED lighting, replacement gradually	1. Led lighting investment in Sastamala, and Co2 consumption decrease by 20% 2. LED lighting update on going on Huittinen office floor
Company car policy - Co2 reduction by 80%	Towards hybrid cars with lower emissions 2023 (to reduce Co2 by 50%) Towards electric cars for zero emissions by 2026	1 Hybrid company car and 2 electric cars ordered for 2023. Calculated Co2 (tons) from 11 tons to 5 tons of Co2 by the end of 2023. And from 5 to 1 tons by end of 2024.
Product environmental development - target to increase +10% recycled materials	Towards use of recycled materials - for example, the use of recycled aluminium instead of virgin metal. Finding plastic material which is recycled and EN45545 compliant (and endurance tested).	1. Study to be started in aluminium and plastics (wheels)
Implementation of sustainable supplier policy to all suppliers.	More suppliers selected with 14001 certified and push existing to certify. Supporting Ecovadis and minimum requirement to fulfil our sustainable supplier policy.	Today we have 150 suppliers. 13/21 is certified 14001 - Target end of 2024 is 15 suppliers certified. New suppliers are selected based on ISO14001 compliance.
Increasing recyclability of packages from 0% to 20%. Reduction of plastics by 70%	Utilization of returnable packages whenever feasible Replacing plastics with more eco-friendly materials.	Promote more returnable packaging to customers. Study to replace bubble wrap and cell foam in door packages.
Ecovadis - sustainability development system improvement by 7points during 2023-2024	Target to achieve Gold level and achieve 70/100 points by the end of 2024	Ecovadis update on-going (currently level 67/100 and gold)



Oil Consumption (m3)

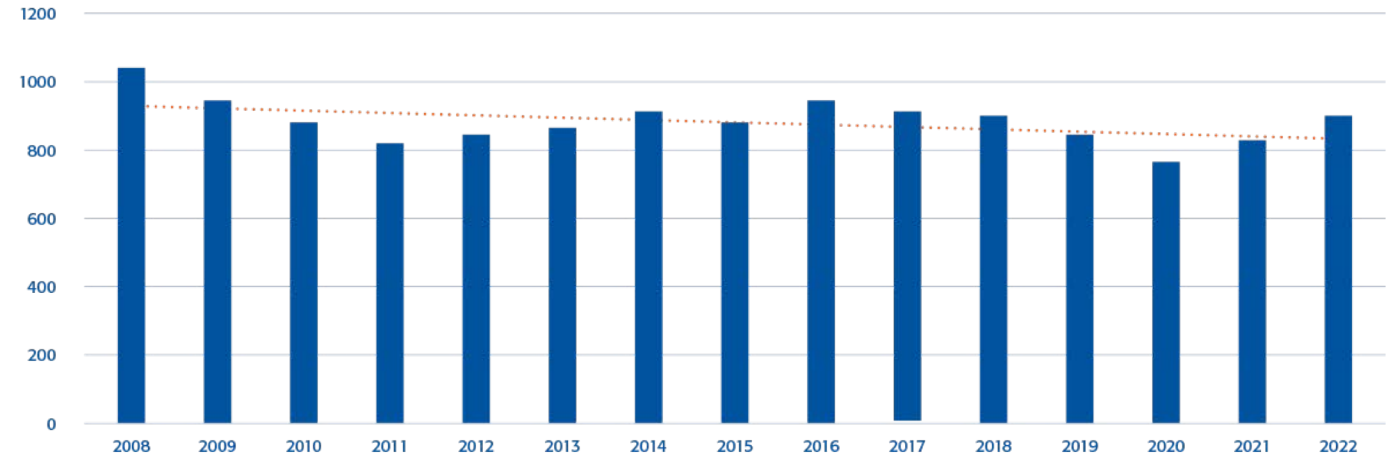


Decrease of oil consumption
as we installed Air/Ground heat pumps.
Radical decrease from 2023 onwards



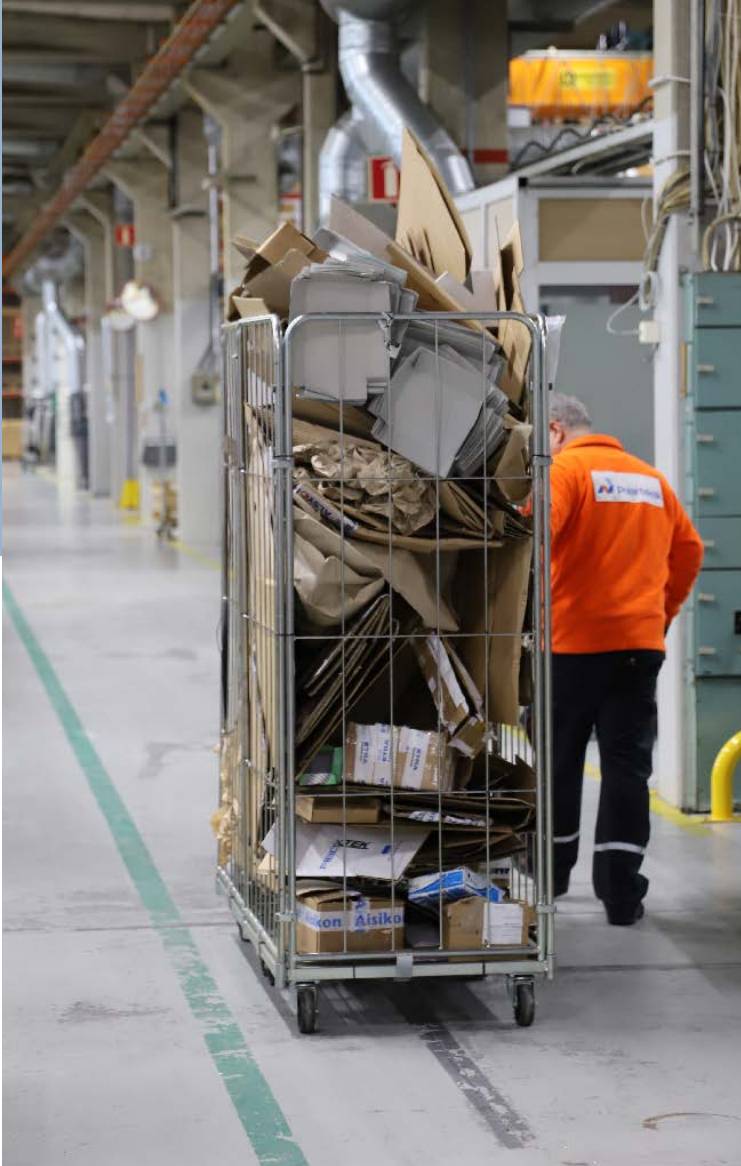


Electricity Consumption (MWh)

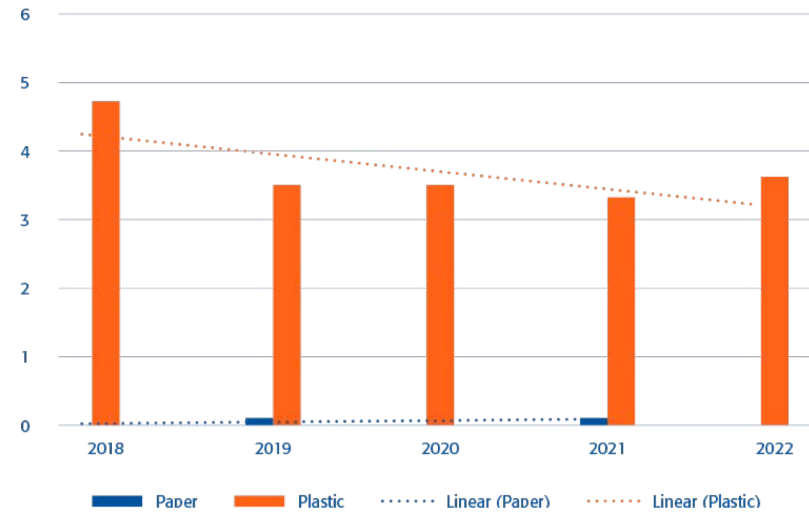


Increase in electricity consumption because of the heating method change which we compensate in 2023 by installing led lighting in all working spaces from production to office.





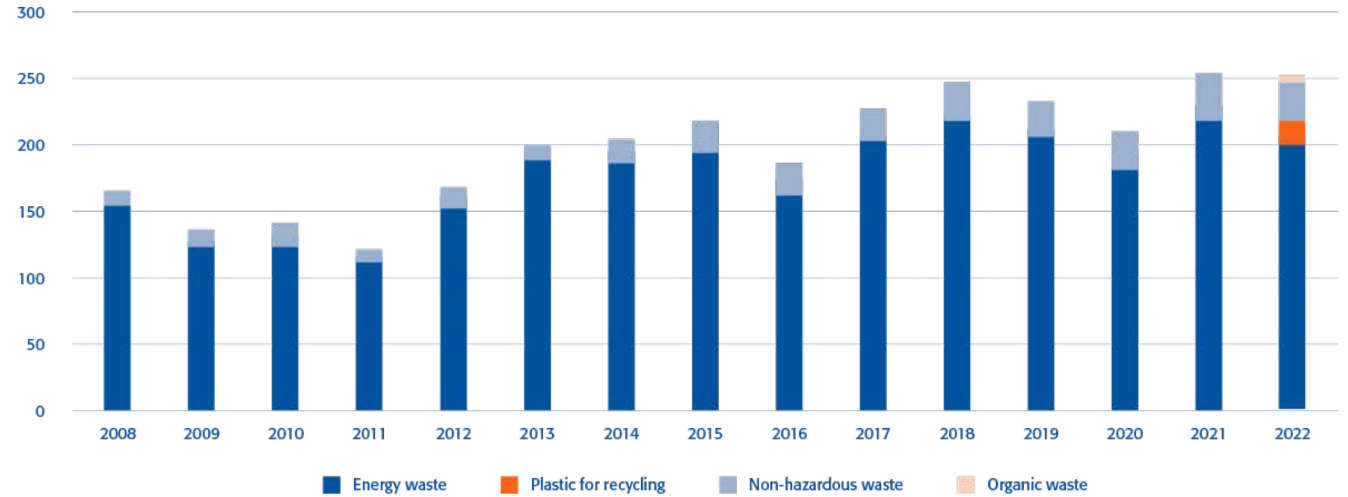
Paper vs. Plastic (tons)



Finding ways or replacing plastic with other more environmentally friendly packaging materials while still maintaining the level of protection for products in transportation.



Waste (m³)

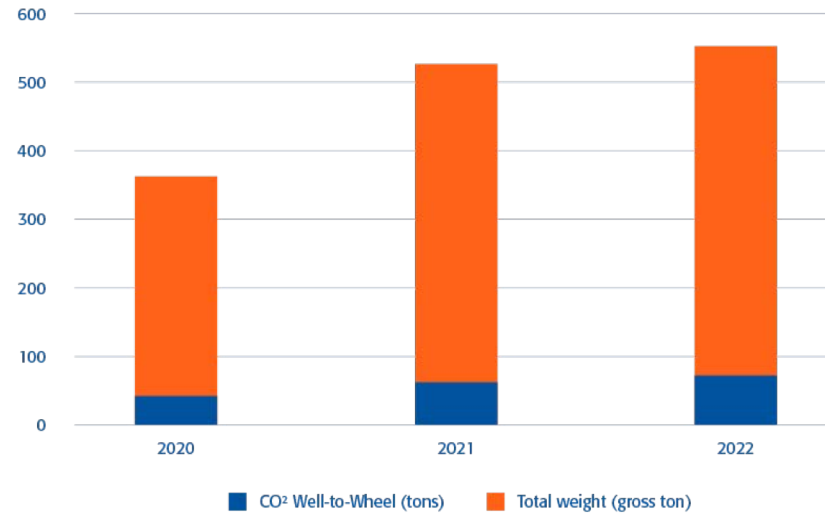


We have established a comprehensive Waste Management Plan. This plan encompasses an annual internal report on all waste-related matters, including recycling plans and collection procedures. Moreover, we have a centralized database accessible to all employees at their respective locations and our Quality Manager, ensuring easy access to vital waste-related information.





Well-to-Wheel



Well-to-Wheel (WTW) = total energy required and total greenhouse gas (GHG) emitted

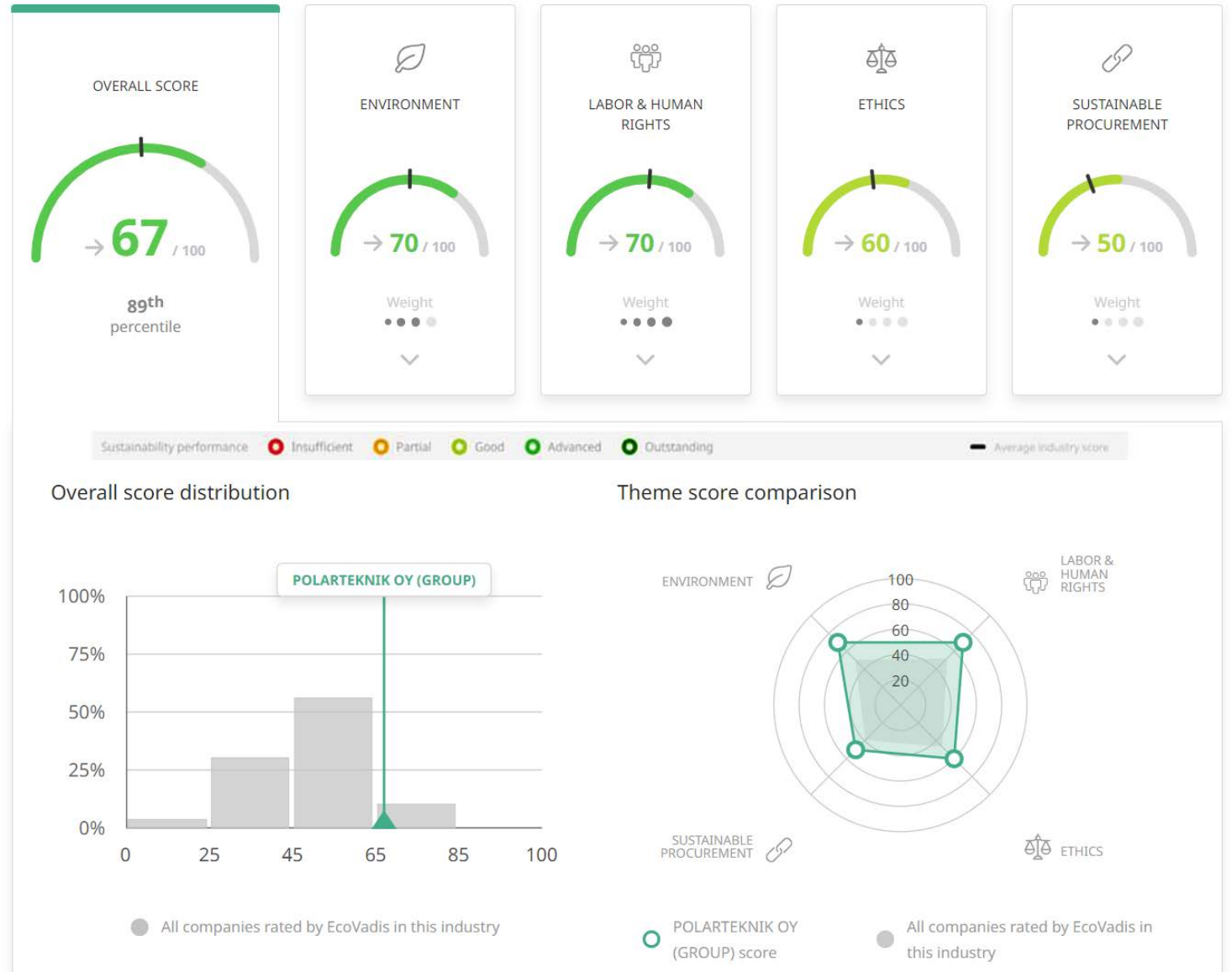
Company cars EV or HEV
Electric forklifts

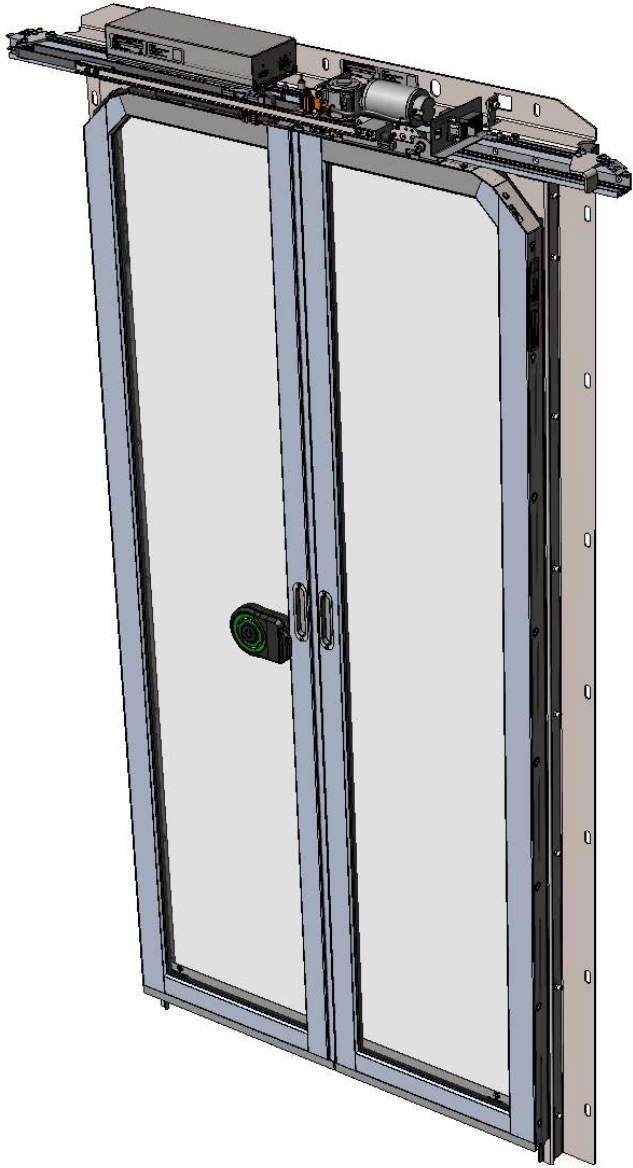
Carbon dioxide equivalent (CO₂e) = metric measure used to compare the emissions from various greenhouse gases based on their global-warming potential (GWP) and relative to volume of production.



Polarteknik commitment

Polarteknik is pleased that its persistent work in developing the operations and products to be more sustainable has been recognized with the EcoVadis silver medal. To be included in the top 25% of all companies is a great milestone for us and proves the strong commitment towards sustainability for the external and internal stakeholders. Being able to sustain the Silver level is a significant achievement while more and more companies are rates and already rated companies improve their rating. It is a concrete proof of our commitment to sustainability in action.





Energy use of the products

Our door drive products have been predominantly electrically driven since 2006. Bespoke control unit designed only for our use optimizes electrical consumption along with easy configurability from project to project and safety of the passengers in daily use.

Example of energy consumption for the entire life-cycle of doors in one trainset:

10 Door systems per trainset
30 Year life-cycle
20h/day operation
0,0067 kWh per hour of operation

1 door 49kW / year
10 doors 14MW / 30 years

Product eco-design

ISO22628 Recyclability and UNI-LCA-001 Recyclability and Recoverability calculations are a part of our design process.

Recyclability rate of our products is typically very high – in the range of 95-99%

Product weight

A good customer of ours has calculated that 1 additional kilo of weight in a train equals to 1800 Euros in the lifetime of the train in energy consumption, so we design our products to be as light as possible

Ownership Group structure



Nordstjernan, a family-controlled investment company that, through active ownership, develops companies and creates good and long-term value growth.

Net asset value of >4,2 Bn€
Turnover of 12 Bn€ and
50000 employees

www.nordstjernan.se/en



Dacke, develops companies with a strong technical knowhow, design capabilities and quality performance.

Turnover >1300 M€ and
1500 employees

www.dackeindustri.se/en



Our product range includes complete fire barrier walls, automatic single or double leaf sliding doors, telescopic, curved manual sliding or hinged doors.

Turnover 16M€ and
90 employees

www.polarteknik.fi/

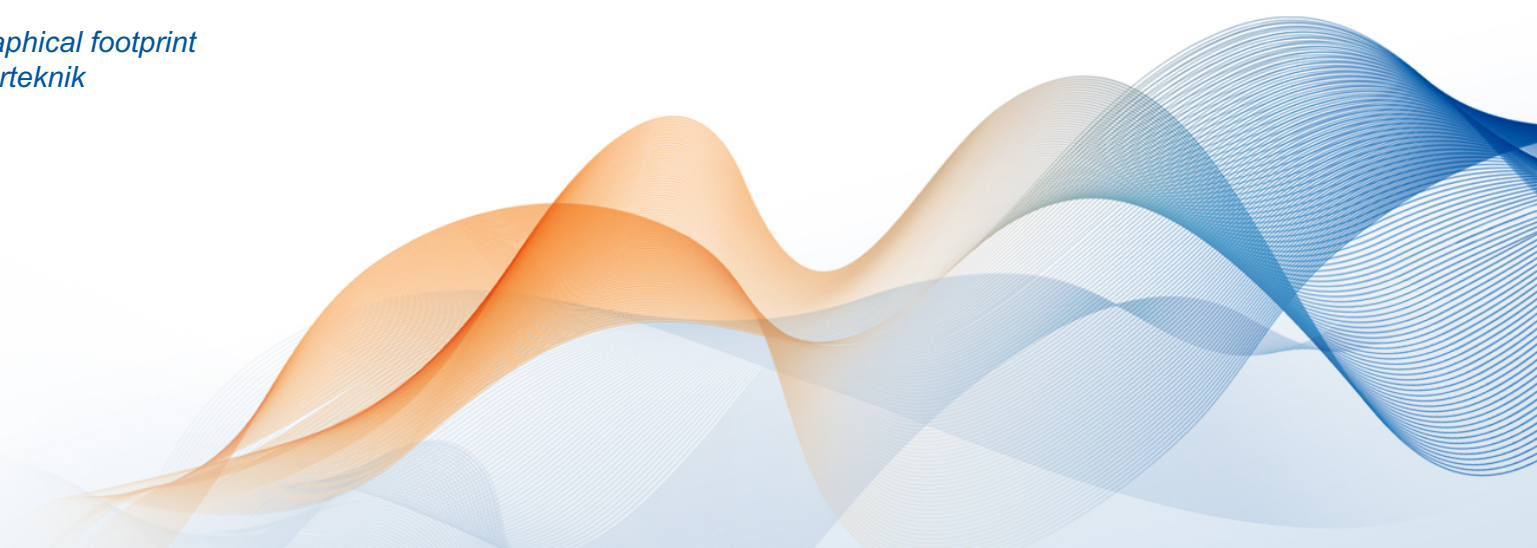


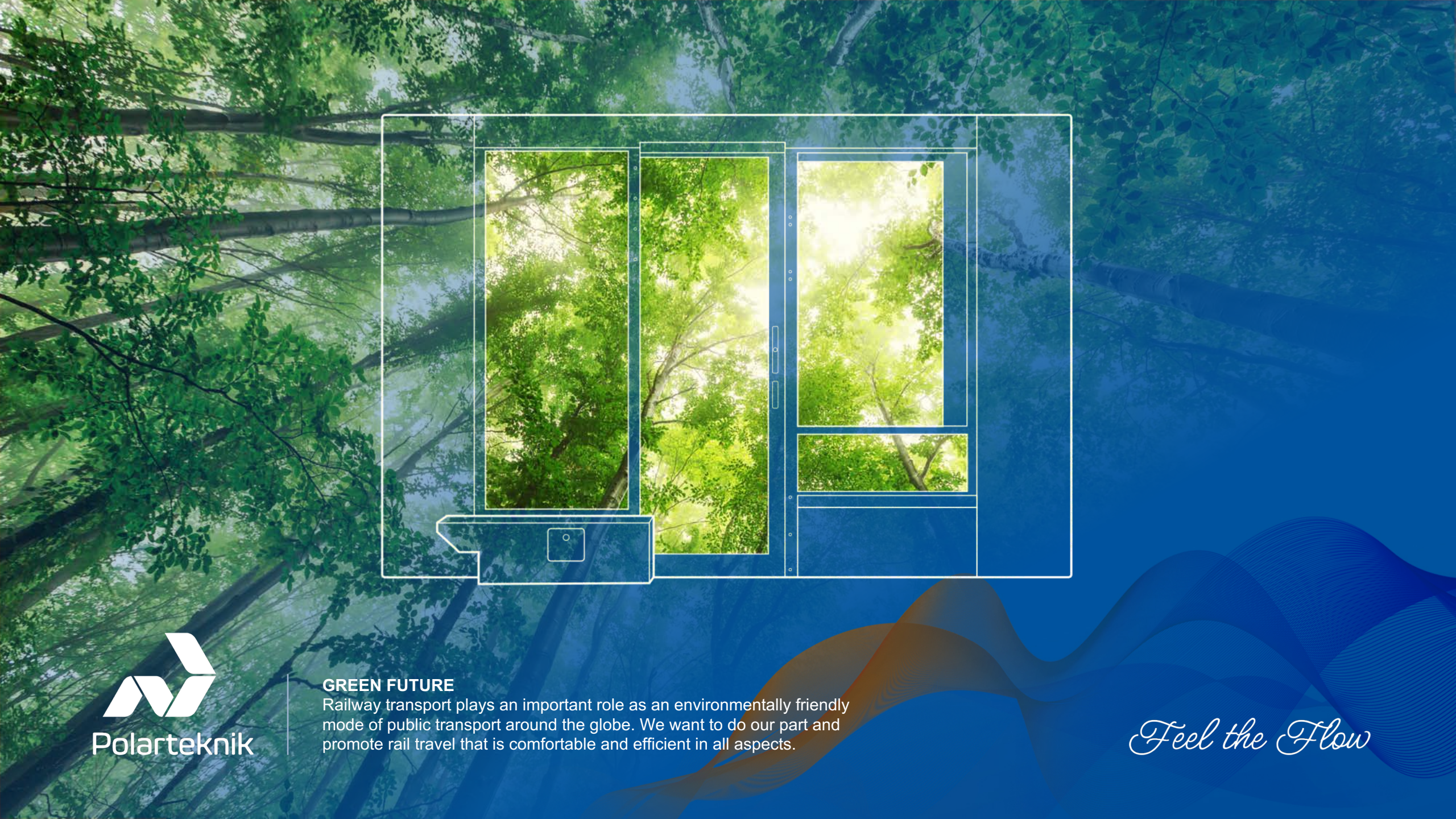
Polarteknik TDS is a specialist company for pneumatic and electrical passenger door system manufacture, service, maintenance, refurbishment and beyond.

www.traindoor.com/



Geographical footprint of Polarteknik





GREEN FUTURE

Railway transport plays an important role as an environmentally friendly mode of public transport around the globe. We want to do our part and promote rail travel that is comfortable and efficient in all aspects.

Feel the Flow