

# STADLER®



# ESRS Sustainability Report

Willi Stadler GmbH

Reporting year: **2024**

Disclosure framework: **ESRS**

**Willi Stadler GmbH**

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# Executive Summary

## Who We Are

Willi Stadler GmbH is a family-owned group specializing in the design, development, manufacturing and servicing of automated and semi-automated waste sorting systems and equipment for the global waste recycling industry. With seven generations of family machine-building heritage, we combine established mechanical expertise with modern recycling technology solutions.

The group is owned by Willi Stadler GmbH (Germany), with two production companies:

- **Stadler Anlagenbau GmbH** – Headquartered in Altshausen, Germany. Development, engineering, and manufacturing of sorting equipment and complete plant solutions.
- **Willy Stadler d.o.o.** – Located in Krško, Slovenia. Production facility with development, engineering, and manufacturing capabilities, also operating our test and innovation Center for testing and optimizing waste sorting technologies.

Both facilities maintain comparable operational capabilities and skilled workforces, forming the production base of the Stadler Group. Sales and service subsidiaries in the USA, UK, Spain, Mexico, Italy, Greece, and Brazil support our global market presence.

Sustainability is integral to our business model. Our sorting plants enable higher recycling rates, improved material recovery, and reduced landfilling. As circular economy requirements grow, demand for efficient sorting solutions increases accordingly.

## Methodology

This sustainability statement is prepared voluntarily under the European Sustainability Reporting Standards (ESRS) framework. The 2024 report builds on our established German Sustainability Code (DNK) reporting practices, which we have followed since 2019. For this transitional report, DNK disclosures have been translated into the ESRS structure.

The underlying materiality assessment for this report is double materiality assessment that was conducted in 2023 as part of DNK reporting. For this report, the identified material matters have been mapped to the corresponding ESRS topical standards that are presented in the table below.

## Report Scope

This report covers the following ESRS modules:

ESRS Module	Coverage
<a href="#">ESRS 2</a>	General Disclosures – Governance, strategy, materiality, stakeholders
<a href="#">ESRS E1</a>	Climate Change – Energy consumption, GHG emissions (Scope 1 and 2)
<a href="#">ESRS E5</a>	Resource Use & Circular Economy – Waste, circular design, resources
<a href="#">ESRS S1</a>	Own Workforce – Employment, health and safety, workforce composition
<a href="#">ESRS G1</a>	Business Conduct – Corporate culture, supplier relationships, compliance

This voluntary report establishes a foundation for ESRS-aligned sustainability disclosure. A comprehensive ESRS-aligned materiality assessment is planned for 2025, which will inform further development of our reporting scope and methodology.

## 2024 Highlights

In 2024, Stadler expanded its product portfolio with new solutions that strengthen our position as an integrated technology provider:

- **STADLERconnect** – Cloud-based digital platform launched in November 2024, integrating predictive maintenance, material quality monitoring, and performance optimization. Deployed in 15+ customer plants.
- **WireX** – Automated bale dewiring system using AI and sensor technology, improving sorting line efficiency and worker safety.
- **SortX** – Mobile sorting container developed with everwave for river plastic waste processing. Deployed in Albania, achieving approximately 80% recyclable output.

## Environmental Performance

### Energy and Climate (ESRS E1)

Metric	2024
Total energy consumption	7.771 MWh
Scope 1 GHG emissions	1.007,3 tCO <sub>2</sub> e
Scope 2 GHG emissions (location-based)	938,3 tCO <sub>2</sub> e
Scope 2 GHG emissions (market-based)	1.979,6 tCO <sub>2</sub> e
Installed PV capacity	1.445 kWp
Renewable electricity generated	1.153 MWh
Electricity self-sufficiency (Altshausen)	28,7%

**Target:** Increase electricity self-sufficiency to 40% and transition to green electricity procurement by 2026 at Stadler Anlagenbau GmbH.

### Resource Use and Circular Economy (ESRS E5)

Metric	2024
Total waste generated	2.054,9 tons
Hazardous waste	129,7 tons (6,3%)
Recyclable fraction (metal scrap)	~85%

Our products are designed with circular principles: durable steel construction, modular components enabling upgrades and repairs, and maximum recyclability at end-of-life.

**Social Performance (ESRS S1)**

<b>Metric</b>	<b>2024</b>
<b>Total employees</b>	518
<b>Stadler Anlagenbau (Germany)</b>	328
<b>Willy Stadler (Slovenia)</b>	190
<b>Female employees</b>	18 %
<b>Active apprentices (Stadler Anlagenbau)</b>	33
<b>Employee turnover</b>	3,6 %
<b>Work-related fatalities</b>	0
<b>Recordable accidents</b>	24

Workforce stability is supported by our apprenticeship program, professional development opportunities, and collective bargaining alignment. Willy Stadler d.o.o. maintains ISO 45001, ISO 14001, and ISO 9001 certified management systems.

**Governance (ESRS G1)**

As a family-owned business, Stadler's corporate culture is based on responsibility, reliability, and long-term orientation. Legal compliance is managed through systematic monitoring via the PAUL legal register. Supplier relationships prioritize long-term partnerships with EU-based suppliers, supported by sustainability self-assessment questionnaires.

No incidents of corruption, bribery, or serious legal non-compliance occurred in 2024.

# ESRS 2

## General disclosures

### Basis for Preparation

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#### **ESRS 2, para. 5-a and 5-b-i** **Consolidated sustainability statement**

The sustainability statement is prepared on a consolidated basis covering the same entities as the financial statements: Stadler Anlagenbau GmbH (Germany) and Willy Stadler d.o.o. (Slovenia), both fully owned and controlled by Willi Stadler GmbH (Germany). Both entities operate as separate legal entities and produce separate financial reports but are reported jointly at group level for sustainability reporting.

#### **ESRS 2, para. 5-b-ii** **Exemption from sustainability reporting**

The following subsidiaries are excluded from the sustainability reporting scope as they operate exclusively as sales and service offices with limited staff and no material sustainability impacts, risks or opportunities:

- Stadler America LLC (USA)
- Stadler UK Ltd. (United Kingdom)
- Stadler Selecciona S.L.U. (Spain)
- STADLER Recycling Mexico, S. de R.L. de C.V. (Mexico)
- Stadler Italia S.r.l. (Italy)
- Stadler Hellas Ltd. (Greece)
- Stadler do Brasil Ltda. (Brazil)

These entities have no manufacturing or production activities and their materiality to the group's sustainability performance is negligible.

#### **ESRS 2, para. 5-c, AR 1** **Value chain**

The sustainability statement for the reporting year 2024 represents a transitional step in the company's gradual alignment with the ESRS requirements. The 2024 sustainability statement is based on the same data scope and level of detail as applied in the 2023 DNK (Deutscher Nachhaltigkeitskodex) sustainability report, translated into the ESRS structure. Accordingly, the sustainability statement for 2024 focuses primarily on the company's own operations, while coverage of the upstream and downstream value chain remains limited. The company intends to progressively expand the scope and depth of sustainability reporting, including additional value chain-related information, in subsequent reporting years, starting from 2025.

#### **ESRS 2, para. 5-d** **Omission of information regarding intellectual property**

Certain information on material consumption, in particular quantities of semi-finished products, is omitted for competitive reasons to protect technical know-how, in line with the approach applied in the 2023 DNK report.

**ESRS 2, para. 5-e*****Omission of information for certain large undertakings and groups***

No sustainability-related information has been withheld based on ongoing negotiations or pending strategic developments.

**ESRS 2, para. 9*****Time horizons***

The company has not deviated from the definitions of medium - or long-term time horizons when preparing the sustainability statement.

**ESRS 2, para. 10*****Value chain data from indirect sources***

The reported metrics of the company do not include upstream or downstream value chain data estimated using indirect sources, such as sector-average data or other proxies.

**ESRS 2, para. 11*****Significant estimation or outcome uncertainty***

There is no significant estimation uncertainty or significant outcome uncertainty regarding the metrics included in the sustainability report.

**ESRS 2, para. 13-a*****Changes in preparation or presentation of sustainability information***

There have been changes in the preparation and presentation of sustainability information compared to previous reporting periods.

**ESRS 2, para. 14*****Material prior period errors***

There are no material errors relating to prior reporting periods.

**ESRS 2, para. 15*****Disclosures stemming from other legislation or standard***

There are no specific disclosures arising from other legislation requiring the undertaking to disclose sustainability information, as well as from generally accepted sustainability reporting standards and frameworks.

**ESRS 2, para. 16*****Incorporation by reference***

The company has not incorporated any information by reference in this report.

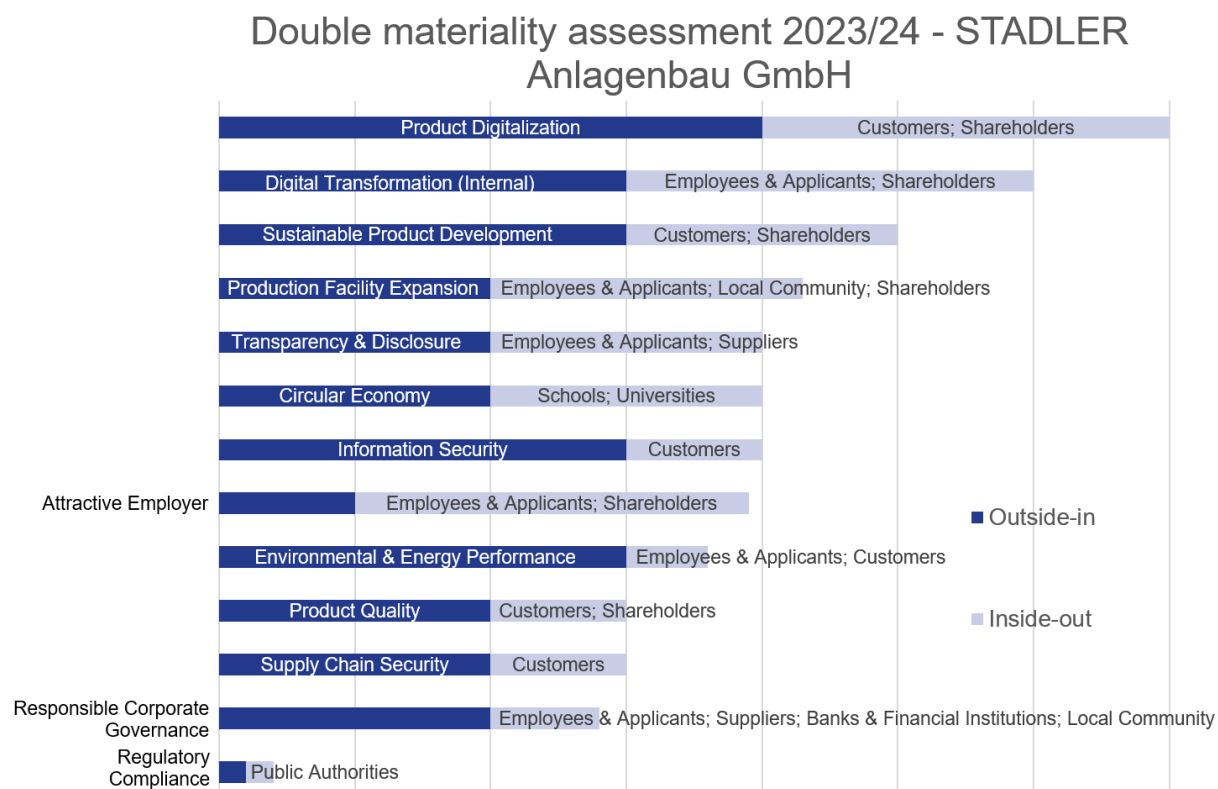
## Materiality

### ESRS 2, para. 17-a List of material matters

Stadler identified material matters through a materiality analysis conducted in 2023 under the German Sustainability Code (DNK) framework. While the assessment formally covered only Stadler Anlagenbau GmbH, both operating entities (Stadler Anlagenbau GmbH and Willy Stadler d.o.o.) conduct identical activities (R&D and manufacturing of sorting equipment), operate in comparable semi-rural locations, and face the same material sustainability impacts. The material matters therefore apply to both entities.

The DNK materiality assessment evaluated topics from two perspectives: Inside-Out (Stadler's impacts on environment and society) and Outside-In (external factors affecting Stadler's business). The assessment was conducted through workshops with management and representatives from various business units, evaluating each topic's relevance from both the internal company perspective and the stakeholder perspective.

Material matters identified under DNK 2023 double materiality analysis are presented in the figure and table below:



Material Topic	Perspective	Relevance	Rationale
<b>Product digitalization</b>	Outside-In	Very high	Top strategic priority: digital maintenance, automation, and material analysis directly impact future viability
<b>Digital transformation (internal)</b>	Outside-In	Very High	Essential for remaining future-proof; knowledge transfer and collaboration
<b>Sustainable product development</b>	Inside-Out	Very High	Reducing ecological footprint of products; material and energy efficiency
<b>Production facility expansion</b>	Inside-Out & Outside-In	High	Growth requirements balanced with land use considerations
<b>Transparency and disclosure</b>	Outside-In	High	Internal and external stakeholder communication
<b>Circular economy</b>	Inside-Out & Outside-In	High	Core business enabling recycling infrastructure; part of EU Green Deal
<b>Information security</b>	Inside-Out	High	Preventing data misuse; IT risk management
<b>Attractive employer / talent retention</b>	Inside-Out & Outside-In	High	Skilled worker retention in rural labor markets
<b>Environment and energy performance</b>	Inside-Out & Outside-In	High	Renewable energy, energy efficiency; GHG reduction and cost savings
<b>Product quality</b>	Outside-In	Medium	Customer satisfaction and reputation
<b>Supply chain security</b>	Outside-In	Medium	Procurement stability; delivery reliability
<b>Responsible corporate governance</b>	Inside-Out & Outside-In	Medium	Long-term family business orientation; fair working conditions
<b>Regulatory compliance</b>	Inside-Out	Low current risk	Legal compliance; well-positioned but monitored

The 2023 analysis identified seven priority topics for which specific goals were defined: Digitalization (products), Digitalization (internal), Sustainable product development, Circular economy, Information security, Attractive employer, and Environment & Energy performance (see ESRS 2, para. 17-b for related targets).

Translation of DNK material matters into ESRS structure:

The DNK materiality analysis was not structured according to ESRS topical architecture. For the 2024 transitional report, DNK material matters have been translated into ESRS topical standards where data and processes are available:

ESRS Standard	DNK Material Matters Covered
<b>ESRS 2 (General Disclosures)</b>	Digitalization (products and internal), Circular economy strategy, Responsible corporate governance, Transparency
<b>ESRS E1 (Climate Change)</b>	Environment and energy performance
<b>ESRS E5 (Resource Use &amp; Circular Economy)</b>	Circular economy, Sustainable product development
<b>ESRS S1 (Own Workforce)</b>	Attractive employer, Product quality (occupational safety dimension)
<b>ESRS G1 (Business Conduct)</b>	Responsible corporate governance, Compliance, Secure supply chain, Information security

Integration into business model and strategy:

Material matters are embedded into Stadler's operations through five strategic action areas (Technology, Environment, People, Supply Chain, Governance) aligned with the DNK priority topics, a core business model focused on circular economy infrastructure, digitalization as top strategic priority driving product R&D (see ESRS 2, para. 40-a-i), an integrated management system for environmental, safety, and compliance matters (see ESRS 2, para. 22-c), and long-term family ownership orientation prioritizing stakeholder relationships.

Limitations of 2024 reporting:

The 2023 DNK materiality analysis was not structured according to ESRS topical architecture and did not apply a quantified double materiality methodology as defined under ESRS 1. For 2024, DNK material matters have been translated into ESRS structure where data and processes are available. Not all ESRS topics are fully covered. Topics not reported include ESRS E2 (Pollution), ESRS E3 (Water and Marine Resources), ESRS E4 (Biodiversity and Ecosystems), ESRS S2 (Workers in the Value Chain), ESRS S3 (Affected Communities), ESRS S4 (Consumers and End-Users), and detailed upstream/downstream value chain assessments (see ESRS 2, para. 5-c for value chain scope).

A comprehensive ESRS-aligned double materiality assessment covering the entire group is planned for 2025, which will form the basis for potentially expanded disclosures in future reporting periods.

**ESRS 2, para. 17-b**  
**Targets for omitted material matters**

Material matters addressed in ESRS 2024 with quantitative data:

- Circular economy, climate & energy, own workforce, business conduct

Material matters with objectives tracked:

- Digitalization (products): Digital modules deployed (predictive maintenance: 15+ plants; BaleCheck/material control: multiple plants; OEE dashboard: 2 plants); quantified deployment targets in development (2025)
- Digitalization (internal): ERP implementation in progress (2025)
- Information security: IT emergency plan active; NIS2 framework planned (2026)

We plan to establish comprehensive ESRS-aligned targets as part of 2025 group-wide materiality assessment.

**ESRS 2, para. 17-c**

***Policies for omitted material matters***

For material matters identified in the 2023 DNK materiality analysis that have limited ESRS disclosure, Stadler applies operational policies and management practices:

- Digitalization: R&D roadmap processes, customer feedback mechanisms, structured vendor selection
- Information security: IT security policy with access controls, regular audits, employee training, cyber endpoint protection, NIS2 preparation (2026)
- Circular economy research: Research collaboration frameworks, innovation center testing protocols
- Sustainable product development: Design review for material/energy efficiency, continuous improvement (KVP)
- Employer attractiveness: Apprenticeship program, professional development, collective bargaining compliance, annual feedback
- Biodiversity: No formal policy; land use considered in investment planning

These are implemented operationally but not yet codified as standalone ESRS-aligned policies. We plan to formalize comprehensive policies for all material matters in 2025.

**ESRS 2, para. 17-d**

***Actions for omitted material matters***

For material matters with limited ESRS disclosure, Stadler has taken the following actions:

- Digitalization (products): Deployed predictive maintenance (15+ plants), BaleCheck, material split control, OEE dashboard; systematic innovation testing conducted; Result: Reduced customer downtime, improved sorting quality
- Digitalization (internal): ERP implementation initiated with vendor selected; Result: In progress, expected 2025 completion
- Information security: IT emergency plan active, regular security audits, spam protection, employee training, NIS2 preparation; Result: No security incidents in 2024
- Circular economy research: Active in research projects (ReVise, EnEwa, IRG textiles), innovation center testing, quarterly stakeholder engagement; Result: Advanced material analysis and automation technologies
- Sustainable product development: Motor efficiency evaluations, material thickness reductions, department for production technology established, KVP (continuous improvement process) applied; Result: Reduced material consumption in components
- Employer attractiveness: 33 apprentices maintained (Stadler Anlagenbau; 9.24% apprenticeship rate), English courses offered, annual feedback meetings, collective bargaining compliance; Result: 3,6% turnover
- Biodiversity: No facility expansion in 2024; Result: No additional land use impacts

We plan to develop comprehensive action plans with targets and KPIs for all material matters in 2025.

**ESRS 2, para. 17-e*****Metrics relevant for omitted material matters***

Material matters identified in the 2023 DNK materiality analysis are addressed in this transitional report to the extent that corresponding ESRS disclosure requirements exist and data is available. Relevant metrics for matters covered by ESRS topical standards (E1, E5, S1, G1) are reported in the respective ESRS sections.

For material matters not directly covered by ESRS topical standards (digitalization, information security), no standardized ESRS metrics are defined. Stadler tracks operational indicators for these matters through internal management processes but does not report them as formal ESRS metrics in this transitional statement.

## Governance

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### **ESRS 2, para. 22-c**

#### ***Management's role in governance processes***

Overall responsibility for sustainability governance lies with the managing directors of Stadler Anlagenbau GmbH and Willy Stadler d.o.o.

Management's role:

- Oversees sustainability impacts, risks and opportunities through integrated management system (environmental, safety, quality, compliance)
- Integrates 2023 materiality assessment results into strategic planning and investment decisions
- Assigns operational responsibilities to department heads (EHS, HR, Procurement, R&D)
- Monitors progress through internal reporting and periodic management reviews

Key processes and controls:

- Environmental aspects assessment
- Occupational safety risk assessments and incident tracking
- Legal compliance monitoring (PAUL register, quarterly updates)
- Supplier sustainability evaluations
- Continuous improvement (KVP) across operations

Review frequency:

- Annual management review of integrated management system
- Quarterly compliance updates (Stadler Anlagenbau GmbH)
- Ongoing departmental KPI reporting

Sustainability is integrated into standard management processes rather than managed through separate governance structures. We plan to enhance governance arrangements in 2025.

## Strategy

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### **ESRS 2, para. 40**

#### ***Impact of general strategy***

Sustainability is a core element of Stadler's general strategy and long-term business orientation. The company's strategic positioning as a provider of waste sorting infrastructure for the waste recycling industry means that sustainability is inherent to the business model rather than a separate activity (see ESRS 2, para. 42 for business model description).

In 2023, Stadler Anlagenbau GmbH conducted a materiality analysis to identify the most relevant sustainability topics (see ESRS 2, para. 17-a for methodology and outcomes). Based on the results, a sustainability strategy was formally established with five strategic fields of action: Technology, Environment, People, Supply Chain, and Governance. These fields guide the company's sustainability-related priorities, objectives, and measures (see ESRS 2, para. 40-e for detailed goals).

The sustainability approach is communicated internally under the guiding principle "Z.U.K.U.N.F.T." (Together, Environment, Customers, Rethinking, Sustainable, Fair, Transparent), reflecting the company's commitment to responsible and future-oriented business conduct.

As a family-owned company with long-term orientation, responsible corporate governance and economic sustainability are central strategic elements. This includes reinvestment of profits, maintaining a strong equity base, and prioritizing stable relationships with stakeholders (see ESRS 2, para. 40-g for strategic initiatives).

For Willy Stadler d.o.o., no separate sustainability strategy has yet been formally defined. However, both entities conduct identical activities (R&D and manufacturing of sorting machines from steel and metal inputs), operate in comparable semi-rural locations, and face the same material sustainability impacts. The material matters identified for Stadler Anlagenbau GmbH therefore apply equally to Willy Stadler d.o.o. Formal extension of the sustainability strategy and materiality analysis to cover the entire Stadler Group is planned for 2025.

### **ESRS 2, para. 40-a-i**

#### ***Products and services relating to sustainability matters***

Stadler's core products consist of waste sorting plants and specialized components for the waste recycling industry. We develop and manufacture machinery, systems and individual components used in waste sorting and recycling facilities to enable efficient material separation and recovery.

The product portfolio is closely linked to our role as infrastructure provider for the circular economy. Effective waste sorting is a fundamental prerequisite for high-quality recycling, and our solutions are designed to enable and improve recycling performance for customers.

Significant product and service developments in 2024:

#### **New physical products:**

- WireX (launched April 2024) - Automated bale wire remover; technology that dewires cross-wired bales in a single pass using AI and sensor technology.

Capacity: up to 60 bales/hour. Increases sorting line efficiency and worker safety.

- SortX (launched September 2024) - Mobile sorting container developed in collaboration with everwave for river plastic waste processing. Enables on-site waste sorting in remote locations; processes approximately 30m<sup>3</sup>/hour. Deployed in Albania with ~80% recyclable output from collected river waste.

#### **Digital solutions platform:**

- STADLERconnect (launched November 2024) - Cloud-based platform providing unified access to Stadler's digital solutions portfolio. Integrates machine and material data to optimize sorting plant availability, performance and process efficiency. Successfully implemented in multiple customer plants with patented modules including:
  - Predictive Maintenance (deployed in 15+ plants)
  - BaleCheckIn/Out (material quality monitoring)
  - Material Split Control (automated flow optimization)
  - Blockage Detection, Downtime Tracker, Production Report, Support Portal

#### **Strategic significance:**

The 2024 product launches represent Stadler's strategic expansion of offerings that include integrated hardware-software systems. Digital solutions were established as a core strategic priority with the appointment of Julia Stadler as Chief Digital Officer in 2023. The STADLERconnect platform positions Stadler to lead the industry evolution toward smart, data-driven sorting plants. Core mechanical sorting equipment portfolio (ballistic separators, screens, wind sifters, NIR sorters, magnetic separators, etc.) remained unchanged in 2024.

#### ***ESRS 2, para. 40-a-ii***

#### ***Significant markets related to sustainability matters***

Stadler primarily serves customers in the waste management and waste recycling industry. Our products and services are designed for professional and industrial customers that operate waste sorting and recycling facilities and require specialized machinery and components to support efficient recycling processes.

#### **Core markets and customer groups:**

- Stadler operates primarily in business-to-business markets serving:
  - o Waste management and waste recycling facility operators (municipal and private), Materials recovery facilities (MRFs), Packaging and consumer goods manufacturers (via recyclability testing services), Environmental organizations and government agencies (waste infrastructure projects)
  - o We maintain long-term relationships with customers active in the development and operation of recycling infrastructure. Sustainability considerations are closely linked to these customer groups, as our solutions contribute directly to the establishment and improvement of circular economy systems.

#### **Geographic presence:**

- Stadler serves customers globally through production facilities in Germany (Altshausen) and Slovenia (Krško), with sales and service subsidiaries in the UK, Spain, Italy, Greece, Brazil, USA, Mexico, and Switzerland.

**New market developments in 2024:**

- Packaging industry - Expanded partnership with RecycleMe consultancy, offering packaging producers access to Stadler's Test and Innovation Centre in Slovenia for recyclability analysis and optimization under real-world sorting conditions.
- Environmental cleanup sector - Launch of SortX mobile sorting container in collaboration with everwave opens new market segment addressing river and ocean plastic pollution. Initial deployment in Albania (June 2024) targeting emerging and developing countries without established waste infrastructure.

**ESRS 2, para. 40-a-iv**  
**Banned products and services**

The company does not offer products or services that are banned in specific markets.

**ESRS 2, para. 40-d-i**  
**Fossil fuel activities**

The company is not active in the fossil fuel (coal, oil and gas) sector.

**ESRS 2, para. 40-d-ii**  
**Chemicals production**

The company is not active in the production of chemicals.

**ESRS 2, para. 40-d-iii**  
**Controversial weapons**

The company is not active in the production of controversial weapons.

**ESRS 2, para. 40-d-iv**  
**Cultivation and production of tobacco**

The company is not active in the cultivation and production of tobacco.

**ESRS 2, para. 40-e**  
**Sustainability-related goals governance**

Stadler's sustainability-related goals are structured along five strategic fields of action established following the 2023 materiality analysis: Technology, Environment, People, Supply Chain, and Governance.

**Products and Services - Technology & Circular Economy:**

**Goals focus on advancing circular economy infrastructure through:**

- Digital solutions deployment - Expand platform rollout (see ESRS 2, para. 40-a-i) to improve plant availability, reduce downtime, and enhance sorting quality for customers (target: 2025 deployment milestones)

- Sustainable product development - Improve material and energy efficiency of equipment while maintaining product quality (ongoing optimization)
- Circular economy research - Maintain active participation in 2+ collaborative research projects annually; conduct 3+ systematic innovation tests per year at Test Centers (2024 target achieved). Current research projects include: ReVise-UP (RWTH Aachen - post-consumer packaging recycling potential), EnEWA (paper recovery from residual waste streams), Multi2Recycle (multilayer film recyclability), and EOL-Model textiles (textile sorting and recycling). These projects advance sorting technology for complex and emerging waste streams including textiles, multilayer packaging, and electronic waste.
- Innovation partnerships - Strengthen collaboration with universities, (RWTH Aachen, University of Leoben, ITA), research institutes, and industry partners (RecycleMe, everwave) to expand recycling scope and develop new market applications.

**Customer Categories:**

Stadler primarily serves waste management facility operators, materials recovery facilities, and recycling infrastructure developers (see ESRS 2, para. 40-a-ii). Sustainability goals aim to:

- Enable customers to meet increasing regulatory requirements (e.g., EU recycling targets, Extended Producer Responsibility legislation)
- Improve operational efficiency and cost-effectiveness through digital solutions
- Support customers' transition to smart, data-driven sorting plants
- Provide reliable, long-term partnerships with comprehensive after-sales service

**Geographic Areas:**

Sustainability goals are applied consistently across Stadler's operations (Germany and Slovenia). No region-specific targets are defined for 2024 transitional reporting. Focus areas include:

- Responsible environmental management at production sites (Altshausen, Krško)
- Energy efficiency improvements (PV systems commissioned in 2023: 1.001 kWp; 28,7% electricity self-sufficiency achieved in 2024 at Stadler Anlagenbau, target: 40%; LED lighting implemented; heat recovery from powder coating and compressed air generation)
- Waste management optimization at facilities
- Emerging market engagement to support waste infrastructure development in areas without established circular economy systems

**Stakeholder Relationships:**

- Employees - Maintain high apprenticeship rate and low turnover (metrics reported in ESRS 2, para. 17-b and ESRS S1); professional development programs (language training during working hours); safe and meaningful employment
- Customers - Long-term partnerships; responsive after-sales service and technical support; transparent communication; knowledge transfer initiatives
- Suppliers - Responsible supply chain management; sustainability evaluations through self-assessment processes; stable partnerships
- Local communities - Financial support for local clubs, schools, and non-profit organizations; apprenticeship partnerships with regional educational institutions; participation in community initiatives

Research partners - Collaborative innovation through university partnerships and industry alliances (research projects detailed above under circular economy research goals)

### **Governance & Compliance:**

- Information security - Active IT emergency plan with continuous improvement; NIS2 compliance preparation (implementation target: 2026); ongoing employee security awareness training programs
- Legal compliance - PAUL legal register with quarterly regulatory updates; proactive compliance monitoring; zero incidents of corruption, bribery, or serious legal non-compliance in 2024
- Economic sustainability - Maintain stable equity ratio; reinvest profits for long-term business resilience; contribute fairly to public finances

### **Target Development:**

For 2024 transitional reporting, many goals are qualitative or based on operational targets from the 2023 DNK framework. Stadler plans to establish comprehensive ESRS-aligned, time-bound targets with baseline years and monitoring frameworks as part of the 2025 group-wide materiality assessment and strategy development.

### ***ESRS 2, para. 40-f***

#### ***Relation of significant products to sustainability goals***

Stadler's products, services, and customer relationships are inherently aligned with sustainability goals, with sustainability embedded in the core business model.

### **Product-goal alignment:**

Core products (see para. 40-a-i) directly enable circular economy infrastructure. 2024 innovations (STADLERconnect, WireX, SortX) strengthen alignment by advancing smart sorting plants, operational efficiency, and emerging market access.

### **Market-goal alignment:**

Customer groups (see para. 40-a-ii) are inherently sustainability-focused. Market expansions in 2024 strengthen impact through environmental cleanup, packaging recyclability, and research collaboration.

### **Strategic consistency:**

Strong alignment exists between sustainability goals (see para. 40-e) and business activities across Technology, Environment, People, Supply Chain, and Governance dimensions.

### **Assessment:**

Current offerings inherently support sustainability ambitions. 2024 launches demonstrate strategic commitment to expanding impact through innovation and geographic reach into emerging markets

**ESRS 2, para. 40-g*****Strategy that relates to sustainability matters*****Core strategic positioning:**

Sustainability is embedded in Stadler's core business model as a provider of waste sorting plants and specialized components for the waste recycling industry (see ESRS 2, para. 40-a-i). By enabling efficient waste sorting and high-purity material recovery, our products directly support circular economy development and improved resource efficiency. Sustainability is therefore an inherent part of value creation rather than a standalone activity.

**Strategic framework:**

Stadler's sustainability strategy, formalized following the 2023 materiality analysis (see ESRS 2, para. 17-a), is structured along five strategic fields: Technology, Environment, People, Supply Chain, and Governance (see ESRS 2, para. 40-e). The strategy is operationally supported by an integrated management system that embeds environmental protection, occupational health and safety, risk management, compliance, and continuous improvement (KVP) into core business processes (see ESRS 2, para. 22-c).

**Strategic sustainability priorities:**

Stadler's strategy addresses sustainability impacts throughout the value chain:

- Material efficiency - Optimize material use in product design (key measures: sheet metal thickness reduction; weld seam replacement with bending)
- Energy efficiency (manufacturing) - Enhance production process efficiency (key measures: more efficient lighting; heat recovery)
- Energy efficiency (customer operations) - Design energy-efficient products (key measures: higher motor efficiency classes; smart controls via STADLERconnect)
- Digitalization and innovation - Advance data-driven solutions (key measures: predictive maintenance; collaborative research - see ESRS 2, para. 40-a-i)
- Circular economy research - Expand recycling scope for complex materials through collaborative research partnerships and systematic innovation testing (see ESRS 2, para. 40-e for current projects and targets)
- Renewable energy - Increase self-sufficiency (key measures: expanding owned photovoltaic capacities)

**Main strategic challenges ahead:****Business and operational challenges:**

- Customer sustainability communication - Customers require transparent environmental performance data for procurement and reporting decisions
- Supply chain engagement - Limited supplier sustainability visibility beyond current self-assessments
- Technology adoption - Digital solutions require customer organizational change and demonstrated value proposition
- Emerging market expansion - Scaling solutions (e.g., SortX) requires adapted business models and local partnerships

**Reporting and governance challenges:**

- Group-level harmonization - Extension of strategy to entire Stadler Group (planned: 2025)
- ESRS transition - Additional data processes, value chain coverage, time-bound targets with baselines needed

- Value chain transparency - Systematic supplier and product use-phase impact data collection required

### **Critical solutions and projects:**

#### **Business solutions:**

- Customer engagement - Systematic sustainability communication; lifecycle impact data; customer reporting support
- Supply chain initiative - Expanded supplier evaluations beyond self-assessments; collaboration programs; sustainability criteria in supplier selection
- Digital customer success - Change management support for STADLERconnect; training programs; documented case studies (energy savings, downtime reduction)
- Emerging market innovation - Partnerships with environmental organizations; adapted offerings for low-infrastructure contexts

#### **Governance solutions:**

- 2025 group-wide assessment - ESRS-aligned materiality analysis covering both entities; unified strategy
- Target development - ESRS-aligned targets with baselines for all material matters (see ESRS 2, para. 17-b); monitoring frameworks
- Enhanced governance - Dedicated sustainability steering committee or expanded board responsibilities, integrated management reviews
- Data systems - Scope 3 data collection; supplier assessments; use-phase impact methodology; ERP enhancement (2025)

Continuous improvement (KVP) in manufacturing, waste management optimization, and workforce development support both business and sustainability objectives. These initiatives position Stadler for long-term resilience, regulatory compliance, and ESRS reporting requirements.

## Business Model

### ESRS 2, para. 42

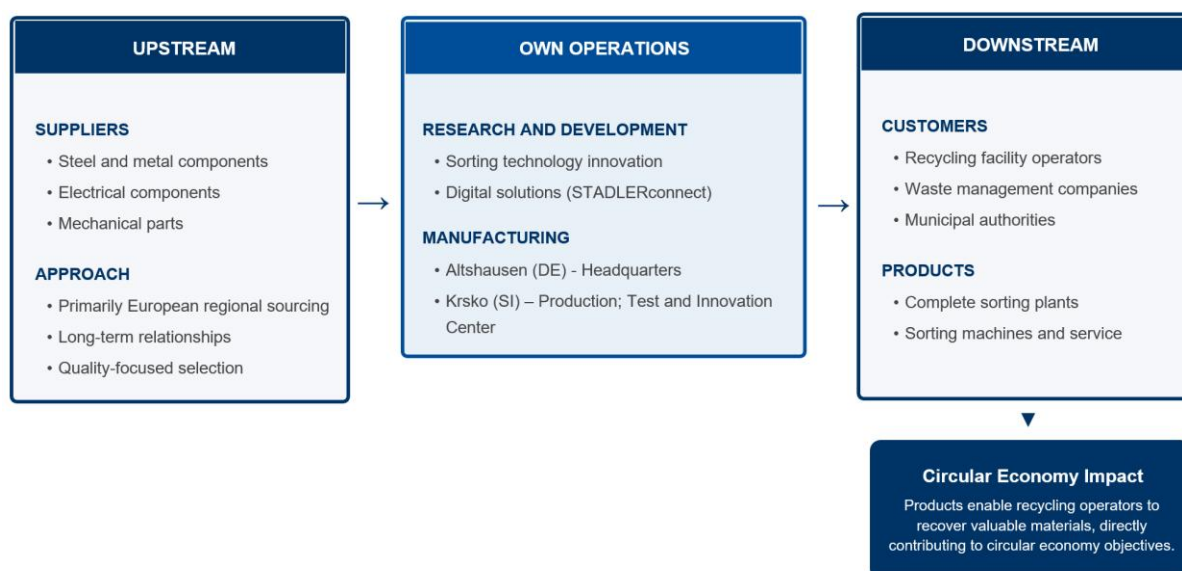
#### Description of business model and value chain

##### Business model:

Stadler operates as a technology provider and system integrator in the waste sorting and waste recycling industry, developing and delivering customized waste sorting plants and specialized components (see ESRS 2, para. 40-a-i). The business model focuses on modular sorting solutions tailored to specific waste streams, material compositions, and customer requirements.

Stadler creates value by enabling efficient waste sorting and high-purity material separation - essential prerequisites for effective recycling and circular economy transition. Solutions support customers in improving resource efficiency, material recovery, and compliance with environmental and regulatory requirements (see ESRS 2, para. 40-a-ii for customer groups and markets).

##### Value chain structure:



##### Upstream (sourcing and inputs):

- Sourcing of mechanical, electrical, and sensor-based components from specialized suppliers
- Engineering expertise and technological know-how development
- Supplier relationships embedded in integrated management system addressing quality, environmental, and occupational health and safety aspects
- Current scope: Limited upstream value chain coverage in sustainability reporting (see ESRS 2, para. 5-c); supplier sustainability evaluations through self-assessments (see ESRS G1)

##### Own operations (core value creation):

- Research and development - Innovation in sorting technology, digital solutions, and circular economy applications through internal R&D and collaborative research partnerships with universities and industry consortia (see ESRS 2, para. 40-e for current projects)

- Plant design and engineering - Customized system design; modular configurations; integration of mechanical and digital components
- Manufacturing - Production of sorting equipment at facilities in Altshausen (Germany) and Krško (Slovenia); focus on material and energy efficiency (see ESRS 2, para. 40-g for strategic priorities)
- Assembly and testing - Quality assurance through Test and Innovation Centers; systematic testing programs
- Project management - Turnkey plant delivery; coordination of installation and commissioning

Activities supported by integrated management system embedding environmental protection, occupational safety, risk management, compliance, and continuous improvement (KVP) into operational processes (see ESRS 2, para. 22-c).

#### Downstream (delivery and customer relationships):

- Delivery and installation of sorting plants, machinery, and components to waste management facility operators, materials recovery facilities, and recycling infrastructure developers (see ESRS 2, para. 40-a-ii)
- Commissioning and performance optimization of installed systems
- Long-term customer relationships focused on reliability, adaptability, and after-sales service
- Digital solutions (STADLERconnect) for ongoing plant performance monitoring and optimization
- Current scope: Limited downstream value chain coverage in sustainability reporting (see ESRS 2, para. 5-c); product use-phase impact assessment in development

#### Value chain alignment with sustainability:

Stadler's business model and value chain are inherently aligned with sustainability objectives (see ESRS 2, para. 40-f). Value creation is directly linked to provision of infrastructure and technologies that enable circular economy solutions and responsible resource use. The company acts as an enabling partner for recycling operators, supporting downstream material recovery and secondary raw material production.

Strategic priorities across the value chain focus on material efficiency, energy efficiency (manufacturing and use-phase), digitalization, circular economy research, and renewable energy deployment (see ESRS 2, para. 40-g for detailed strategic initiatives).

### **ESRS 2, para. 42-a**

#### ***Inputs and gathering of inputs***

Key inputs for manufacturing waste sorting plants and specialized components include steel and metal-based materials, mechanical components (drives, bearings, structural elements), electrical components (motors, controls, sensors), and sensor-based sorting technologies (NIR sensors, cameras, AI-based recognition systems). Engineering expertise and technical know-how represent critical intangible inputs.

Inputs are primarily sourced from specialized suppliers within the European Union, with a focus on regional procurement and long-term supplier relationships to ensure supply chain security and quality consistency (see ESRS 2, para. 42 for value chain structure and ESRS G1 for supplier management approach).

The approach to securing input is supported by the company's integrated management system, which provides structured processes for supplier selection, quality assurance, and risk assessment. Supplier sustainability evaluations incorporating environmental

and social criteria are conducted through supplier self-assessments (see ESRS 2, para. 40-g for supply chain strategic priorities).

### **ESRS 2, para. 42-b**

#### ***Outputs and outcomes of the company***

Primary outputs consist of waste sorting plants, machinery, and specialized components that enable efficient waste sorting and high-purity material separation (see ESRS 2, para. 40-a-i for product portfolio details).

Current and expected benefits for key stakeholders:

- Customers – Reliable, future-oriented recycling infrastructure supporting regulatory compliance, improved sorting performance, reduced downtime through digital solutions, and long-term operational efficiency (see ESRS 2, para. 40-a-ii for customer categories)
- Shareholders – Long-term value creation through stable market position in growing waste recycling industry, economic sustainability through profit reinvestment, and business resilience as family-owned company with long-term orientation
- Employees – Meaningful and stable employment contributing to environmental objectives; focus on occupational health and safety, skills development, and long-term employment relationships (see ESRS S1 for workforce disclosures)
- Suppliers – Long-term, fair cooperation within value chain supported by structured management processes and clear quality expectations (see ESRS G1 for supplier management)
- Local communities – Employment and economic contribution in semi-rural regions (Altshausen, Krško); support for local organizations and apprenticeship partnerships with regional schools
- Society – Contribution to circular economy development by enabling efficient recycling, reducing landfill dependency, and supporting secondary raw material recovery

These benefits are expected to grow as demand for recycling infrastructure and circular economy solutions increases in response to regulatory developments and societal expectations.

### **ESRS 2, para. 42-c**

#### ***Upstream and downstream value chain***

Stadler is positioned as a technology provider and system integrator within the waste sorting and recycling value chain, enabling downstream recycling processes and secondary raw material recovery.

Upstream, suppliers provide steel and metal materials, mechanical and electrical components, and sensor-based sorting technologies required for manufacturing operations. Procurement focuses on European regional sourcing with long-term supplier relationships to ensure quality and supply security (see ESRS 2, para. 42-a for input details and ESRS G1 for supplier management).

Own operations encompass engineering, design, manufacturing, assembly, and testing of sorting systems at production facilities in Altshausen (Germany) and Krško (Slovenia), supported by an integrated management system (see ESRS 2, para. 22-c). Downstream, sorting plants, machinery, and components are delivered to professional customers in the waste management and recycling sector. Long-term customer relationships are maintained through commissioning support, after-sales service, and

digital solutions for plant performance optimization (see ESRS 2, para. 40-a-ii for customer categories).

Detailed value chain structure, including current sustainability reporting scope and strategic priorities, is presented in ESRS 2, para. 42.

# Stakeholder Engagement

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## ESRS 2, para. 45-a

### *Communication with key stakeholders*

Stadler engages with key stakeholders as part of regular business activities and long-term operational relationships. Stakeholder engagement is integrated into day-to-day management, decision-making, and communication rather than organized as a separate formal process.

### **Key stakeholder groups and engagement approaches:**

#### **Employees:**

- Regular internal communication through departmental meetings and management dialogue
- Annual feedback meetings; employee survey conducted in 2023
- Training and professional development programs (language courses, technical training)
- Focus on fair working conditions, occupational health and safety (see ESRS S1 for workforce details)

#### **Customers:**

- Continuous dialogue throughout project development, implementation, and after-sales phases
- Long-term partnerships with responsive technical support
- Digital solutions (STADLERconnect) enable ongoing performance monitoring and optimization
- Knowledge transfer initiatives and technical training programs
- Customer groups: waste management operators, materials recovery facilities, recycling infrastructure developers (see ESRS 2, para. 40-a-ii)

#### **Suppliers:**

- Structured supplier management embedded in integrated management system
- Supplier sustainability evaluations via self-assessment questionnaires
- Ongoing cooperation focused on quality, environmental, and safety aspects
- Enhanced supplier engagement program planned (see ESRS 2, para. 40-g)

#### **Local communities:**

- Financial support for local clubs, schools, and non-profit organizations at Altshausen (Germany) and Krško (Slovenia) sites
- Apprenticeship partnerships with regional educational institutions
- Participation in community initiatives (e.g., Stadtradeln cycling competition)

#### **Research partners:**

- Collaborative innovation through university partnerships (RWTH Aachen, University of Leoben, ITA) and industry research consortia (see ESRS 2, para. 40-e for current projects)
- Test and Innovation Center access for research institutions and industry partners
- Educational initiatives including STADLER Summer School (launched 2023) for industry professionals and students

#### **Financial partners:**

- Regular dialogue with banks and financial institutions
- Increasing consideration of sustainability aspects in financial cooperation

**Industry associations:**

VDMA (German Engineering Federation), Unternehmerverband Metall Baden-Württemberg, Familienunternehmer e.V., BVSE (Federal Association for Secondary Raw Materials), Pack4Food

**Stakeholder input in materiality assessment:**

The 2023 double materiality assessment (see ESRS 2, para. 17-a) incorporated stakeholder perspectives through internal workshops with department heads, customer feedback from ongoing business relationships, regulatory requirements analysis, and research partner input. A more comprehensive stakeholder engagement process is planned for the 2025 group-wide materiality assessment.

**Contribution to sustainability strategy:**

Stakeholder engagement supports long-term, trust-based relationships and informs Stadler's understanding of relevant sustainability topics and expectations. Engagement outcomes inform strategic priorities (see ESRS 2, para. 40-e) and business model development (see ESRS 2, para. 42), particularly regarding customer sustainability requirements, supplier performance expectations, and workforce development needs.

**ESRS 2, para. 45-a-i*****Description of key stakeholders***

Stadler's key stakeholders comprise:

- Employees – Central stakeholder group given the company's role as employer in semi-rural regions in Germany and Slovenia
- Customers – Professional and industrial operators in the waste management and recycling sector
- Suppliers – Providers of materials, components, and services within the upstream value chain
- Local communities – Stakeholders at production sites in Altshausen (Germany) and Krško (Slovenia)
- Research partners – Universities, research institutes, and industry consortia supporting innovation
- Financial partners – Banks and financial institutions with increasing focus on sustainability aspects
- Industry associations – VDMA, BVSE, Familienunternehmer e.V., and other sector organizations

Detailed engagement approaches, communication channels, and contribution of each stakeholder group to sustainability strategy are described in ESRS 2, para. 45-a.

**ESRS 2, para. 45-a-ii*****Active stakeholders***

Stakeholders actively engaging with Stadler are organized in the following categories:

- Internal stakeholders – Employees and management engaged through day-to-day operations, internal communication, and direct dialogue on operational and sustainability topics
- Business stakeholders – Customers engaged throughout project lifecycle (development, implementation, after-sales); suppliers engaged through procurement processes and structured supplier management
- Financial stakeholders – Banks and financial partners engaged on financing, risk assessment, and increasingly on sustainability performance

- Local and societal stakeholders – Local communities and regional partners at Altshausen (Germany) and Krško (Slovenia) sites engaged through employment relationships, apprenticeship programs, and community support
- Knowledge and innovation stakeholders – Research partners, universities, and industry associations engaged through collaborative projects and sector initiatives

Detailed engagement approaches for each category are described in ESRS 2, para. 45-a.

**ESRS 2, para. 45-a-iii**  
**Organization of stakeholders**

Stakeholder engagement is organized in a decentralized manner and integrated into regular business activities rather than managed through a separate formal framework. Responsibility for stakeholder engagement is distributed across functional areas according to stakeholder category:

- Human Resources – Employee engagement, training, feedback processes
- Sales and Project Management – Customer engagement throughout project lifecycle
- Procurement – Supplier engagement and sustainability evaluations
- Management – Financial partner relationships, community engagement, strategic stakeholder dialogue

Engagement frequency and intensity varies by stakeholder group: continuous for employees and customers during active projects, periodic for suppliers and financial partners, and ongoing for local communities through established relationships.

This decentralized approach ensures stakeholder engagement is embedded in operational processes and aligned with business activities. Detailed engagement channels for each stakeholder group are described in ESRS 2, para. 45-a.

**ESRS 2, para. 45-a-iv**  
**Purpose of stakeholder engagement**

Stakeholder engagement serves three primary purposes:

- Relationship building – Establish and maintain long-term, trust-based relationships that support business continuity and mutual value creation
- Understanding expectations – Identify and consider stakeholder expectations relevant to business activities, sustainability matters, and strategic priorities
- Informed decision-making – Incorporate stakeholder perspectives into management decisions, risk assessment, and sustainability strategy development

Specific objectives vary by stakeholder group: employee engagement focuses on fair working conditions, safety, and retention; customer engagement ensures solutions meet operational and regulatory requirements; supplier engagement secures quality and responsible conduct; community engagement supports regional development; financial partner engagement ensures transparency on economic and sustainability performance.

Stakeholder input contributed to the 2023 materiality assessment (see ESRS 2, para. 17-a) and informs strategic priorities (see ESRS 2, para. 40-e). Enhanced stakeholder engagement processes are planned for the 2025 group-wide materiality assessment.

**ESRS 2, para. 45-a-v**  
**Taking into account stakeholder feedback**

Stakeholder feedback is integrated into management and decision-making through established functional processes rather than a separate feedback mechanism.

Integration pathways by stakeholder group:

- Employee feedback → Workforce planning, training programs, health and safety improvements, working conditions (see ESRS S1)
- Customer feedback → Product development priorities, service improvements, digital solutions roadmap (see ESRS 2, para. 40-a-i)
- Supplier feedback → Procurement decisions, supplier management optimization, quality requirements (see ESRS G1)
- Community feedback → Site development considerations, local partnership initiatives
- Financial partner feedback → Transparency improvements, sustainability reporting scope, risk communication

Stakeholder perspectives informed the 2023 materiality assessment outcomes (see ESRS 2, para. 17-a) and contribute to ongoing refinement of strategic priorities (see ESRS 2, para. 40-e). The planned 2025 group-wide materiality assessment will include more structured processes for capturing and documenting stakeholder feedback.

### **ESRS 2, para. 45-b**

#### ***Interests and views of key stakeholders***

Stadler understands key stakeholder interests and views to be closely aligned with its long-term strategy and business model (see ESRS 2, para. 42 and para. 40-g).

#### **Employees:**

- Interests: Stable employment, fair working conditions, occupational health and safety, meaningful work, professional development
- Alignment: Long-term employment relationships with low turnover, high apprenticeship rate, internal career progression opportunities, training programs, integrated safety management (see ESRS S1 for workforce metrics)
- Strategic reflection: People dimension in five strategic fields (see ESRS 2, para. 40-e)

#### **Customers:**

- Interests: Reliable, high-quality, future-oriented sorting solutions; regulatory compliance support; operational efficiency; sustainability performance transparency; total cost of ownership optimization
- Alignment: Core business model directly addresses needs through modular sorting solutions (see ESRS 2, para. 40-a-i); digital solutions improve operational efficiency; long-term after-sales support
- Strategic reflection: Technology and circular economy priorities (see ESRS 2, para. 40-e); product innovation aligned with regulatory requirements (EU recycling targets, Extended Producer Responsibility)

#### **Suppliers:**

- Interests: Long-term, reliable cooperation; clear technical and quality requirements; stable business relationships
- Alignment: Long-term partnerships; integrated supplier management; supplier sustainability evaluations; enhanced engagement program in development (see ESRS 2, para. 40-g)
- Strategic reflection: Supply Chain dimension in strategic framework (see ESRS 2, para. 40-e)

**Local communities:**

- Interests: Employment opportunities, apprenticeship provision, regional economic contribution, environmental responsibility at production sites
- Alignment: Financial support for local organizations; apprenticeship partnerships with regional schools; responsible environmental management at Altshausen and Krško sites; community participation
- Strategic reflection: Environment and People dimension in strategic framework

**Financial partners:**

- Interests: Long-term financial stability, sound governance, risk management, sustainability transparency, regulatory compliance
- Alignment: Long-term ownership orientation supported by stable equity ratio, profit reinvestment and conservative financing.
- Strategic reflection: Governance dimension in strategic framework (see ESRS 2, para. 40-e)

**Research partners:**

- Interests: Access to industry expertise and testing facilities, collaborative innovation opportunities, real-world validation of research concepts
- Alignment: Test and Innovation Center access; active participation in collaborative research projects (see ESRS 2, para. 40-e for details); educational initiatives
- Strategic reflection: Circular economy research and innovation partnerships as strategic priorities (see ESRS 2, para. 40-g)

**Assessment:**

Stakeholder interests and views are largely consistent with Stadler's strategic orientation, supporting a business model focused on long-term value creation, technological competence, and sustainable business development. The alignment is particularly strong regarding circular economy enablement, operational excellence, and responsible business conduct.

Areas for enhanced alignment include systematic customer sustainability communication and expanded supplier sustainability engagement, both identified as strategic challenges and addressed through planned initiatives (see ESRS 2, para. 40-g)

***ESRS 2, para. 45-c******Amendments to strategy and business model***

During 2024, no fundamental amendments to Stadler's strategy or business model were made as a direct result of stakeholder engagement. The core strategy and business model remain based on long-term orientation, technological competence, and the role as provider of waste sorting plants and recycling infrastructure (see ESRS 2, para. 42 for business model description).

Stakeholder views and interests are considered on an ongoing basis and contribute to continuous refinement and prioritization of strategic focus areas (see ESRS 2, para. 40-g) rather than triggering discrete changes to strategy or business model.

**Stakeholder influence on strategic priorities:**

- Customer requirements and regulatory expectations inform product development priorities and digital solutions roadmap (see ESRS 2, para. 40-a-i for 2024 product innovations responding to market needs)

- Employee and labor market considerations inform workforce planning, apprenticeship programs, and professional development initiatives (see ESRS S1 for workforce management)
- Supplier feedback contributes to supplier management process optimization and informs planned supplier engagement enhancement program (see ESRS 2, para. 40-g)
- Research partner collaboration shapes circular economy research priorities and innovation testing programs at Test and Innovation Centers
- Financial partner sustainability requirements influence transparency and reporting framework development, including voluntary ESRS adoption for 2024

Stakeholder engagement supports ongoing validation and evolution of strategic direction but has not resulted in material changes to strategy or business model during the reporting period. The planned 2025 group-wide materiality assessment (see ESRS 2, para. 40-g) will include more comprehensive stakeholder engagement that may inform future strategic refinements.

### ***ESRS 2, para. 45-c-i***

#### ***Past changes of strategy and business model***

No fundamental amendments to strategy or business model have been made as a direct result of stakeholder engagement during the reporting period. The core strategy and business model remain based on long-term orientation, technological competence, and the role as provider of waste sorting infrastructure (see ESRS 2, para. 42).

Stakeholder views contribute to continuous refinement and prioritization of strategic focus areas rather than triggering discrete changes. Key areas where stakeholder input has influenced strategic priorities include product development (customer requirements), workforce planning (employee and labor market considerations), supplier management optimization (supplier feedback), and voluntary ESRS adoption (financial partner sustainability expectations).

Detailed description of stakeholder influence on strategic priorities is provided in ESRS 2, para. 45-c.

### ***ESRS 2, para. 45-c-ii***

#### ***Future changes of strategy and business model***

No discrete amendments to strategy or business model are currently planned as direct stakeholder-driven projects. Strategy and business model are designed to address stakeholder interests through continuous development rather than defined amendment initiatives.

#### **Planned steps that may result in strategic refinements:**

- 2025: Group-wide materiality assessment with comprehensive stakeholder engagement covering Stadler Anlagenbau GmbH and Willy Stadler d.o.o. (see ESRS 2, para. 40-g) – outcomes may inform strategic priority adjustments
- 2025-2026: Enhanced supplier engagement program implementation – may influence supply chain strategy
- Ongoing: Customer sustainability requirements monitoring – informs product development roadmap and digital solutions priorities

Any resulting adjustments are expected to occur incrementally through normal business and strategy cycles rather than as fundamental business model changes. The 2025 materiality assessment represents the most significant planned activity that could inform future strategic refinements based on stakeholder input.

**ESRS 2, para. 45-c-iii**

***Changes of relationship with stakeholders***

Planned developments are not expected to fundamentally modify relationships with key stakeholders or materially change stakeholder views of the company.

The 2025 group-wide materiality assessment (see ESRS 2, para. 40-g) will involve more comprehensive stakeholder engagement, which is expected to strengthen rather than alter existing relationships. Enhanced dialogue may deepen mutual understanding of sustainability priorities and expectations.

Planned strategic initiatives – including digital solutions expansion, supplier engagement enhancement, and continued circular economy research collaboration – are designed to reinforce long-term, trust-based relationships with customers, suppliers, and research partners rather than change the nature of these relationships. Overall, planned developments aim to maintain continuity and alignment with stakeholder expectations while strengthening engagement quality across all stakeholder groups in line with stakeholder expectations and the company's long-term strategic orientation.

**ESRS 2, para. 45-d**

***Informing the governance bodies on stakeholders***

The managing directors of Stadler Anlagenbau GmbH and Willy Stadler d.o.o. (see ESRS 2, para. 22-c for management's governance role) are informed about stakeholder views and interests through regular management activities and reporting processes integrated into governance and management systems.

Information channels to management:

- Operational reporting - Regular departmental reporting on production, quality, safety, environmental performance, and customer satisfaction
- Direct stakeholder dialogue - Management engagement with employees (departmental meetings, annual feedback meetings), customers (project reviews, technical discussions), and suppliers (supplier meetings, quality reviews)
- Functional area inputs - Structured inputs from Human Resources (workforce trends, training needs), Procurement (supplier performance, sustainability evaluations), EHS (environmental and safety incidents), and R&D (customer requirements, technology trends)
- Integrated management system processes - Systematic information flow through environmental aspects assessment, occupational safety risk assessments, legal compliance monitoring (PAUL register quarterly updates), and continuous improvement (KVP) processes (see ESRS 2, para. 22-c)

**Sustainability-related stakeholder topics in management discussions:**

Stakeholder interests and concerns are reflected in management discussions on:

- Risk management and opportunity identification
- Compliance and legal requirements
- Occupational health and safety performance

- Environmental management and resource efficiency
- Strategic planning and investment decisions
- Product development priorities and customer requirements
- Workforce planning and employer attractiveness

#### Management review frequency:

- Annual management review of integrated management system covering environmental, safety, quality, and sustainability performance
- Quarterly compliance updates via PAUL legal register
- Ongoing operational reporting through departmental KPIs and management meetings

#### Assessment:

Stakeholder views and interests are communicated to and considered by management on a continuous basis as part of regular decision-making and oversight, rather than through a separate or formalized stakeholder reporting mechanism. This integrated approach ensures stakeholder perspectives inform strategic and operational decisions across the organization.

The planned 2025 group-wide materiality assessment (see ESRS 2, para. 40-g) will include enhanced stakeholder engagement processes, which may lead to more structured governance reporting on stakeholder topics in future reporting periods.

### **ESRS 2, para. 48-a**

#### ***Material risks and opportunities***

Material risks and opportunities were identified through the double materiality assessment conducted in 2023 for Stadler Anlagenbau GmbH (see ESRS 2, para. 17-a for materiality process and material matters list). The assessment evaluated sustainability topics from both inside-out (impact) and outside-in (financial) perspectives.

#### **Material opportunities:**

##### Circular economy and market demand (very high relevance):

- Growing importance of circular economy solutions supported by EU Green Deal, recycling targets, and Extended Producer Responsibility legislation
- Rising demand for recycling infrastructure and efficient material recovery technologies
- Stadler's core business model directly positioned to benefit (see ESRS 2, para. 42)

##### Digitalization of products (very high relevance - critical for future viability):

- Digital solutions for plant operation, material analysis, and predictive maintenance
- Market differentiation through smart, data-driven sorting plants
- 2024 response: STADLERconnect platform launched (see ESRS 2, para. 40-a-i)

##### Sustainable product development (high relevance):

- Reduced environmental footprint through material and energy efficiency
- Lower production and operational costs for customers
- Strengthened competitive position through sustainability performance

Environmental and energy performance (high relevance):

- Energy efficiency improvements reduce GHG emissions and operating costs
- Renewable energy generation increases energy security and cost stability
- Strategic response: see ESRS 2, para. 40-a-i and para. 40-g

Digitalization of internal processes (high relevance):

- Operational efficiency gains through ERP implementation
- Improved collaboration and data-driven decision-making
- Enhanced employer attractiveness

Transparency and responsible governance (medium-high relevance):

- Stakeholder trust and positive relationships with financial partners
- Access to financing as sustainability criteria become standard
- Voluntary ESRS adoption positions company for future requirements

**Material risks:**Supply chain security (medium relevance):

- Delivery bottlenecks, raw material scarcity, and price volatility
- Potential impact on delivery commitments and product quality
- Mitigation measures: see ESRS G1

Information security (high relevance):

- Increasing cyber threats and digital resilience requirements
- Regulatory requirements (NIS2 directive)
- Mitigation measures: see ESRS 2, para. 40-g

Production capacity expansion (medium relevance):

- Potential environmental impacts related to land use and biodiversity
- Strategic necessity for competitiveness vs. environmental responsibility
- Current status: Considered within strategic planning and investment decisions.

Regulatory compliance (low current risk, high vigilance required):

- Changing legal frameworks including supply chain due diligence requirements
- Future ESRS mandatory reporting obligations
- Mitigation measures: see ESRS 2, para. 22-c

**Risk and opportunity management:**

Material risks and opportunities are addressed through Stadler's integrated management system (see ESRS 2, para. 22-c), which embeds environmental protection, occupational safety, compliance, and continuous improvement into core business processes. Strategic responses to key opportunities are reflected in the five strategic fields of action (see ESRS 2, para. 40-e) and ongoing strategic initiatives (see ESRS 2, para. 40-g).

**ESRS 2, para. 48-b*****Current and anticipated effects of material impacts***

Material impacts, risks and opportunities identified through the 2023 materiality assessment (see ESRS 2, para. 48-a) directly influence Stadler's business model, value chain, strategy, and decision-making.

**Effects on business model:**

Stadler's business model as provider of waste sorting infrastructure (see ESRS 2, para. 42) is inherently linked to circular economy development. Increasing regulatory requirements (EU Green Deal, recycling targets, EPR), societal expectations, and

market demand for efficient recycling infrastructure positively affect demand for products and reinforce strategic relevance of core business.

*Response:* Business model remains focused on enabling circular economy; expansion into emerging markets and digital solutions (STADLERconnect) extend market reach and value proposition (see ESRS 2, para. 40-a-i).

**Effects on value chain:**

Upstream (suppliers):

- Supply chain risks (raw material scarcity, price volatility) affect sourcing strategies
- *Response:* Emphasis on long-term supplier relationships, European sourcing where possible, structured supplier management, planned enhanced supplier engagement (see ESRS 2, para. 40-g and ESRS G1)

Own operations:

- Environmental impacts (energy consumption, resource use) affect production planning
- Production expansion needs vs. land use/biodiversity considerations affect site development decisions
- *Response:* Integrated management system embedding environmental performance; energy efficiency measures; renewable energy expansion (see ESRS 2, para. 40-g)

Downstream (customers):

- Customer sustainability requirements increasingly influence product specifications
- *Response:* Digital solutions for operational efficiency; sustainable product design; customer sustainability communication development (see ESRS 2, para. 40-g)

**Effects on strategy and decision-making:**

Material opportunities and risks are systematically reflected in strategic priorities across five fields of action (see ESRS 2, para. 40-e):

Material matter	Strategic effect	Response
<b>Circular economy demand</b>	Reinforces core business focus	Market expansion, innovation partnerships
<b>Digitalization (products)</b>	Drives R&D priorities	Digital solutions development (see para. 40-a-i)
<b>Sustainable product development</b>	Influences design decisions	Material/energy efficiency optimization
<b>Environmental performance</b>	Affects operational planning	Energy efficiency, renewable energy (see para. 40-g)
<b>Supply chain security</b>	Shapes sourcing strategy	Supplier management enhancement
<b>Employer attractiveness</b>	Guides HR decisions	Apprenticeship program, workforce development
<b>Information security</b>	Drives IT investment	Security measures, NIS2 preparation

**Anticipated future effects:**

- **Regulatory evolution:** Increasing ESRS requirements, supply chain due diligence legislation, and recycling mandates will require enhanced data collection, value chain transparency, and formalized sustainability governance
- **Market dynamics:** Growing customer sustainability requirements will increase importance of product lifecycle transparency and sustainability communication
- **Technology development:** Continued digitalization will affect both product offerings and internal processes

*Planned response:* 2025 group-wide materiality assessment covering both operating entities; comprehensive ESRS-aligned targets with baselines; enhanced governance structures; expanded value chain coverage (see ESRS 2, para. 40-g).

**Assessment:**

Current material impacts, risks and opportunities are systematically integrated into strategy and operations through the five strategic fields of action. The company has responded through operational measures (energy efficiency, supplier management, workforce development) and strategic initiatives (digital solutions, product innovation). Anticipated effects are addressed through planned governance enhancement and group-wide strategy development for 2025.

**ESRS 2, para. 48-c-i*****Impact on the people or the environment***

Material impacts identified through the 2023 materiality assessment (see ESRS 2, para. 17-a) affect people and the environment through Stadler's products, operations, and role within the recycling value chain.

**Environmental impacts:**Positive impacts (downstream enabling effect):

- Core business provides essential infrastructure for efficient waste sorting - a prerequisite for high-quality recycling
- Enables recovery of secondary raw materials and supports resource efficiency
- Contributes to reduction of environmental burdens: less waste to landfill/incineration, reduced emissions from virgin material extraction
- Digital solutions improve customer plant efficiency, reducing energy consumption and material losses in sorting processes

Negative impacts (own operations):

- Energy and resource consumption in manufacturing processes
- Production capacity expansion may lead to increased land use and potential biodiversity impacts

**Social impacts:**Positive impacts (own workforce and communities):

- Significant employer in rural regions (Altshausen, Germany and Krško, Slovenia)

- Creation and safeguarding of skilled jobs with stable employment relationships
- Training and apprenticeship opportunities supporting skills development
- Strong focus on occupational health and safety contributing to employee well-being
- Economic contribution to local communities through employment, taxes, and financial support for local organizations

#### Negative impacts (potential):

- Labour market challenges in rural regions affecting talent attraction
- Information security and data protection risks affecting employees, business partners, and customers if not properly managed

#### **Value chain impacts:**

##### Upstream (suppliers):

- Potential indirect environmental and social impacts through supply chain
- Limited current visibility on supplier sustainability performance
- *Mitigation:* Supplier sustainability evaluations; enhanced engagement program planned (see ESRS G1 and ESRS 2, para. 40-g)

##### Downstream (customers/end users):

- Positive enabling effect: Stadler products directly support customers' circular economy contributions
- Product quality, reliability, and longevity affect customer operational performance and environmental outcomes

#### **Assessment:**

Stadler assesses that positive impacts on people and environment - particularly through enabling circular economy solutions - outweigh potential negative impacts from own operations. Identified impacts are systematically considered in sustainability strategy (see ESRS 2, para. 40-e) and managed through integrated management system (see ESRS 2, para. 22-c) to mitigate negative effects and strengthen positive contributions.

#### **ESRS 2, para. 48-c-ii**

##### ***Origins of the material impacts***

Material impacts are directly connected to Stadler's strategy and business model (see ESRS 2, para. 42).

Positive environmental impacts originate from the core business model itself. As a provider of waste sorting infrastructure, Stadler's commercial success is inherently linked to enabling circular economy outcomes - every sorting plant delivered directly contributes to improved recycling performance and resource efficiency downstream. This means positive impacts are not a byproduct of business activities but a fundamental outcome of the value proposition. Strategic choices to prioritize digitalization, sustainable product development, and research partnerships (see ESRS 2, para. 40-g) further amplifies these positive effects by improving sorting quality and expanding recycling capabilities for complex materials.

Negative impacts arise from the operational activities required to deliver this business model. Manufacturing processes consume energy and resources, and facility operations have local

environmental footprints. These impacts are inherent to industrial production but are recognized as strategic priorities and actively managed through environmental performance measures and the integrated management system (see ESRS 2, para. 22-c).

The connection between impacts and strategy is intentional: Stadler's five strategic fields of action (see ESRS 2, para. 40-e) explicitly address both maximizing positive contributions through products and innovation, and minimizing negative effects from operations. This dual focus reflects a long-term strategic orientation where business resilience and responsible environmental stewardship are viewed as mutually reinforcing rather than competing objectives.

**ESRS 2, para. 48-c-iii**  
**Time horizons of the impacts**

Material impacts occur over different time horizons depending on their nature and origin within the business model (see ESRS 2, para. 42).

**Short-term impacts (year of the reporting)** relate primarily to own operations and arise continuously from day-to-day activities. These include energy and resource consumption in manufacturing, occupational health and safety aspects, and environmental management at production sites. Short-term impacts are managed through operational controls within the integrated management system (see ESRS 2, para. 22-c) and are subject to ongoing monitoring and continuous improvement.

**Medium-term impacts (1-5 years)** are associated with strategic and operational developments that materialize over several years. These include production capacity decisions and associated land use considerations, supply chain stability and supplier sustainability performance, digital transformation both internally (ERP implementation) and in product offerings (STADLERconnect deployment), and workforce development in rural labor markets. Medium-term impacts influence investment planning, technology choices, and organizational development (see ESRS 2, para. 40-g for strategic initiatives addressing these areas).

**Long-term impacts (5+ years)** are primarily linked to the core value proposition: waste sorting plants and recycling infrastructure remain operational for decades, generating positive environmental effects throughout their lifecycle. Each installation delivered contributes to circular economy outcomes (improved recycling rates, resource recovery, reduced landfilling) for 15-25 years or longer. This means Stadler's most significant positive impacts compound over time as the installed base of sorting infrastructure grows. While detailed quantification of downstream impacts is outside the current reporting scope (see ESRS 2, para. 5-c), this enabling effect represents Stadler's most significant long-term sustainability contribution. Long-term negative impacts relate primarily to the environmental footprint from Stadler production facility development, which is why land use and biodiversity considerations are evaluated for expansion decisions (see ESRS 2, para. 48-a).

Overall, Stadler's impact profile is characterized by continuous short-term operational impacts that are actively managed, medium-term strategic impacts that shape business development, and substantial long-term positive impacts through products that enable circular economy infrastructure for decades. This time horizon profile reinforces the alignment between commercial success and sustainability contribution.

**ESRS 2, para. 48-c-iv**  
**Impact of business relationships**

Stadler is involved with material impacts both through its own activities and through business relationships along the value chain. The nature of involvement differs significantly between direct operations and value chain relationships.

#### **Own activities (direct involvement):**

Material impacts arise directly from Stadler's core activities: research and development, manufacturing of sorting equipment at Altshausen and Krško facilities, and project delivery including installation and commissioning. These activities generate both positive impacts (enabling circular economy through product functionality) and negative impacts (energy consumption, resource use, occupational safety considerations). Direct impacts are within Stadler's operational control and managed through the integrated management system (see ESRS 2, para. 22-c).

#### **Business relationships (indirect involvement):**

**Upstream (suppliers):** Stadler is connected to potential environmental and social impacts through sourcing of mechanical, electrical, and sensor-based components. Current visibility on supplier sustainability performance is limited to self-assessment processes, with enhanced engagement planned (see ESRS G1 and ESRS 2, para. 40-g).

**Downstream (customers):** Stadler's most significant positive impacts occur through business relationships with customers. Sorting plants delivered to waste management operators generate environmental benefits throughout their 15-25 year operational life - impacts that are enabled by Stadler's products but realized through customer operations. This indirect positive contribution substantially exceeds direct operational impacts in scale and duration.

#### **Involvement characterization:**

The distinction matters for accountability and action: direct impacts from own activities are subject to operational control and continuous improvement, while indirect impacts through business relationships require engagement, collaboration, and influence rather than direct control. Stadler recognizes both forms of involvement and addresses them through differentiated approaches - operational management for direct impacts, supplier engagement and customer-enabling strategies for indirect impacts (see ESRS 2, para. 40-g for strategic initiatives).

Current sustainability reporting focuses primarily on direct impacts from own operations, with value chain coverage to be expanded in future reporting periods (see ESRS 2, para. 5-c).

#### **ESRS 2, para. 48-d**

#### ***Financial effects of material risks and opportunities***

At the reporting date, Stadler has not identified material sustainability-related risks or opportunities that have resulted in significant, separately quantifiable financial effects on financial position, financial performance, or cash flows, or that would require material adjustments to carrying amounts of assets or liabilities within the next annual reporting period.

#### **Current financial effects:**

Material sustainability-related opportunities positively influence financial performance, though effects are integrated into normal business results rather than separately identifiable. Growing demand for recycling infrastructure and circular economy solutions (see ESRS 2, para. 48-a)

supports revenue generation and market positioning. The 2024 product launches - STADLERconnect digital platform, WireX, and SortX (see ESRS 2, para. 40-a-i) - represent investments responding to these opportunities, with associated development costs recognized in operating expenses and expected revenue contributions over coming years.

Material risks including supply chain volatility and energy costs affect operating expenses but have not resulted in material asset impairments or provision requirements. Energy efficiency investments (PV systems, heat recovery) improve cost stability while requiring capital expenditure. Information security investments for NIS2 compliance (target: 2026) represent planned future expenditure.

### **Medium to long-term financial implications:**

The primary financial effects of sustainability-related matters manifest over medium to long-term horizons through strategic positioning rather than immediate balance sheet impacts. Opportunities from circular economy market growth influence investment planning, R&D prioritization, and capacity decisions. Risks from regulatory evolution (ESRS requirements, supply chain due diligence) will require future compliance investments.

### **Adjustments within next reporting period:**

No material adjustments to carrying amounts of assets or liabilities are anticipated within the next annual reporting period based on current sustainability-related risk assessment. Specifically:

- No impairment indicators identified for property, plant and equipment related to environmental factors
- No material provisions required for environmental remediation or compliance
- No significant changes to useful lives of assets anticipated from sustainability-related factors

Stadler continuously monitors sustainability-related developments through integrated risk management (see ESRS 2, para. 22-c) and would reflect material financial effects in financial statements should they arise in future reporting periods.

### **ESRS 2, para. 48-e**

#### ***Anticipated financial effects of material risks and opportunities***

Anticipated financial effects of Stadler's material sustainability-related risks and opportunities (see ESRS 2, para. 48-a) are expected to materialize primarily over medium to long-term horizons, consistent with the nature of the business model and strategic planning cycles.

### **Short-term (1 year):**

No significant additional financial effects beyond normal business operations are anticipated. Current sustainability-related investments - digital solutions development, energy efficiency measures, ESRS reporting implementation - are incorporated into existing operational and capital budgets. Supply chain cost volatility and energy prices may influence operating margins but within normal business variability.

**Medium-term (2-5 years):****Opportunities expected to positively affect financial performance:**

- Growing demand for recycling infrastructure driven by EU circular economy regulations supports revenue growth potential
- Digital solutions (STADLERconnect platform) create recurring revenue opportunities through software and service offerings beyond traditional equipment sales
- Market expansion into emerging economies (environmental cleanup sector) opens new revenue streams
- Sustainable product development (material/energy efficiency) may reduce production costs over time

**Risks anticipated to require investment or affect cost structures:**

- NIS2 compliance implementation (target: 2026) will require information security investments
- Enhanced supplier sustainability engagement will increase procurement management costs
- ESRS mandatory reporting requirements will require data systems and governance investments
- Carbon Border Adjustment Mechanism (CBAM): From 2026, CBAM implementation may indirectly increase steel procurement costs as reduced import competition affects EU market pricing dynamics. As a European manufacturer sourcing primarily from EU suppliers, Stadler faces indirect price effects rather than direct CBAM obligations, but medium-term cost structures may be affected.
- Electronic components supply chain: AI-driven semiconductor demand may increasingly affect industrial electronics supply chains, potentially impacting availability and pricing of PLC controllers, sensors, and control systems used in sorting equipment. Lead times and component costs may require adjusted procurement strategies.
- Potential supply chain due diligence legislation may affect sourcing costs and supplier relationships

**Long-term (5+ years):**

The fundamental alignment between Stadler's business model and circular economy transition (see ESRS 2, para. 42) positions the company favorably for long-term financial resilience. As regulatory requirements for recycling infrastructure increase globally, demand for sorting technology is expected to grow, supporting long-term revenue development and market positioning. Continued investment in digitalization and sustainable product development is expected to strengthen competitive position and margin stability.

Long-term risks relate primarily to potential disruption from technology shifts or new market entrants, which are addressed through ongoing R&D investment and innovation partnerships (see ESRS 2, para. 40-g).

**Quantification:**

At this stage, Stadler does not provide quantified estimates of anticipated sustainability-related financial effects. The company's sustainability-related opportunities and risks are integrated into overall business planning rather than separately quantifiable, and the transitional nature of current sustainability reporting (see ESRS 2, para. 5-c) does not yet support detailed financial impact modeling. Development of more specific financial effect estimates is planned

as part of the 2025 group-wide materiality assessment and enhanced ESRS reporting framework.

### **ESRS 2, para. 48-f**

#### **Resilience of strategy and business model**

Stadler considers its strategy and business model to be resilient with regard to addressing material impacts and risks and taking advantage of material opportunities (see ESRS 2, para. 48-a for material R&O overview).

#### **Structural alignment with sustainability trends:**

The core business as provider of waste sorting infrastructure is structurally aligned with long-term sustainability trends. Unlike companies facing transition risks from decarbonization, Stadler's value proposition directly supports circular economy transition - demand for sorting technology grows as recycling requirements increase. This fundamental alignment means regulatory developments such as EU Green Deal, recycling targets, and Extended Producer Responsibility legislation represent opportunities rather than threats to the business model (see ESRS 2, para. 42). The company operates in a sector where commercial success and positive environmental contribution are mutually reinforcing.

#### **Capacity to address material risks:**

Resilience against identified material risks is supported by several structural factors. The **integrated management system** embeds environmental, safety, compliance, and continuous improvement into operational processes, enabling systematic risk identification and mitigation (see ESRS 2, para. 22-c). A **diversified use of the products** across waste stream types reduces dependency on single markets or applications. The **European manufacturing base** with production facilities in Germany and Slovenia provides supply chain stability and proximity to key markets, while domestic sourcing reduces exposure to trade disruptions and evolving carbon border adjustments.

The **family ownership structure** enables long-term decision-making without short-term financial pressure, supporting investments in innovation and sustainability even during market fluctuations. This orientation is complemented by **financial stability** through conservative capital structure, stable equity ratio, and self-financing capability (see ESRS 2, para. 48-e). **Technological competence and R&D capability** allow adaptation to changing material compositions, regulatory requirements, and customer needs over time.

#### **Capacity to take advantage of material opportunities:**

The strategy positions Stadler to benefit from identified opportunities through continued capability development. **Digital solutions development** through the STADLERconnect platform creates new revenue streams and strengthens customer relationships beyond traditional equipment sales (see ESRS 2, para. 40-a-i). **Innovation partnerships** with research institutions expand capabilities into complex material streams such as textiles and multilayer packaging as recycling requirements evolve (see ESRS 2, para. 40-a-ii). The **Test and Innovation Centers** in Slovenia and Germany enable rapid response to customer requirements and market developments.

#### **Demonstrated adaptive capacity:**

The business model has demonstrated resilience through various stress factors. Supply chain disruptions have been addressed through European supplier relationships, inventory management, and multi-sourcing strategies. Energy cost volatility is mitigated through energy efficiency investments and renewable energy generation at own facilities. Labor market pressures in rural regions are managed through employer attractiveness initiatives, apprenticeship programs, and workforce development (see ESRS S1). Technology evolution is addressed through continuous R&D investment and collaborative research participation.

#### **Limitations and areas for development:**

Current resilience assessment is qualitative, based on management judgment and operational experience. Stadler has not conducted formal quantitative scenario analysis or climate stress testing. Development of more structured resilience assessment methodologies, including scenario-based analysis with defined time horizons, is planned as part of the 2025 group-wide materiality assessment and enhanced ESRS reporting framework.

Overall, Stadler's strategy and business model provide a stable and adaptable framework to manage sustainability-related challenges while maintaining long-term business continuity. The combination of structural alignment with circular economy trends, integrated management processes, financial stability, and family ownership orientation supports resilience across short, medium, and long-term horizons. The primary resilience advantage is that business success and positive sustainability contribution are mutually reinforcing rather than competing objectives.

#### **ESRS 2, para. 48-g** ***Changes in comparison to previous periods***

Compared to the previous reporting period, there have been no fundamental changes in Stadler's material impacts, risks, and opportunities. The 2024 sustainability statement is based on the materiality assessment conducted in 2023 for Stadler Anlagenbau GmbH (see ESRS 2, para. 17-a), which continues to provide a valid basis for identifying material topics.

#### **Continuity of material matters:**

The material impacts, risks, and opportunities identified in 2023 remain consistent and continue to relate to circular economy solutions, sustainable product development, environmental and energy performance, supply chain stability, workforce-related topics, digitalization, information security, and responsible corporate governance (see ESRS 2, para. 48-a for current R&O overview). No material topics have been added or removed compared to the prior assessment.

#### **Context of external developments:**

External developments during 2024 - including evolving EU regulatory requirements, growing market demand for recycling infrastructure, and accelerating digitalization trends - represent ongoing continuation rather than fundamental changes in the nature of material impacts, risks, and opportunities. These developments reinforce rather than alter the strategic relevance of previously identified material matters.

#### **Reporting framework transition:**

The 2024 report represents Stadler's first sustainability statement prepared under the ESRS framework, transitioning from the previous DNK (Deutscher Nachhaltigkeitskodex) reporting

format used in 2023. While the presentation structure has changed significantly to align with ESRS requirements, the underlying material matters remain consistent. The DNK material matters have been translated into ESRS topical structure where data and processes are available (see ESRS 2, para. 17-a for translation approach).

**Planned reassessment:**

A comprehensive group-wide materiality assessment covering both operating entities (Stadler Anlagenbau GmbH and Willy Stadler d.o.o.) is planned for 2025. This assessment will be conducted in accordance with ESRS double materiality requirements and may result in refinement to the list of material matters, updated impact and risk assessments, and establishment of ESRS-aligned targets with baseline years. Any material changes resulting from this reassessment will be disclosed in the 2025 sustainability statement.

**ESRS 2, para. 48-h**

**Entity specific disclosures**

Stadler's material impacts, risks, and opportunities are addressed through general ESRS disclosure requirements and relevant topical standards. For the 2024 transitional report, no additional entity-specific disclosures have been applied beyond the ESRS framework.

**Material matters covered by ESRS standards:**

Material matter	ESRS coverage
<b>Circular economy solutions, resource efficiency</b>	ESRS E5 (Resource Use & Circular Economy)
<b>Environmental and energy performance, GHG emissions</b>	ESRS E1 (Climate Change)
<b>Workforce topics (employment, safety, development)</b>	ESRS S1 (Own Workforce)
<b>Supply chain management, business conduct</b>	ESRS G1 (Business Conduct)
<b>Strategy, governance, materiality, stakeholders</b>	ESRS 2 (General Disclosures)

See ESRS 2, para. 17-a for complete translation of DNK material matters into ESRS structure.

**Material matters with limited ESRS coverage/entity specific disclosures:**

Certain material matters identified in the 2023 DNK assessment do not have direct ESRS topical standard equivalents but are addressed through general disclosures:

Material matter	Current approach
<b>Digitalization of products (STADLERconnect)</b>	Addressed in ESRS 2 strategy and business model disclosures (para. 40-a-i, 40-g)
<b>Digitalization of internal processes</b>	Addressed in ESRS 2 governance disclosures (para. 22-c)
<b>Information security</b>	Addressed in ESRS 2 strategy disclosures (para. 40-g); NIS2 compliance preparation noted
<b>Product quality</b>	Addressed through business model and customer relationship disclosures

**Entity-specific disclosures:**

For the 2024 reporting year, Stadler has not developed additional entity-specific sustainability disclosures beyond the ESRS framework. The sustainability statement represents a transitional step based on the same scope and level of detail as the 2023 DNK report, translated into ESRS structure (see ESRS 2, para. 5-c).

The need for entity-specific disclosures will be evaluated as part of the 2025 group-wide materiality assessment. Potential areas for entity-specific disclosure development include digitalization metrics (platform deployment, customer adoption), circular economy enabling impact (downstream recycling performance supported by Stadler equipment), and innovation activity indicators. Any entity-specific disclosures developed will complement rather than replace ESRS standard disclosures.

**ESRS 2, para. 53-a**

***Methodologies to identify impacts, risks and opportunities***

Stadler's identification and assessment of material sustainability impacts, risks, and opportunities for 2024 is based on a materiality assessment conducted under the German Sustainability Code (DNK) framework in 2023.

The DNK-based materiality assessment was carried out through internal workshops and structured discussions involving management and representatives of key functional areas including production, R&D, procurement, human resources, EHS, and finance. The assessment considered the company's own operations, business model, value chain position, and stakeholder expectations. Topics were assessed qualitatively based on relevance to business activities and strategic orientation, potential impacts on the environment and society (inside-out perspective), relevance from a stakeholder and financial perspective (outside-in perspective), and regulatory context and industry developments.

The DNK materiality assessment was not structured according to ESRS topical architecture and did not apply a fully quantified double materiality methodology as defined under ESRS 1. For 2024, Stadler has applied a transitional approach, mapping DNK assessment outcomes to the ESRS structure where sufficient and reliable information is available (see ESRS 2, para. 17-a for mapping details). Disclosures in the 2024 sustainability statement focus on ESRS topics for which relevant data, policies, or actions are documented under the DNK framework. Topics for which no sufficient data or processes are available are disclosed as not material or not covered in detail. The 2024 statement should be read as a structured ESRS mapping of DNK-based disclosures, not as full ESRS compliance.

**Based on the 2023 DNK assessment, the following sustainability topics were identified as material:**

<b>DNK Category</b>	<b>Material Topic</b>	<b>Materiality Rationale</b>	<b>ESRS Coverage</b>
<b>Process Management</b>	Innovation and product responsibility	Core business enabling circular economy; product durability, modularity, efficiency	ESRS 2, ESRS E5
<b>Environment</b>	Use of natural resources	Significant steel, metal, energy, and water inputs in production	ESRS E1, ESRS E5

DNK Category	Material Topic	Materiality Rationale	ESRS Coverage
Environment	Resource management	Production waste generation; material efficiency potential	ESRS E5
Environment	Climate-relevant emissions	Electricity and thermal energy use in facilities	ESRS E1
Company	Employee rights	Manufacturing activities requiring safe working conditions	ESRS S1
Company	Equal opportunities	Non-discrimination and equal access to development	ESRS S1
Company	Qualification	Technical complexity requiring skilled workforce	ESRS S1
Company	Human rights	Labor rights in own operations and EU-based supply chain	ESRS S1, ESRS G1
Company	Community	Long-standing presence at Altshausen and Krško sites	ESRS 2
Company	Lawful conduct	Compliance, integrity, and responsible business conduct	ESRS G1

Stadler plans to conduct a fully ESRS-aligned double materiality assessment covering the entire group (Stadler Anlagenbau GmbH and Willy Stadler d.o.o.) in 2025. This assessment will apply quantified impact and financial materiality scoring, structured stakeholder engagement, value chain impact assessment, and formal threshold criteria in accordance with ESRS 1 requirements. The results will serve as the basis for expanded disclosures in future reporting periods.

**ESRS 2, para. 53-b-ii**  
*Impacts involving company*

The 2023 materiality assessment (see ESRS 2, para. 17-a for methodology) considered impacts on people and the environment arising from both own operations and business relationships along the value chain.

**Own operations impacts identified include:**

- Environmental impacts from production activities, energy consumption, and resource use at manufacturing facilities in Altshausen and Krško
- Social impacts related to occupational health and safety and the company's role as employer in semi-rural regions

**Business relationship impacts identified include:**

- Upstream – Potential impacts associated with raw material sourcing and purchased components from suppliers (see ESRS G1 for supplier management)
- Downstream – Positive enabling impacts through products that support circular economy and resource efficiency at customer facilities (see ESRS 2, para. 48-c-i for impact description)

This distinction between own operations and business relationship impacts informed the identification and prioritization of material topics and the structure of the sustainability strategy (see ESRS 2, para. 40-e for strategic fields addressing different impact categories).

**ESRS 2, para. 53-d**  
**Decision-making process**

Decision-making related to sustainability matters is embedded in the company's regular management processes rather than managed through a separate governance structure (see ESRS 2, para. 22-c for management's governance role).

**Strategic decisions on sustainability matters are taken by the managing directors (Geschäftsführung) based on structured inputs from relevant functional areas, including:**

- Production and quality management – operational performance, resource efficiency
- Procurement – supplier sustainability evaluations, supply chain considerations
- Human resources – workforce planning, training needs, employer attractiveness
- Environmental management and occupational health & safety – compliance, risk assessments, incident reporting
- Research and development – product development priorities, circular economy innovation

Material topics identified through the 2023 DNK assessment (see ESRS 2, para. 17-a) are systematically considered in planning cycles, investment decisions, and operational management.

**Internal control procedures for sustainability matters are integrated into the company's management system rather than organized as a standalone framework. Key control mechanisms include:**

- Legal compliance monitoring through the PAUL register with quarterly updates on regulatory changes
- Regular environmental aspects assessment to identify and control impacts from production activities
- Occupational safety risk assessments ensuring systematic hazard identification and control measures
- Supplier evaluations incorporating sustainability criteria through supplier self-assessments
- Periodic internal audits covering environmental, safety, and quality management processes
- Corrective action procedures ensuring systematic follow-up on identified non-conformities
- Annual management review evaluating integrated management system performance

Continuous improvement methodology (KVP) supports ongoing identification and implementation of sustainability-related improvements across operations, ensuring that decision-making and control processes evolve in response to changing requirements and identified opportunities.

**ESRS 2, para. 53-h**  
**Revision of the processes**

The company's process to identify and assess sustainability-related impacts, risks and opportunities was established and last modified in 2023, when a materiality assessment based on the German Sustainability Code (DNK) framework was conducted for Stadler Anlagenbau GmbH (see ESRS 2, para. 17-a for methodology details).

Compared to the prior reporting period, no changes were made to the assessment process during the 2024 reporting year. The 2024 sustainability statement is based on the outcomes of the 2023 DNK materiality assessment, translated into ESRS structure where applicable. This approach reflects the transitional nature of the 2024 voluntary ESRS report.

A comprehensive revision of the materiality assessment process is planned for 2025, including:

- Extension of scope to cover the entire Stadler Group (Stadler Anlagenbau GmbH and Willy Stadler d.o.o.)
- Transition from DNK-based methodology to fully ESRS-aligned double materiality assessment
- Implementation of quantified impact and financial materiality scoring
- Structured stakeholder engagement process
- Formal threshold criteria in accordance with ESRS 1 requirements
- Value chain impact assessment covering upstream and downstream activities

The 2025 group-wide materiality assessment will establish the foundation for expanded ESRS disclosures in future reporting periods (see ESRS 2, para. 40-g for strategic context). Following the 2025 assessment, Stadler plans to review the materiality assessment periodically

**ESRS 2, para. 56**  
**ESRS disclosure requirements**

The 2024 sustainability statement is prepared as a transitional report, building on the 2023 DNK materiality analysis translated into ESRS structure (see ESRS 2, para. 17-a for methodology). The following ESRS standards and disclosure requirements are addressed:

**Disclosed in this transitional statement:**

- ESRS 2 (General Disclosures) – Basis for preparation, governance, strategy, business model, stakeholder engagement, materiality assessment, impacts, risks and opportunities
- ESRS E1 (Climate Change) – Energy consumption, GHG emissions (Scope 1, Scope 2), renewable energy, climate mitigation actions
- ESRS E5 (Resource Use and Circular Economy) – Resource inflows, waste generation, circular economy policies and actions
- ESRS S1 (Own Workforce) – Employee metrics, health and safety, working conditions, training
- ESRS G1 (Business Conduct) – Corporate culture, supplier relationships, anti-corruption, compliance

**Not disclosed in this transitional statement:**

- ESRS E1 Scope 3 emissions – Phase-in provision applied; data collection in development
- ESRS E2 (Pollution)

- ESRS E3 (Water and Marine Resources)
- ESRS E4 (Biodiversity and Ecosystems)
- ESRS S2 (Workers in Value Chain)
- ESRS S3 (Affected Communities)
- ESRS S4 (Consumers and End-users)

The 2023 DNK materiality analysis was not structured according to ESRS topical architecture. Materiality of topics not disclosed in this transitional statement will be assessed as part of the planned 2025 group-wide ESRS-aligned double materiality assessment (see ESRS 2, para. 40-g), which will determine whether these standards require disclosure in future reporting periods.

**ESRS 2, para. 57**  
***Climate change as material***

Climate change has been identified as a material topic for Stadler. The 2023 DNK materiality assessment (see ESRS 2, para. 17-a) identified energy consumption and climate-related aspects as material from both inside-out and outside-in perspectives.

From an inside-out perspective, the company's production facilities consume electricity and thermal energy, resulting in greenhouse gas emissions that contribute to climate change. From an outside-in perspective, energy efficiency and the transition to renewable energy sources are relevant for reducing operating costs, ensuring energy supply security, and meeting evolving customer and regulatory expectations.

Climate change is addressed through ESRS E1 disclosures in this sustainability statement, covering energy consumption, renewable energy generation, and greenhouse gas emissions from own operations (Scope 1 and Scope 2). The company has implemented climate change mitigation measures including photovoltaic systems for renewable electricity generation, energy efficiency improvements, and heat recovery systems (see ESRS E1 for detailed disclosures).

**ESRS 2, para. AR 2**  
***European standardisation systems***

The company has not formally relied on European standards approved by the European Standardisation System (ISO/IEC or CEN/CENELEC standards) for the preparation of this sustainability statement.

**ESRS 2, para. AR 2**  
***External assurance of data and processes***

The sustainability reporting data and processes have not been verified by an external assurance provider. Accordingly, no external assurance in accordance with ISO/IEC or CEN/CENELEC standards has been performed on this sustainability statement.

The reported sustainability information is based on internally collected data, internal controls, plausibility checks by responsible departments, and documented calculation methodologies (see ESRS 2, para. 53-d for internal control procedures).

# ESRS E1

## Climate change

### Strategy

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#### **E1, para. 14**

##### ***Transition plan for climate change mitigation***

Stadler does not currently have a formal transition plan for climate change mitigation as defined under ESRS E1.

As a medium-sized manufacturing company with relatively low direct emissions intensity, Stadler has not yet developed a comprehensive, time-bound decarbonization pathway with defined milestones and carbon reduction targets aligned to 1.5°C or 2°C scenarios.

However, the company has implemented concrete climate change mitigation measures within its operations, including:

- Renewable energy generation through photovoltaic systems (1.001 kWp capacity; 28,7% electricity self-sufficiency in 2024 at Stadler Anlagenbau, target: 40%)
- Energy efficiency improvements (LED lighting, heat recovery systems)
- Ongoing evaluation of further efficiency measures in production processes

These measures are described in detail in ESRS E1 energy and emissions disclosures and in strategic priorities (see ESRS 2, para. 40-g).

Development of a formal transition plan will be considered as part of the 2025 group-wide ESRS-aligned materiality assessment, which will evaluate whether a structured transition plan is appropriate given the company's emissions profile, sector context, and stakeholder expectations.

#### **E1, para. 16-g**

##### ***Exclusion from Paris-aligned Benchmarks***

Stadler is not excluded from the EU Paris-aligned Benchmarks.

The company is not involved in activities that would trigger exclusion under the EU Climate Benchmark Regulation, including fossil fuel extraction or processing, coal-related activities, controversial weapons manufacturing, or tobacco production (see ESRS 2, para. 40-d for sector activity confirmations).

As a manufacturer of waste sorting equipment for the waste recycling industry, Stadler's core business activities contribute positively to circular economy objectives and resource efficiency rather than to activities associated with benchmark exclusion criteria.

## Climate Actions

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### **E1, para. 28**

#### ***Climate change mitigation and adaptation actions***

Stadler has implemented climate change mitigation actions focused on improving energy efficiency and increasing renewable energy share in own operations. No specific climate change adaptation actions have been implemented to date.

#### **Mitigation actions – Renewable energy:**

- Photovoltaic systems at Altshausen production facilities with total capacity of 1.001 kWp (commissioned 2023: Plant 1: 135 kWp, Plant 2: 750 kWp, Plant 3: 116 kWp)
- PV self-consumption in 2024: 472.876 kWh, covering 28,7% of electricity needs at Altshausen site (target: 40%)
- Additional PV capacity at Krško (Slovenia): 443,52 kWp (installed since 2012)

#### **Mitigation actions – Energy efficiency in operations:**

- LED lighting conversion (Hall 2 completed (Stadler Anlagenbau); ongoing rollout)
- Heat recovery from powder coating process (Stadler Anlagenbau): 178.000 kWh recovered in 2024
- Heat recovery from compressed air generation (Stadler Anlagenbau): 45.818 kWh recovered in 2024
- Energy monitoring system for major electricity consumers and PV performance tracking

#### **Mitigation actions – Material and production efficiency:**

- Production technology improvements reducing material and energy use (roll forming technology enabling sheet metal thickness reduction 3 mm → 2 mm, increased automation and robotic welding)
- Evaluation of higher energy efficiency classes for electric motors in products
- Material-efficient design approaches reducing resource use and associated indirect emissions

#### **Resources allocated:**

Internal engineering and production technology capacity, maintenance and facility management resources, and targeted capital investments in energy infrastructure (PV systems, LED lighting, heat recovery) as part of operational improvement measures. Specific investment amounts are not separately tracked for climate-related actions.

Detailed strategic context for these measures is provided in ESRS 2, para. 40-g.

### **E1, para. 29-a**

#### ***Climate change mitigation and adaptation actions***

Stadler's climate change mitigation actions (see ESRS E1, para. 28) apply the following decarbonisation levers:

#### **Energy efficiency (Scope 2 reduction):**

- Building energy efficiency through LED lighting conversion and energy monitoring systems
- Production process optimization reducing electricity consumption per unit produced
- Heat recovery systems capturing waste heat from powder coating and compressed air generation

#### **Renewable energy (Scope 2 reduction):**

- On-site photovoltaic electricity generation reducing reliance on grid electricity

- Current coverage: 28,7% of electricity from own PV (2024); target: 40%
- Medium-term goal: Purchase only green electricity for remaining needs from 2026

**Material and process efficiency (Scope 3 reduction potential):**

- Material-efficient product design reducing steel and metal inputs and associated embodied emissions
- Production technology improvements (roll forming, automation) reducing material waste
- Process stability improvements through robotic welding reducing reject rates

**Product use-phase efficiency (downstream Scope 3 enabling):**

- Evaluation of higher motor efficiency classes for equipment supplied to customers
- Digital solutions (STADLERconnect) optimizing customer plant performance and reducing operational energy consumption

No nature-based solutions have been implemented to date.

## Energy

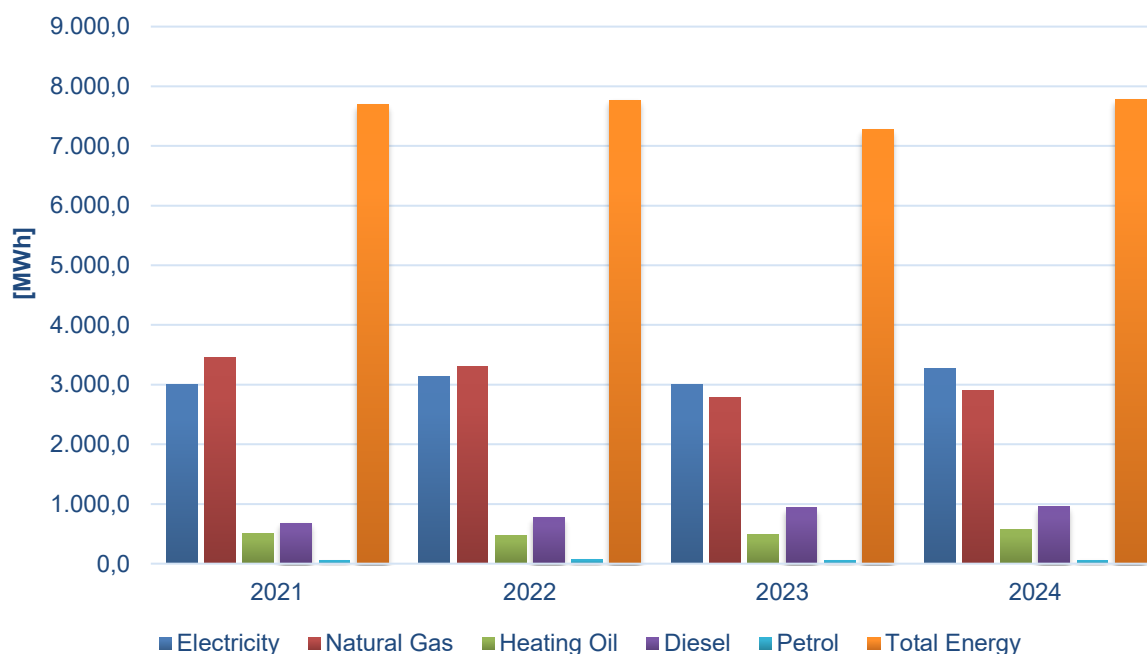
### ESRS E1, para. 37

#### Total energy consumption

Total energy consumption related to own operations in 2024 amounted to 7.771 MWh. This comprises electricity, natural gas, heating oil, diesel and petrol, used at production facilities in Altshausen (Germany) and Krško (Slovenia) and for company owned vehicles.

Energy consumption remained relatively stable compared to prior years as seen in the chart and table below.

### Total Energy Use



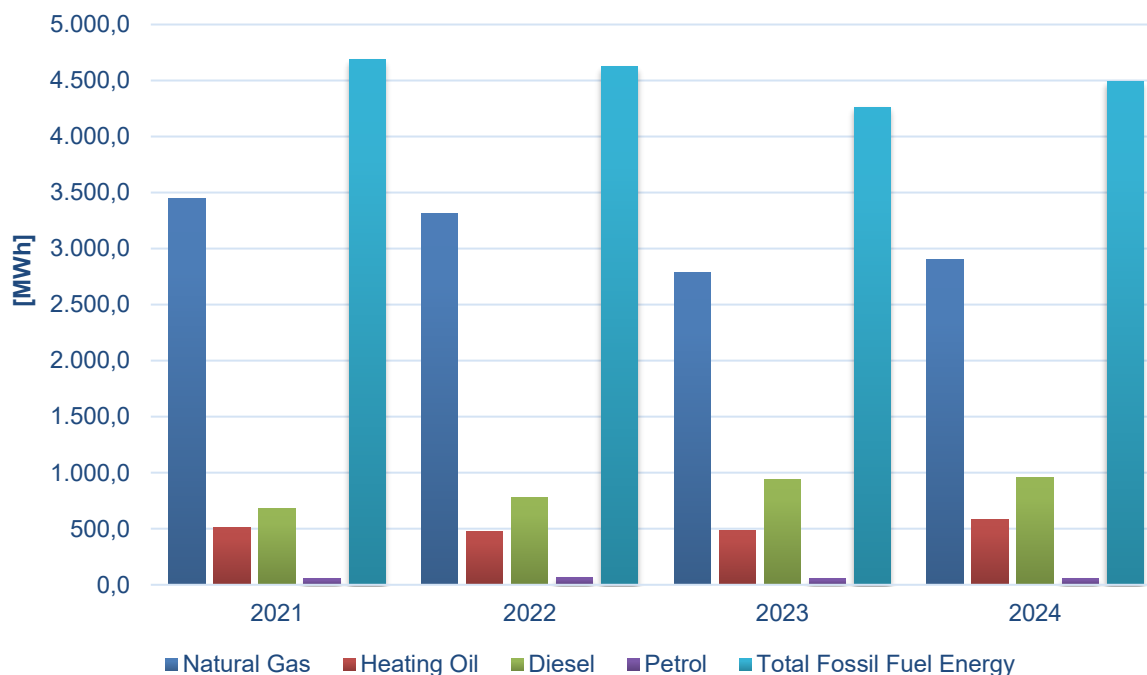
Total Energy Use (MWh)	2021	2022	2023	2024
Stadler Anlagenbau (GER)	5.204	5.374	4.805	5.080
Willy Stadler (SLO)	2.514	2.420	2.492	2.690
<b>Total energy use</b>	<b>7.718</b>	<b>7.793</b>	<b>7.297</b>	<b>7.771</b>

### ESRS E1, para. 37-a

#### Total energy consumption from fossil sources

Total energy consumption from fossil sources (direct fuel consumption) in 2024 amounted to 4.494 MWh. This includes fossil fuel used directly by Stadler Anlagenbau GmbH and Willy Stadler d.o.o. Fossil fuel use for electricity generation supplied through the grid is not included in this value.

## Fossil Fuel Energy Use



### **ESRS E1, para. 37-c**

#### **Total energy consumption from renewable sources**

Total electricity consumption from renewable sources in 2024 amounted to 473 MWh, representing electricity generated and self-consumed from on-site photovoltaic systems at Stadler Anlagenbau (Altshausen) production facilities. Electricity generated by on-site photovoltaic system at Willy Stadler (Krško) was in totality fed to the electrical distribution grid and not used by Willy Stadler.

### **ESRS E1, para. 37-c-i**

#### **Renewable sources of energy consumption**

The company uses electricity from renewable sources generated by on-site photovoltaic (PV) systems at its production facilities:

- Altshausen (Germany): 1.001 kWp installed capacity (commissioned 2023: Plant 1: 135 kWp, Plant 2: 750 kWp, Plant 3: 116 kWp)
- Krško (Slovenia): 444 kWp installed capacity (operational since 2012)

#### **Total installed PV capacity: 1.445 kWp**

The renewable electricity is self-generated and partially self-consumed on-site. The company does not currently purchase green electricity certificates or guarantees of origin for grid-supplied electricity (see market-based Scope 2 emissions, ESRS E1, para. 49-b).

**ESRS E1, para. 37-c-ii**

**Total electricity consumption from renewable sources**

PV self-consumption at Stadler Anlagenbau (Altshausen) in 2024: 473 MWh (472.876 kWh), representing 28,7% of electricity needs at that site. Additional PV capacity exists at Krško (444 kWp installed since 2012). Target: 40% electricity self-sufficiency at Stadler Anlagenbau (Altshausen) and 100 % green electricity purchased from the grid (backed by certificates or guarantees of origin).

**ESRS E1, para. 38**

**Non-renewable sources of energy consumption**

The company uses the following non-renewable/fossil energy sources:

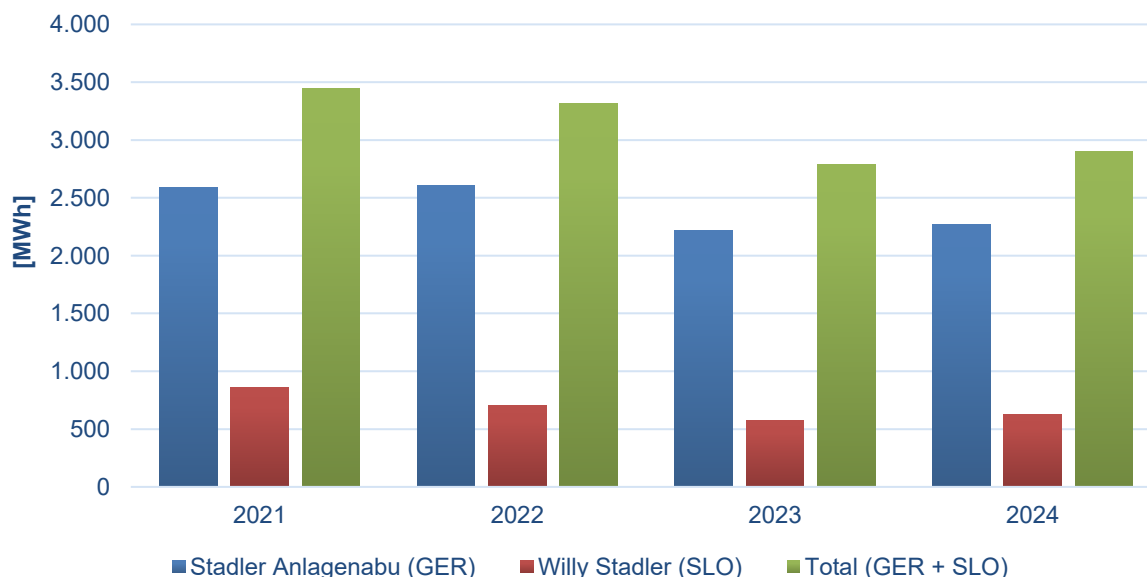
- Natural gas (primary heating fuel for buildings heating and manufacturing processes)
- Heating oil (supplementary heating fuel for buildings heating and manufacturing processes)
- Diesel (company vehicles, forklifts, equipment)
- Petrol (company vehicles)

**ESRS E1, para. 38-c**

**Fuel consumption from natural gas**

Total natural gas consumption in 2024: 2.903 MWh used primarily for heating at production facilities.

**Natural gas use**



Natural Gas (MWh)	2021	2022	2023	2024
Stadler Anlagenbau (GER)	2.591	2.605	2.213	2.273
Willy Stadler (SLO)	856	707	578	630
<b>TOTAL</b>	<b>3.447</b>	<b>3.312</b>	<b>2.791</b>	<b>2.903</b>

**ESRS E1, para. 38-d**  
**Fuel consumption from other fossil sources**

Other fossil fuel consumption in 2024:

Total other fossil sources (besides natural gas): **1591 MWh**

Heating Oil (MWh)	2021	2022	2023	2024
Stadler Anlagenbau (GER)	505	466	486	569
Willy Stadler (SLO)	19	19	9	10
<b>Total Heating Oil (GER + SLO)</b>	<b>524</b>	<b>485</b>	<b>495</b>	<b>579</b>

Diesel (MWh)	2021	2022	2023	2024
Stadler Anlagenbau (GER)	508	572	547	534
Willy Stadler (SLO)	182	218	402	419
<b>Total Diesel (GER + SLO)</b>	<b>689</b>	<b>789</b>	<b>949</b>	<b>954</b>

Petrol (MWh)	2021	2022	2023	2024
Stadler Anlagenbau (GER)	52	65	53	57
Willy Stadler (SLO)	1	1	1	1
<b>Total Petrol (GER + SLO)</b>	<b>53</b>	<b>65</b>	<b>53</b>	<b>58</b>

**ESRS E1, para. 39**  
**Energy production**

Stadler produces renewable energy through on-site photovoltaic systems at its production facilities.

Total renewable energy production in 2024: **1.153 MWh**

Energy production by site:

- Altshausen (Germany): 785 MWh
  - o Self-consumption: 473 MWh
  - o Grid feed-in: 312 MWh
  - o Installed capacity: 1.001 kWp
- Krško (Slovenia): 368 MWh
  - o Self-consumption: 0 MWh
  - o Grid feed-in: 368 MWh
  - o Installed capacity: 444 kWp (operational since 2012)

Total installed renewable energy generation capacity: 1.445 kWp

The photovoltaic systems contribute to reducing reliance on grid electricity and associated Scope 2 emissions. At the Altshausen site, PV self-consumption covered 28,7% of electricity needs in 2024, progressing towards the company's target of 40% electricity self-sufficiency.

## GHG Emissions

### ESRS E1, para. 48-a Gross Scope 1 GHG emissions

Gross Scope 1 GHG emissions in 2024 amounted to 1.007,3 tCO<sub>2</sub>e.

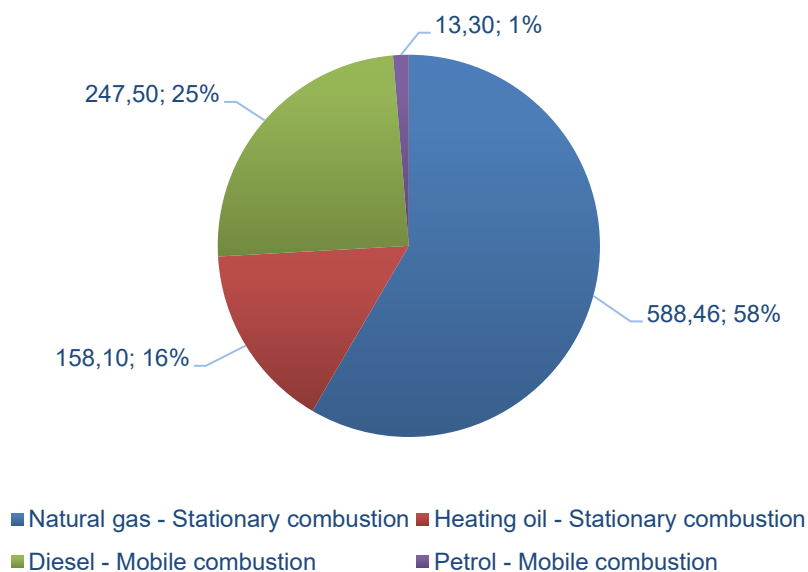
These emissions arise from direct fuel combustion at production facilities in Altshausen (Germany) and Krško (Slovenia), including:

- Natural gas combustion for heating and production processes
- Heating oil combustion for supplementary heating
- Diesel consumption for company vehicles, forklifts, and equipment
- Petrol consumption for company vehicles

Emission factors applied are sourced from the Codio Impact ESRS reporting tool, which uses recognized emission factor databases for fuel combustion.

Pie-chart below presents GHG Scope 1 Emissions by fuel type and use for Stadler Anlagenbau and Willy Stadler combined.

### Scope 1 GHG Emissions by fuel type and use in 2024 [tCO<sub>2</sub>e]



### ESRS E1, para. AR 41 Scope 1 stationary combustion

Scope 1 emissions from stationary combustion in 2024 amounted to 746,5 tCO<sub>2</sub>e. Stationary combustion includes fuel used for heating and production processes at fixed installations:

- Natural gas: Used primarily for space heating and process heating at production facilities in Altshausen and Krško
- Heating oil: Used for supplementary heating

Emission factors are sourced from the Codio Impact ESRS reporting tool.

GHG stationary combustion emissions were calculated using the fuel-based method, applying activity data (fuel consumption in liters and kWh) multiplied by corresponding emission factors.

**Scope 1 mobile combustion**

Scope 1 emissions from mobile combustion in 2024 amounted to 260,8 tCO<sub>2</sub>e. Mobile combustion includes fuel used for company-owned or controlled vehicles and mobile equipment:

- Diesel: Company vehicles, forklifts, and mobile equipment
- Petrol: Company vehicles

Emission factors are sourced from the Codio Impact ESRS reporting tool, which applies emission factors accounting for the average biofuel blend in transport fuels in accordance with EU fuel quality standards (approximately 7% biodiesel component in diesel).

GHG mobile combustion emissions were calculated using the fuel-based method, applying activity data (fuel consumption in liters and kWh) multiplied by corresponding emission factors.

**Scope 1 fugitive emissions**

Scope 1 fugitive emissions in 2024 amounted to 0 tCO<sub>2</sub>e. Stadler's production activities do not involve significant sources of fugitive emissions such as industrial process emissions, significant refrigerant leakage, or other non-combustion emission sources. No refrigerant top-ups required reporting were recorded during the reporting period.

**Scope 1 summary:**

Category	tCO <sub>2</sub> e	Share
Stationary combustion	746,5	74%
Mobile combustion	260,8	26%
Fugitive emissions	0	0%
<b>Total Scope 1</b>	<b>1.007,3</b>	<b>100%</b>

**ESRS E1, para. 48-b**

**Scope 1 GHG emissions from regulated trading schemes**

0% of Scope 1 GHG emissions originate from regulated emission trading schemes. Stadler's production facilities are not subject to the EU Emissions Trading System (EU ETS) or other regulated trading schemes, as the company's operations do not meet the threshold criteria for mandatory participation.

**ESRS E1, para. 49-a, 52-a**

**Location-based Scope 2 GHG emissions**

Gross location-based Scope 2 GHG emissions in 2024 amounted to 938,3 tCO<sub>2</sub>e.

Location-based emissions are calculated using average grid emission factors for the countries where electricity is consumed:

- Germany (Altshausen): National grid average emission factor
- Slovenia (Krško): National grid average emission factor

Emission factors are sourced from the Codio Impact ESRS reporting tool. PV self-consumption (473 MWh at Altshausen) is excluded from Scope 2 calculations as it represents zero-emission renewable electricity.

As Slovenian location emission factors for electricity are not available in the Codio Impact database, the Slovenian grid emission factor was manually adjusted based on data from the Inštitut Jožef Štefan (IJS), applying the 2023 value of 0,238 kgCO<sub>2</sub>e/kWh.

**ESRS E1, para. 49-b, 52-b**  
**Market-based Scope 2 GHG emissions**

Gross market-based Scope 2 GHG emissions in 2024 amounted to 1.979,6 tCO<sub>2</sub>e.

Market-based emissions are calculated using residual mix emission factors, which reflect the emission intensity of grid electricity after accounting for tracked renewable energy instruments (guarantees of origin, green certificates).

The higher market-based value compared to location-based (1.979,6 vs. 938,3 tCO<sub>2</sub>e) reflects that Stadler does not currently purchase green electricity certificates or guarantees of origin for grid-supplied electricity. The residual mix therefore has a higher emission factor than the average grid mix.

Emission factors are sourced from the Codio Impact ESRS reporting tool using Country specific residual mix data.

**ESRS E1, para. AR 41**  
**Scope 2 GHG emissions by purchased energy**

Scope 2 emissions in 2024 totaled 938,3 tCO<sub>2</sub>e (location-based) or 1,979.6 tCO<sub>2</sub>e (market-based), arising exclusively from purchased electricity. The group does not purchase district heating, steam, or cooling services; all heating requirements are met through on-site combustion of natural gas and heating oil, which is reported under Scope 1.

Energy type	Location-based (tCO <sub>2</sub> e)	Market-based (tCO <sub>2</sub> e)
Electricity	938,3	1.979,6
Heat	0	0
Steam	0	0
Cooling	0	0
<b>Total Scope 2</b>	<b>938,3</b>	<b>1.979,6</b>

Emission factors for purchased electricity are based on national grid averages for Germany and Slovenia (location-based) and residual mix factors (market-based), sourced from the Codio Impact ESRS reporting tool.

**ESRS E1, para. 51, AR 46-d**  
**Gross Scope 3 GHG emissions**

Scope 3 GHG emissions are not reported for the 2024 transitional sustainability statement. Stadler applies the phase-in provision under ESRS E1, which allows companies to omit Scope 3 disclosures in the first year of ESRS reporting.

Scope 3 emissions are expected to be material for Stadler, particularly in categories such as purchased goods and services (steel and metal components), upstream transportation, and use of sold products (energy consumption of sorting equipment at customer facilities). Development of Scope 3 data collection processes is planned as part of the transition to full ESRS compliance.

# ESRS E5

## Resource use and circular economy

### Materiality

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#### **ESRS E5, para. 11-a**

##### ***Screening process for materiality assessment of circular economy matters***

Circular economy and resource use were identified as material topics through the company's double materiality assessment conducted in 2023 (see ESRS 2, para. 17-a for methodology and para. 53-a for assessment approach).

Given Stadler's core business as a supplier of waste sorting and recycling technologies, circular economy was assessed as having very high relevance from an outside-in perspective. The screening considered resource efficiency and material use in own operations (inside-out), market demand for circular solutions and regulatory developments (outside-in), and upstream material sourcing and downstream enabling impacts through installed sorting equipment.

Significant positive downstream impacts were identified: Stadler's products enable higher recycling rates, improved material purity, and reduced landfilling, thereby supporting customers' circular economy performance and reducing greenhouse gas emissions associated with primary material production.

#### **ESRS E5, para. 11-b**

##### ***Stakeholder engagement for materiality assessment of circular economy matters***

Stakeholder perspectives on circular economy matters were incorporated through the engagement processes described in ESRS 2, para. 45-a.

Relevant inputs included customer feedback on recycling technology requirements and performance expectations, exchanges with research partners on circular economy innovation (see ESRS 2, para. 40-e for research projects), and internal workshops with production, R&D, and procurement functions.

No formal ESRS-specific stakeholder consultation on circular economy matters was conducted for 2024. Enhanced stakeholder engagement is planned as part of the 2025 group-wide materiality assessment.

## Policies

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### **ESRS E5, para. 14**

#### ***Policies related to resource use and circular economy***

Stadler has not adopted a standalone circular economy or resource use policy. Resource efficiency and circular economy considerations are addressed through operational practices and management systems at both entities:

#### **Willy Stadler d.o.o. (Slovenia):**

- Environmental management system (ISO 14001 certified) covering resource efficiency, waste minimization, and environmental performance
- Quality management system (ISO 9001 certified) addressing material standards and production efficiency
- 

#### **Stadler Anlagenbau GmbH (Germany):**

- Environmental aspects assessment and resource management practices integrated into production operations
- Waste management procedures and resource efficiency measures applied operationally

#### **Group-wide practices:**

- Product design principles emphasizing durability, serviceability, and modular component replacement to extend equipment lifecycles
- Continuous improvement methodology (KVP) applied to resource efficiency in manufacturing

For the overall policy framework applied to material sustainability matters, see ESRS 2, para. 17-c. Development of a dedicated circular economy policy is planned for 2025 (see ESRS 2, para. 40-g).

## Circularity Principles

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### **ESRS E5, para. 15**

#### ***Other policies related to resource use and circular economy***

Beyond the policies and management practices described in E5, para. 14, circular economy principles are embedded in the company's product development and innovation processes.

As a provider of waste sorting and recycling technologies, Stadler's core business model inherently supports circular economy objectives. Product development practices emphasize:

- Equipment durability and longevity (typical service life exceeding 15 years)
- Modular design enabling component replacement and upgrades
- Serviceability and reparability to extend operational lifecycles
- Use of recyclable materials (primarily steel) in equipment construction

These principles are applied through the company's R&D and product development functions rather than through a separate policy document. The company's contribution to enabling circular material flows in the downstream value chain is described in ESRS 2, para. 42 (business model).

### **ESRS E5, para. AR 9-a**

#### ***Policies addressing the waste hierarchy***

The resource use and circular economy practices described in E5, para. 14-15 are aligned with the waste hierarchy as follows:

1. **Prevention:** Material optimization in manufacturing processes and efficient product design reduce resource consumption at source
2. **Reuse:** Equipment designed for durability (15+ year service life), modular components enabling refurbishment and upgrades
3. **Recycling:** Core business activity – Stadler's sorting technologies enable customers to achieve higher recycling rates and material recovery, directly supporting this hierarchy level
4. **Recovery:** Company's waste sorting equipment helps divert materials from energy recovery to higher-value recycling streams
5. **Disposal:** Minimized through efficient sorting – Stadler equipment reduces residual waste volumes requiring landfill

Within own operations, waste prevention and recycling are prioritized, with disposal applied only for non-recyclable fractions (see E5, para. 37 for waste generation data).

### **ESRS E5, para. AR 9-b**

#### ***Waste avoidance and minimisation prioritised over waste treatment***

As described in E5, para. AR 9-a, the company prioritizes waste prevention and minimization in accordance with the waste hierarchy.

#### **Own operations:**

- Material optimization and cutting efficiency reduce offcuts and scrap
- Design for manufacturability minimizes production waste
- Continuous improvement (KVP) targets waste reduction in manufacturing processes

#### **Downstream enabling impact:**

- Sorting technologies maximize material recovery, reducing residual waste volumes for customers
- Higher sorting accuracy diverts materials from disposal to recycling streams

Waste treatment and disposal are applied only for fractions where prevention, reuse, or recycling are not technically feasible.

## Actions

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### **ESRS E5, para. 19**

#### **Actions and resources related to resource use and circular economy**

The company implemented actions related to resource use and circular economy during 2024.

#### **Digital solutions for resource efficiency:**

- Predictive maintenance modules deployed in 15+ customer plants, reducing unplanned downtime and component waste
- BaleCheck quality monitoring enabling real-time material assessment
- Automated material split control improving sorting accuracy and reducing material losses
- OEE dashboards for performance optimization

#### **Testing and development activities:**

- Systematic testing of NIR-based sorting loops, blockage detection, and material split control
- Sieving trials conducted at Krško test facility and customer sites
- Continuous improvement of sorting efficiency to maximize material recovery

#### **Resources allocated:**

- Dedicated R&D and engineering teams for digital product development
- Test and Innovation Center infrastructure
- Cross-functional teams (product development, production technology, process optimization)

**Collaborative research:** The company participates in research projects including ReVise-UP, EnEWA, and Multi2Recycle, supporting circular economy innovation (see ESRS 2, para. 40-e for research project details).

These actions primarily generate positive downstream impacts by enabling customers to achieve higher recycling rates and reduced residual waste volumes.

### **ESRS E5, para. 20-b**

#### **Actions supporting higher rates of secondary raw material use**

**Downstream enabling impact:** The actions described in E5, para. 19 directly support higher rates of secondary raw material use in the value chain. Stadler's sorting technologies and digital solutions improve material purity and sorting accuracy, enabling customers to produce cleaner output fractions suitable for recycling into secondary raw materials.

**Own operations:** Stadler's products are manufactured primarily from steel, a material with high recycled content in standard supply chains. However, the company does not currently track or specify minimum recycled content requirements for input materials. Assessment of secondary raw material use in own operations is planned as part of the 2025 ESRS E5 data collection enhancement.

### **ESRS E5, para. 20-c**

#### **Application of circular design**

**Circular design principles** are applied in Stadler's product development across four key dimensions.

**Equipment is designed for longevity** through robust steel construction using durable, recyclable materials and components specified for continuous industrial operation in demanding environments.

**Modularity and upgradeability** are core design features. Digital modules such as predictive maintenance, BaleCheck, and material split control can be retrofitted to existing installations without full equipment replacement. Sorting line configurations are modular and adaptable to different material streams, with standardized component interfaces enabling upgrades and replacements over the equipment lifecycle.

**Serviceability** is prioritized through accessible component placement for maintenance and repair, spare parts availability supporting extended operational life, and remote diagnostics capability reducing the need for on-site interventions.

**End-of-life considerations** are addressed through material selection: equipment is manufactured primarily from steel, which is fully recyclable, with minimal use of composite or non-recyclable materials. Modular construction facilitates component separation at end-of-life.

Resources allocated to circular design include R&D and engineering teams as described in E5, para. 19.

#### **ESRS E5, para. 20-d**

##### ***Application of circular business practices***

Stadler applies circular business practices primarily through service-oriented business models that extend equipment value and lifecycle:

**Servitization and lifecycle services:** Comprehensive after-sales service including maintenance, repair, and spare parts supply supports equipment performance over extended operational life. Long-term service agreements with customers ensure ongoing support and optimization.

**Digital product offerings:** The STADLERconnect platform (launched November 2024) provides digital solutions that extend equipment value: predictive maintenance capabilities (deployed in 15+ plants) reduce unplanned downtime and extend component life, while BaleCheck and Material Split Control (deployed in several plants) optimize customer operations and material recovery.

**Knowledge transfer and capability building:** Customer training programs on equipment operation and maintenance, and the STADLER Summer School (launched 2023) for industry knowledge exchange, support customer capability development.

**Collaborative innovation:** Research partnerships (ReVise-UP, EnEWA, Multi2Recycle) advance circular economy solutions (see ESRS 2, para. 40-e).

The company has not implemented product take-back, leasing, or product-as-a-service models. Assessment of additional circular business model opportunities is planned as part of the 2025 strategy review.

**ESRS E5, para. 20-e****Actions to prevent waste generation in value chain****Own operations:**

- Material optimization in manufacturing (cutting efficiency, sheet metal utilization) reduces production scrap
- Continuous improvement (KVP) methodology targets waste reduction in production processes
- See E5, para. 37 for waste generation data

**Upstream value chain:**

- No specific supplier waste prevention programs currently implemented
- Procurement prioritizes quality materials to reduce defect-related waste in manufacturing

**Downstream value chain:**

- Primary focus area: Stadler's sorting technologies and digital solutions enable customers to achieve higher sorting precision, reduced reject fractions, and improved material recovery
- This represents Stadler's most significant waste prevention contribution through enabling impact

Assessment of formalized upstream waste prevention initiatives is planned for 2025

**ESRS E5, para. 20-f****Optimisation of waste management in line with waste hierarchy**

Waste management optimization follows the waste hierarchy principles described in E5, para. AR 9-a.

**Own operations:**

- Production waste segregated by material type (metals, plastics, wood, mixed waste) to enable appropriate treatment pathways
- Metal scrap (primary waste stream) directed to recycling; hazardous waste managed through certified disposal partners
- See E5, para. 37-39 for waste volumes and treatment methods

**Downstream enabling impact:**

- Stadler's sorting technologies directly support waste hierarchy implementation at customer facilities by maximizing material recovery before disposal
- Digital solutions (predictive maintenance, BaleCheck, Material Split Control) improve sorting precision and output quality, enabling higher-value recycling pathways
- Higher material purity reduces contamination-related losses and diverts materials from energy recovery or landfill to recycling

## Research and Collaboration

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### **ESRS E5, para. AR 11**

#### **Collective actions for circular economy strategies**

Stadler engages with value chain partners and networks to advance circularity of products and materials:

#### **Downstream and customer engagement:**

- Digital solution deployment (STADLERconnect) in customer plants with joint testing and optimization
- Collaboration with everwave on river plastic waste sorting (SortX mobile container deployed in Albania)
- Partnership with RecycleMe for recyclability testing and eco-design support for packaging industry

#### **Research and industry networks:**

- Active participation in collaborative research projects: ReVise-UP (recycling optimization), EnEWA (sorting technology advancement), Multi2Recycle, Pack4Food, IRG textiles
- University partnerships (RWTH Aachen, ITA) for technology development
- Industry association membership (VDMA, BVSE) for knowledge exchange
- See ESRS 2, para. 40-e for research project details

#### **Upstream engagement:**

- Supplier sustainability evaluations via self-assessment questionnaires
- No formal collaborative circularity initiatives with upstream suppliers currently implemented

#### **Local network:**

- Test and Innovation Centers available for research partner trials
- STADLER Summer School (launched 2023) for industry knowledge sharing

### **ESRS E5, para. AR 12-a**

#### **Contribution to the circular economy**

Stadler contributes to the circular economy as an infrastructure provider enabling material recovery at scale. The company's waste sorting plants and components enable efficient separation of recyclable materials from mixed waste streams, with equipment designed for high sorting purity to support downstream recycling processes.

In 2024, smart waste processing capabilities were expanded through the SortX mobile sorting container (deployed in Albania for river plastic waste, achieving ~80% recyclable output) and the STADLERconnect digital platform with predictive maintenance and material optimization modules. The WireX automated dewiring system further improves sorting line efficiency. These solutions enable customers to achieve higher material purity and reduced reject fractions, supporting closed-loop recycling applications. For product details, see ESRS 2, para. 40-a-i.

### **ESRS E5, para. AR 12-b**

#### **Stakeholders involved in collective actions**

Stakeholders involved in circular economy collaborations (see E5, para. AR 11 for details):

- Customers operating waste sorting and recycling facilities
- Research institutions (RWTH Aachen, ITA)
- Technology and industry partners (everwave, RecycleMe)
- Research consortia (ReVise-UP, EnEWA, Multi2Recycle, Pack4Food)
- Industry associations (VDMA, BVSE)

**ESRS E5, para. AR 12-c**

***Organisation of collaborations***

Collaborative initiatives are organized as joint development activities, pilot implementations, and research partnerships.

Within these collaborations, Stadler contributes technical expertise, engineering capabilities, and testing infrastructure through its Test and Innovation Centers. Customers and plant operators provide operational environments for testing under real-world conditions. Research institutions and technology partners contribute complementary expertise and application knowledge.

For details on specific partnerships and research projects, see ESRS 2, para. 40-e.

## Targets

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### **ESRS E5, para. 27**

#### ***Mandatory nature of resource use and circular economy targets***

The setting of resource use and circular economy targets is voluntary for Stadler. The company is not subject to legislation mandating specific circular economy or resource efficiency targets.

Targets and objectives related to resource use and circular economy are established as part of the company's sustainability strategy (see ESRS 2, para. 40-e) and are driven by business considerations, customer expectations, and alignment with the company's role as circular economy infrastructure provider.

## Resource Inflows

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### **ESRS E5, para. 30** **Resource inflows**

**Materials:** Primary material inputs consist of steel-based semi-finished products (sheet metal, structural steel, profiles, cut pieces) used for manufacturing sorting equipment and plant components. Steel represents the main material input by volume and weight. Packaging materials are limited to transport and delivery requirements.

No critical raw materials or rare earth elements are intentionally used as direct inputs in manufacturing processes. Electronic components integrated into equipment (sensors, controls) may contain such materials but are procured as finished components from suppliers. **Water:** Water is used for production processes and sanitary purposes but is not a material input to core manufacturing operations. Water use is on a minimal scale compared to material inputs.

**Property, plant and equipment:** Own operations utilize production halls, metal processing machinery, powder coating facilities, assembly and testing equipment, and supporting infrastructure at Altshausen (Germany) and Krško (Slovenia) facilities.

**Upstream value chain:** Resource inflows relate primarily to procurement of steel-based semi-finished products and components from suppliers predominantly located within the European Union.

## Circular Product Design

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### **ESRS E5, para. 35**

#### **Key products designed along circular principles**

Stadler designs and manufactures waste sorting equipment and components, primarily constructed from steel and steel-based assemblies.

Products are designed along circular principles as described in E5, para. 20-c:

- **Durability:** Robust construction for demanding industrial environments; equipment designed for extended service life under continuous operation
- **Modularity:** Sorting lines configured from standardized components (ballistic separators, screens, conveyors, wind sifters) enabling flexible plant layouts and future modifications
- **Reparability and upgradeability:** Individual components can be replaced, refurbished, or upgraded without full equipment replacement; digital modules (STADLERconnect) retrofit to existing installations

**End-of-life:** Products can be dismantled and materials recovered, with steel being fully recyclable without quality loss. Minimal use of composite materials facilitates material separation at end-of-life.

Key product outputs include complete sorting plants, individual sorting machines, and digital optimization solutions - all designed to maximize operational lifetime and support material recovery across the product lifecycle.

### **ESRS E5, para. 36-b**

#### **Reparability of products**

Products are designed for high reparability as described in E5, para. 20-c and 35.

Key reparability features:

- Modular, accessible component design enabling individual part replacement
- Standardized components across product range
- Long-term spare parts availability
- Comprehensive after-sales services (maintenance, refurbishment, retrofitting)
- Remote diagnostics (STADLERconnect) supporting preventive maintenance

No quantitative reparability scoring is currently applied. Based on design principles and service model, expected reparability is assessed as high.

## Waste

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### **ESRS E5, para. 37-a** **Total generated waste**

Total waste generated in 2024: **2.054,9 tons**. The value includes waste generated at Stadler Anlagenbau and Willy Stadler.

### **ESRS E5, para. 38** **Waste composition**

Waste composition reflects manufacturing and assembly operations at Altshausen (Germany) and Krško (Slovenia) facilities.

The largest fraction consists of metal scrap (steel, iron), representing the dominant waste stream by weight. Packaging waste (wood, paper/cardboard, mixed) and mixed operational waste account for smaller shares. Hazardous waste is limited to process-specific residues, primarily oil-water mixtures from surface treatment operations.

Overall, waste composition is dominated by recyclable materials. For waste stream and material details, see E5, para. 38-a and 38-b. For hazardous waste quantity, see E5, para. 39.

### **ESRS E5, para. 38-a** **Sector-relevant waste streams**

Waste streams arise from manufacturing, surface treatment, assembly, and supporting operations at production facilities in Altshausen (Germany) and Krško (Slovenia).

#### **Non-hazardous waste streams:**

- Metal scrap and residues (steel scrap, iron and steel particles) - largest waste fraction by weight, from fabrication, machining, and assembly
- Packaging waste (paper/cardboard, wood, metal, mixed packaging) - from incoming materials and outgoing products
- Mixed operational waste (sortable mixed waste, office waste)

#### **Hazardous waste streams:**

- Oil-water mixtures and wastewater treatment residues from surface treatment processes
- Contaminated absorbents and filters
- Minor quantities of paints, solvents, batteries, cables, and electronic waste

See E5, para. 37 for waste volumes by category.

### **ESRS E5, para. 38-b** **Materials present in waste streams**

Materials in generated waste reflect manufacturing and assembly activities (see E5, para. 38-a for waste stream categories):

Material	Source
Steel and iron	Fabrication, machining, assembly (largest fraction)
Paper/cardboard	Packaging
Wood	Packaging
Plastics	Packaging, protective foils
Oils and oil-contaminated materials	Lubricants, surface treatment
Chemical residues	Paints, coatings (small quantities)
Electrical/electronic materials	Cables, batteries, components (limited)

Steel represents the primary material in waste streams and is fully recyclable.

**ESRS E5, para. 39**  
**Generated hazardous waste**

Total hazardous waste generated in 2024: **129,65 tons** (6,3% of total waste). The value includes waste generated at Stadler Anlagenbau and Willy Stadler.

Hazardous waste primarily comprises oil-water mixtures and wastewater residues from powder coating and surface treatment processes (120,5 t), with smaller quantities of halogen-free machining emulsions, solvents, and batteries.

## Methodology

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### **ESRS E5, para. 40**

#### ***Contextual information on circular economy methodologies***

**Waste data:** Based on direct measurement and official waste records from certified waste management contractors. Quantities reflect measured amounts for own operations at Altshausen and Krško facilities.

**Circular product classification:** Based on qualitative assessment of design characteristics (see E5, para. 20-c and 35 for criteria), not quantitative circularity metrics or life-cycle assessments. Classification derived from internal product design specifications and engineering practices.

#### **Limitations:**

- No quantitative circularity scoring or recycled content tracking for 2024
- No assumptions made regarding closed-loop material flows or end-of-life recycling rates
- Methodology development planned for future reporting periods

## End-of-life

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### **ESRS E5, para. AR 28** **End-of-life engagement**

Stadler engages in product end-of-life management through an enabling and supportive role rather than direct waste stream management.

**Design for end-of-life:** Products designed for extended lifetime, repair, and eventual material recovery (see E5, para. 20-c and 35).

**Lifecycle extension services:** After-sales services, retrofitting, and upgrade options reduce premature decommissioning (see E5, para. 20-d).

**End-of-life handling:** Material recovery and disposal are carried out by customers and specialized waste operators. Steel construction enables full recyclability without quality loss.

**Limitations:** No dedicated take-back or extended producer responsibility schemes currently implemented. End-of-life support provided through technical documentation, spare parts availability, and service support.

# ESRS S1

## Own workforce

### Policies

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**ESRS S1, para. 19*****Policies related to own workforce***

Stadler manages workforce-related impacts, risks and opportunities through internal policies embedded in the company's integrated management system, consistent with the policy framework described in ESRS 2, para. 17-c. Key policy areas:

**Occupational health and safety:** Workplace accident prevention system with risk assessments, safety instructions, and regular training. At Willy Stadler d.o.o.: ISO 45001 certified management system.

**Equal treatment and non-discrimination:** Principles applied in recruitment, employment conditions, and development opportunities in compliance with labour laws in Germany and Slovenia. Compensation at Stadler Anlagenbau GmbH aligned with collective bargaining agreements.

**Employee development:** Training programs (technical, language courses), apprenticeship program with regional partners, annual feedback meetings.

**Grievance mechanisms:** Internal reporting through line management and HR functions (see S1, para. 32).

These policies apply across both operating entities and aim to ensure safe working conditions, fair treatment, development opportunities, and workforce stability.

## Workforce Composition

### **ESRS S1, para. 50-a** **Total number of employees**

Total employees (headcount) on the 31<sup>st</sup> December 2024: **518**

#### **By gender:**

Gender	Headcount	Share
Male	425	82%
Female	93	18%

Gender data is collected in accordance with national legal requirements. No data on non-binary gender identification is collected

#### **By country:**

Location	Headcount
Stadler Anlagenbau GmbH (Germany)	328
Willy Stadler d.o.o. (Slovenia)	190

The workforce profile reflects the manufacturing nature of operations, with a higher proportion of male employees in production and technical roles.

The values represent Stadler Anlagenbau and Willy Stadler combined.

### **ESRS S1, para. 66-b** **Employees by age group**

Age group	Headcount	Share
Under 30 years	150	29%
30–50 years	247	48%
Over 50 years	121	23%
<b>Total</b>	<b>518</b>	<b>100%</b>

The age distribution reflects a balanced workforce with strong representation across all age groups, supported by the company's apprenticeship program (see ESRS 2, para. 17-b).

The values represent Stadler Anlagenbau and Willy Stadler combined.

## Health and Safety

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### *ESRS S1, para. 88-b* *Work-related fatalities*

Category	2024
Fatalities – own employees	0
Fatalities – other workers on company sites	0
<b>Total fatalities</b>	<b>0</b>

No work-related fatalities occurred during the reporting period.

The values represent Stadler Anlagenbau and Willy Stadler combined.

### *ESRS S1, para. 88-c* *Recordable work-related accidents*

Recordable work-related accidents in 2024: **24**

The values represent Stadler Anlagenbau and Willy Stadler combined.

# ESRS G1

## Business conduct

### Corporate Culture

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**ESRS G1, para. 7*****Policies promoting corporate culture***

Business conduct at Stadler is governed by established management practices and principles embedded in the company's operational framework.

**Compliance framework:** Legal compliance is ensured through a systematic legal register (PAUL system) providing quarterly updates on regulatory requirements. Defined organisational responsibilities and management oversight ensure adherence to applicable laws and regulations.

**Business conduct principles:**

- Lawful, fair and transparent business practices
- Integrity in dealings with customers, suppliers, and business partners
- Responsible decision-making aligned with long-term business orientation
- Clear reporting lines for addressing potential misconduct

**Corporate culture:** As a family-owned business with over 7 generations of machine-manufacturing history, Stadler's corporate culture is built on responsibility, reliability, and long-term stakeholder relationships.

These values are reinforced through leadership behaviour, close cooperation across organisational levels, and consistent management practices rather than through formal incentive schemes.

## Supplier Management

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### **ESRS G1, para. 14**

#### ***Policies on relationship with suppliers***

Supplier relationships are managed through structured procurement procedures embedded in the integrated management system:

- Supplier evaluation process incorporating sustainability criteria
- Self-assessment questionnaires covering quality, environmental, and safety aspects
- Long-term partnership approach with stable supplier relationships
- Suppliers predominantly located within the European Union

No standalone supplier code of conduct currently in place. Enhanced supplier engagement program with formalized sustainability requirements planned for 2025 (see ESRS 2, para. 40-g)

### **ESRS G1, para. 15-a**

#### ***Management of relationships with suppliers***

Stadler's approach to supplier relationships is based on long-term cooperation, reliability, and quality.

Procurement decisions prioritise stable supply, technical performance, and compliance with contractual and legal requirements. The company focuses on suppliers located within the European Union, preferring long-term partnerships over transactional relationships.

Supply chain risks are managed through close cooperation with suppliers and ongoing monitoring of delivery performance and quality. Working predominantly with EU-based suppliers reduces regulatory and compliance risks, as these suppliers operate under established environmental, labour, and safety frameworks.

Sustainability considerations are integrated into supplier relationships through legal compliance and responsible business conduct expectations rather than through formalised ESG scoring systems. Supplier self-assessment questionnaires incorporate sustainability-related criteria (see G1, para. 14).

Enhanced supplier sustainability requirements are planned for 2025 (see ESRS 2, para. 40-g).