

Adtran

Building a secure tomorrow

ESG report 2024

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Foreword from our CEO

We are pleased to share our second environmental, social and governance (ESG) report for Adtran, which documents our progress in sustainability and energy management in 2024. As a publicly traded global company, we believe in transparency and realize the importance of sharing information about our sustainability efforts with our stakeholders, as these efforts will help shape our success moving forward. Similar to the previous year, the most relevant sustainability topics are identified in our double materiality assessment and described in our report.

In 2024, Adtran maintained vigilance in monitoring evolving global regulatory requirements. To support this, Adtran continued to work through various organizations. Our net-zero targets were reviewed and approved by the Science Based Targets initiative (SBTi). Our goal is to achieve net zero before 2050. Adtran also continues to participate with the Carbon Disclosure Project (CDP), where our efforts and progress are recorded. We embed an ecodesign guide in our product-development life-cycle process to aid in decision-making for the design and selection of components. We have strong processes and audits of energy efficiency in our facilities. While regulatory requirements are evolving globally, Adtran monitors them to ensure compliance.

Since our founding, we have been on a mission to be a trusted provider of global communications solutions. We aim to develop innovative technologies that create products and services, making communications simpler and more affordable for people everywhere. Additionally, we strive to foster an entrepreneurial environment supported by enthusiastic employees who exhibit an unwavering commitment to personal integrity and go beyond expectations to support our customers. It is our belief that to achieve this mission, we must approach everything we do with a sustainable mindset to reduce our impact on our environment. Reducing energy consumption in our products and facilities is beneficial for our customers, investors, employees and communities. We continually ask ourselves how we can improve our products to meet the needs of our customers, while minimizing our environmental footprint.

We believe you will find this report informative about our sustainability practices and progress. Our efficient products and services positively impact the flow of communications in the communities we serve, and we look forward to continuing this work to ensure a sustainable and connected world.



Thomas R. Stanton

Chairman Adtran Holdings, Inc. group and CEO Adtran Networks SE and Adtran Holdings

The four chapters of this ESG report

Our 2024 ESG Report is divided into four main chapters. Chapter 1 contains the Adtran Holdings, Inc. group's Net Zero Transition Plan, according to requirements from the Carbon Disclosure Project (CDP). This Transition Plan covers the Adtran Networks SE group, which is a 67% subsidiary of Adtran Holdings, Inc. group. We report this voluntarily because we regard this aspect as being very relevant.

Chapter 2 contains the Task Force on Climate-related Financial Disclosures (TCFD) report. This is also reported voluntarily as we regard its structure as relevant. In addition, it provides details on the scenario analyses and our climate-related risk assessment.

Chapter 3 comprises the combined separate non-financial report for Adtran Networks SE and the Adtran Networks SE group in accordance with section § 315b paragraph 3 of the German Commercial Code (HGB) and is referred to below as the "non-financial report" for the sake of simplicity. This non-financial report is prepared in accordance with §§ 315b and 315c, in conjunction with 289c to 289e HGB and also considers the general principles of the European Sustainability Reporting Standards (ESRS) Implementation Act and is subject to voluntary limited assurance in accordance with International Standards on Assurance Engagement (ISAE) 3000 (Revised). Only the non-financial report in Chapter 3 and the EU Taxonomy Regulation report in Chapter 4 are subject to this assurance engagement. All information in Chapters 1 and 2 of the ESG Report does not belong to the non-financial report and is not part of the limited assurance engagement.

Chapter 4 comprises the EU Taxonomy Regulation report for Adtran Networks SE. This report is part of the non-financial report and, as such, is subject to limited-assurance engagement.

1. Adtran Net Zero Transition Plan

1.1. About us

Adtran Holdings, Inc. group (also referred to as “Adtran” for the remainder of Chapters 1 and 2 unless otherwise specified) develops, manufactures and sells solutions for a modern telecommunications infrastructure. As such, Adtran’s products enable global communication between people by constituting substantial parts of the backbone and the backhaul and access parts of one of today’s most important and critical infrastructures.

Adtran has a globally distributed supply chain. Production focuses on the United States, the European Union (EU), and Asia. In addition to procurement and production, there are important process-based activities in the areas of scaled agile framework (SAFe), sales and marketing, quality assurance, compliance, sustainability and information technology (IT).

Our products for communication infrastructure address the United Nations (UN) Sustainable Development Goal (SDG) No. 9: Industry, innovation and infrastructure. In this way, we address key social aspects, including security against eavesdropping and the physical failures of this infrastructure.

The telecommunications infrastructure is an important enabler of substantial emission savings in other sectors, such as energy networks, the transport sector or building technology. Our products indirectly serve UN SDGs 7 and 11, Affordable and Clean Energy and Sustainable Cities and Communities. Moreover, SDG 13, Climate Action, is also efficiently supported by the considerable emission-saving potential enabled by our products.

Adtran’s addressable market encompasses several applications for fiber-optic transmission technology, Ethernet and passive-optical access, aggregation technology, solutions for network virtualization, encryption, synchronization and monitoring, and the software required for safe and secure network operations. These markets are globally distributed, with a focus on the United States and Europe.

We serve our customers both directly and through original equipment manufacturer (OEM) partners and value-added resellers (VARs). As an infrastructure-equipment provider, our customers are network and data center operators and large enterprises with telecommunications infrastructure.

The business models include the direct sale of products, the sale of products with associated maintenance contracts, and the operation of products. Expanding the service share of sales is a strategic company goal.

The demand for Adtran’s infrastructure solutions is driven by the global information and communication technology (ICT) trends in cloud computing, mobility (now 5G, in the future 6G), the internet of things / machine-to-machine (IoT/M2M), Industry 4.0, big data and high-performance computing (HPC), augmented reality / virtual reality (AR/VR), intelligent power grids and smart cities and buildings. In addition, we assume that the demand for ICT infrastructure solutions through both climate change mitigation and adaptation will increase as a result of the positive effects enabled.

Adtran operates more than 40 sites in 25 countries, running major sites in the United States, Germany, Poland, the United Kingdom and Israel.

1.2. About the Transition Plan

The aim of this Net Zero Transition Plan is to provide Adtran’s stakeholders with clarity about the actions Adtran intends to take toward achieving its net-zero ambitions in between 2034 and 2048. Progress against this Net Zero Transition Plan will be detailed within Adtran’s emissions reporting in the ESG Report and, from 2026, in the Annual Report.

The Transition Plan is part of Adtran’s long-term sustainability strategy. The company submitted its net-zero targets to the Science Based Targets initiative (SBTi) in 2023, and in July 2024, the targets were officially approved by the SBTi. The targets are valid for the entire company (Adtran Holdings, Inc. group, including the Adtran Networks SE group).

The main objective of Adtran’s Transition Plan is to lay the foundations for achieving the net-zero target in 2034 (Scopes 1 and 2) and 2048 (Scope 3), respectively. Moreover, we will promote the reduction of other emissions from stakeholders by working collaboratively with our value chain.

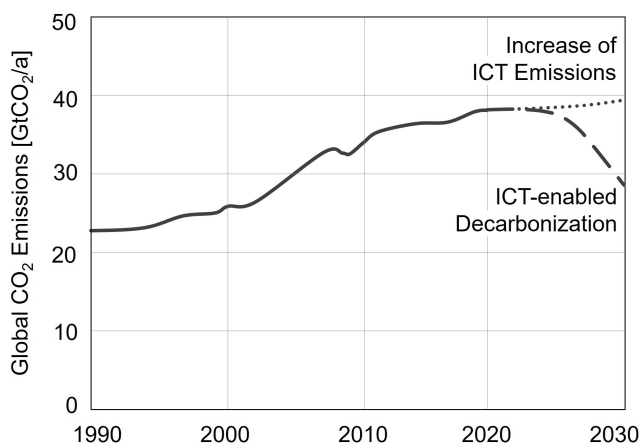
The Transition Plan is a multi-year plan that considers the regulatory requirements at the European level, objectives of the Paris Agreement, and the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

1.3. Our context

Adtran's products are part of the global internet or ICT sector. They are therefore part of an industry that consumes more than 2% of the electricity generated worldwide, and the trend is rising. This increase is a result of the persistent rise in internet bit-rates. As a consequence of electricity consumption, emissions from the ICT sector may also increase mid-term, despite efforts to decarbonize the sector.

The persistent bit-rate increase leads to the requirement for continuous improvements of the network equipment in terms of energy efficiency and related emissions and is one of the main reasons for our focus on corresponding ecodesign and for Adtran's participation in the SBTi.

The ICT sector is critical infrastructure. It enables the significant reduction of global greenhouse-gas (GHG) emissions in various other sectors such as transport and logistics, traffic, energy networks and agriculture. According to the Global e-Sustainability Initiative (GeSI), the savings potential is up to 10 times higher than ICT's own emissions. This is sometimes referred to as Greening-by-ICT. This is one of the few known ways to significantly reduce global energy consumption and associated emissions. This is shown below on the basis of global GHG emissions.



Global GHG emissions, projected mid-term ICT emissions increase, and the ICT-enabled decarbonization in other sectors according to #SMARTer2030 – ICT Solutions for 21st Century Challenges from GeSI.

Within the ICT wireline networks sector, Adtran ranks among the 10 largest suppliers globally in the sub-segments of optical networking, access switching and passive optical access. Since the wireline-networks segment also contains routing and core switching, none of which is covered by Adtran's portfolio, the total impact of our products on the wireline-networks sub-segment is <10%. Likewise, Adtran's contribution to total global ICT emissions is less than 1%.

According to our reporting on GHG emissions, the combined context analysis of the environmental and energy management systems and the comprehensive life-cycle assessments (LCA) of our portfolio, energy consumption and the related emissions are the main environmental impacts of our ICT devices. This is reflected in the materiality analysis in the non-financial report.

However, there are other environmental impacts. According to the analyses mentioned, the next most important effects are those resulting from the raw material consumption in the manufacturing of the devices and the related generation of waste electronic and electrical equipment (WEEE). These can be positively influenced by appropriate mechanisms of circular economy.

In addition, WEEE has a complex material composition, which makes the efficient recovery of valuable materials a challenging task. This recovery is critical due to the impact on raw materials. According to the EU list of critical raw materials from 2020, many critical raw materials, such as metals of the platinum group, and rare-earth elements, including gallium or germanium, are essential for the ICT sector.

Other ICT environmental impacts on humans and ecosystems include toxicity and water consumption. These are recorded in product LCA but are only of secondary importance relative to energy consumption and the related emissions.

Finally, related to employees, there are aspects of labor law, health and safety, as well as some other aspects, such as conflict minerals, modern slavery and corruption. Altogether, they necessitate a holistic approach to sustainability in ICT.

1.4. Governance

Adtran has two governance tiers, the Executive Management Team as the executive body and the Board of Directors as the supervisory body. In addition, stockholders' interests are represented in the Annual Meeting of Stockholders.

The Executive Management Team is led by the CEO. The responsibility for ESG-related governance functions is with the Vice President (VP) of Corporate Quality and Sustainability, who directly reports to the CEO. A Senior Director of Global Sustainability reports to the VP of Corporate Quality and Sustainability and is responsible for ESG matters and, as such, for the environmental aspects of emissions and their reductions.

In addition to the Executive Management Team, there is an international three-person ESG Committee in the Board of Directors. The ESG Committee is also responsible for the review of the group's annual ESG Report. As such, the Board of Directors is the highest governance body to review the impact, risk and opportunity analyses, and the ESG strategy including their effectiveness.

Consultation of stockholders is organized via the Annual Meeting of Stockholders. Regular consultation of other relevant stakeholder groups (e.g., customers) is, for example, conducted via a structured customer satisfaction survey. Where relevant, immediate customer or other stakeholder feedback is provided to the management board. In addition, members of the management board may also directly consult with dedicated stakeholders (e.g., strategic customers).

The review of emissions, other ESG aspects, and the impact, risk, opportunity and materiality analyses is performed regularly (at least once per year) and is in line with defined management processes.

1.5. Strategy and initiatives

Adtran's Transition Plan is deeply integrated into its business strategy. Most importantly, the aspects related to our Scope-3 targets are reflected in product ecodesign and life-cycle assessments (LCA), which are strategic parts of our product development. This is relevant since the product-related Scope-3 emissions are our highest emissions contributions.

Product-related emissions reduction activities can be split into targets that address emissions reductions and the circular economy. The product-related targets are complemented by our combined Scope-1 plus Scope-2 net-zero target.

Circular-economy activities primarily look at material efficiency and indirectly support emissions reductions by reducing the embodied carbon footprint of the products. Moreover, they include relevant parts of the value chain, namely customers and suppliers.

An overview of the most relevant targets, which constitute the core of our ESG strategy, is outlined in the following table.

Environmental topics and main targets

Topic	Targets
Climate change	SBTi near-term and net-zero long-term targets
Energy	Highest product-portfolio energy efficiency (qualitative) Huntsville energy utilization intensity (EUI) down to 55.0 in 2030 (62.8 in 2024 and 102.8 in 2016)
Circular economy	Spend-based supplier coverage in IntegrityNext of 90+% for all-Adtran Climate-change engagement with selected IC suppliers (qualitative) LCA coverage of all relevant new products (qualitative)

The targets cover the critical area of achieving carbon neutrality and cover relevant parts of the supply chain. As such, they also cover Adtran departments, such as Research and Development (R&D), Operations, Facilities and, indirectly, Sales.

More details on the net-zero and value-chain targets follow later in this Transition Plan.

1.6. Scenario analyses

Please refer to the scenario analyses in the TCFD report in this document.

1.7. Finance planning and low-carbon products

Turnover, capital expenses (CapEx), and operating expenses (OpEx) related to low-carbon products and repair activities are stated in the EU Taxonomy Regulation report in this document. This report holds for Adtran Networks SE. We estimate that a similar portion of low-carbon product activities holds for the entire Adtran Holdings, Inc. group.

The mid-term plan is to at least maintain low-carbon-products and activities and extend the repair services activities.

1.8. Engagement

1.8.1. Value chain engagement

Adtran engages with all players in its value chain. This holds for both sides, our customers and our suppliers. We are in bilateral discussions with several customers, exploring ways to further reduce emissions in their networks or data centers and to increase the efficiency of product and packaging materials.

Similarly, we engage with our supply chain in an attempt to reduce our upstream Scope-3 emissions. In later 2024, we started an initiative that addresses suppliers of integrated circuits (e.g., application-specific integrated circuits (ASICs) or field-programmable gate arrays (FPGAs)). These components dominate the emissions impact of our products, according to LCAs. The initiative is jointly followed by certain customers and other system vendors. It is intended as a mid- to long-term initiative. Numerical targets can only be defined later.

A key performance indicator (KPI) that addresses both certain suppliers and customers relates to the coverage of our portfolio with LCA. LCAs are required by an increasing number of customers, to help them understand the environmental impact of the products that they purchase. Calculating correct LCAs in various cases requires input data from the respective suppliers. The LCA-related KPI is recurring; it aims to provide LCAs for all new relevant products.

1.8.2. Policy engagement

Adtran is actively involved in several activities that address policy makers or have an influence on them. This is primarily based on ICT-specific industry associations, which in turn have the capability to influence policy makers.

Active Adtran engagement covers the Telecommunications Industry Association (TIA), the Fiber Broadband Association (FBA), and the German IT society's working group on photonic networks (ITG Fachgruppe 5.3.3, Photonische Netze). These associations consider sustainability aspects (particularly climate change), and they address policy makers.

Moreover, Adtran is actively engaged in international standardization bodies. In the emissions context, this is true with regard to the International Telecommunications Union, standardization sector, study group 5, question 7 (ITU-T Q7/5). The related standards are also used by policy makers.

1.9. Risks and opportunities

Please refer to the risk chapter in the TCFD report in this document.

1.10. Emissions

1.10.1. Transition Plan overview

A summary of Adtran's net-zero targets is outlined in the following table.

Overview on Adtran's Net Zero Transition Plan

GHGP Scope	Target year and target	Base Year	Coverage
Scopes 1+2 near-term	Down to 25% in 2032	2016	97% of the total Scope 1+2 (Scope 1: 100%, Scope 2: due to small energy use, small sales offices are excluded)
Scopes 1+2 long-term	Down to <10% in 2034		
Scope 3 near-term	Down to 60% in 2032		Sold-products use-phase and purchased-goods emissions, 98% of the total Scope 3
Scope 3 long-term	Down to <5% in 2048		

Scope-1+2 emissions will further be reduced after 2034 (toward zero), but 2034 is the official target year for the SBTi application.

The Scope-3 long-term target is further out in the future since it is mostly indirect downstream and not under our direct control.

1.10.2. Scopes 1 and 2

SBTi net-zero targets consist of near-term and long-term targets. Scope-1+2 targets must cover at least 95% of the combined Scope-1 plus Scope-2 emissions, and long-term targets must show a reduction of at least 90%. Target and base years and the reduction figures are listed in the table above. All emission figures are reported yearly on CDP and EcoVadis.

1.10.3. Scope 3

Target requirements for Scope 3 are similar to Scopes 1 and 2, with the exception that at least 90% of the total Scope 3 must be covered. From all applicable Scope-3 categories, we consider the two most relevant ones: the sold product use-phase and purchased components (the latter responsible for the vast majority of production emissions). These two categories account for 98% of our total Scope-3 emissions. They also cover the value chain since use-phase emissions fall into our downstream (customer) domain, and purchased components fall into our upstream (suppliers) domain.

1.10.4. Other targets (ISO 50001, LCA)

To support our net-zero targets and their ambition, we defined supportive targets, that directly and indirectly facilitate emissions reductions.

The first target is our International Standards Organization (ISO) 50001 electricity-consumption reduction target. We have reduced our total electricity consumption since 2005. In 2024, we defined a new electricity-consumption target for the company's main site in Huntsville. This site caters to ~60% of the electricity consumption of the entirety of Adtran. In 2030, the energy utilization intensity (EUI) shall achieve a value of 55, coming from ~72 in 2024 and from >100 in the past.

For Adtran Networks SE, this target is complemented by an ISO 50001 reduction target. This target is recurring and requires a yearly reduction of 1.9% until 2030. This energy-related target is externally validated via ISO audits.

The second target area relates to the LCAs that we perform on our products. LCAs are relevant because they state the products' environmental footprint and can provide guidance, via ecodesign, for improvements.

The LCA target requires that all new relevant products be covered by LCA. These LCAs shall be performed according to credible standards (ISO 14040/14044). This target is recurring.

1.10.5. Accounting and verification

Adtran's emissions are annually reported on CDP and EcoVadis, including external standards-based validation of ~99% of our total Scope-1, Scope-2 and Scope-3 emissions.

2. TCFD report

The TCFD defines requirements for transparent reporting on climate change related financial risks and opportunities. These requirements cover the aspects of management, strategy and risk management, as well as metrics and goals.

2.1. Governance

Climate change is the major environmental aspect addressed by Adtran's ESG department. This department reports to the VP of Corporate Quality and Sustainability, who directly reports to the CEO. In addition, the VP of Corporate Quality and Sustainability regularly reports to Adtran's ESG Committee, which is one of the committees with three named individuals within the Board of Directors. Therefore, aspects and key figures that are relevant to the climate are regularly presented to and discussed with the highest governance layers of Adtran.

Climate-related risks and opportunities are assessed in the ESG department, as part of Adtran's enterprise risk management (ERM) process. ERM also falls under the responsibilities of the VP of Corporate Quality and Sustainability. Therefore, climate-related risks and opportunities are also regularly reviewed in Adtran's highest governance layers.

2.2. Strategy

Operational emission reductions have been pursued at Adtran for a number of years. This applies both to the area of our ISO 50001 activities (i.e., electricity-related emissions), and to the area of transport and logistics, which is particularly concerned with reducing air freight. The reductions are achieved through electricity savings, photovoltaic installations at our main site in Meiningen, Germany, or an increase in the share of renewable energy as well as the continuously followed goal of minimizing air freight. Details on this can be found in the chapter on CO₂ emissions later in this report.

Emission reductions are pursued strategically in Adtran. This started in 2005 for our largest site, Huntsville. For Adtran Networks SE, emissions reduction strategies began in 2016 under the old name of ADVA Optical Networking SE, when we committed to our first SBTi targets. These legacy ADVA targets were continued in 2023; we extended them to the entirety of Adtran and to the net-zero targets. The latter targets were officially approved by the SBTi in July 2024.

Investigations into the resilience of our company strategy under different climate scenarios have been conducted. These analyses lead to the expectation that the general ICT infrastructure business is likely to increase due to ICT-enabled climate-change mitigation (Greening-by-ICT) and adaptation activities in other areas. Furthermore, it is expected that production will be more local again in the future to reduce transport emissions and certain supply-chain disruptions. Mid-term, we do not see the necessity of changing our climate-related strategy.

2.3. Risk management and climate change

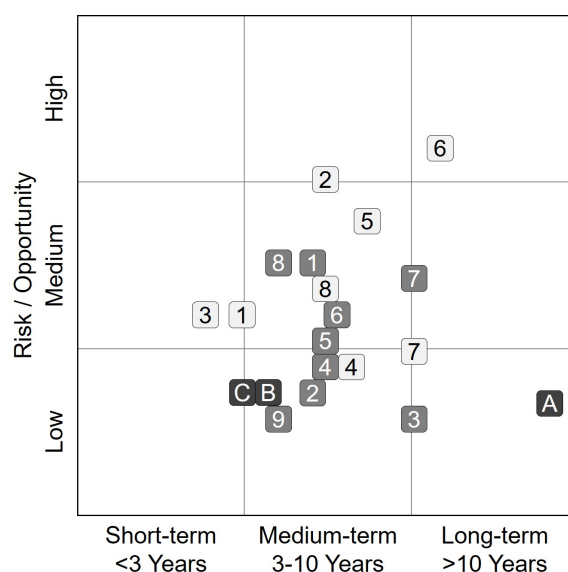
Climate-related risks and opportunities (opportunities where available) are regularly (at least once a year) and systematically examined at Adtran. This is done in two stages. First, an analysis of the climate risks and opportunities is performed using relevant reference documents, such as the IPCC AR5 and AR6.

In accordance with the TCFD specifications, both financial risks and opportunities in the transition phase toward carbon neutrality and physical climate risks, such as extreme weather conditions, are considered. As far as necessary and sensible, this also extends to the supply chain. Climate scenario analyses are also carried out for selected relevant areas. Details are given later.

The following table summarizes the relevant aspects of the analysis that we have identified.

Physical climate risks	
A	Sea level rise 0.3-0.6 m (toward 2100), especially at US west coast and in Asia
B	Extreme precipitation events in Asia and the Mediterranean area
C	More consecutive hot days, soil-moisture decrease and higher risk of droughts in Europe (Mediterranean area) and southern US
Transition risks	
1	High required ecodesign effort and cost
2	Higher ISO 50001 effort and cost
3	Fuel switching (buildings), cost and feasibility
4	Fuel switching (cars) and cost
5	Transport-mode shift, cost and feasibility
6	Higher carbon taxes
7	Cost for extended circular economy
8	Effort and cost for any new regulations
9	Negative impact on company image
Transition opportunities	
1	(Government) cooperation and rewards
2	Increase investors' long-term invests
3	Positive company image
4	Carbon-tax savings
5	Revenue through very efficient products
6	Revenue through mitigation/adaptation-enabling ICT
7	Strengthen resilience (company and supply chain)
8	Save transportation / travel cost

The aspects listed here take into account the location of our sites from today's perspective. The same is true for most of our suppliers' sites. The risks and opportunities are evaluated in the following diagram with regard to influence and the expected period of time for their occurrence.



Graphical representation of climate-related risks and opportunities. For the aspects presented here, see the table above for an explanation.

In particular, transition risk no. 1, expenditure on ecodesign, is accompanied by appropriate processes at Adtran.

In the second stage of assessing climate risks, they are integrated into the company-wide ERM if they meet the related requirements for consideration. To do this, they must meet certain criteria with regard to potential impact, probability of occurrence and time horizon. If this is the case, the relevant climate risks are listed in the company report. Conversely, they are not listed there if they merely represent a comparatively lower risk. The risk reports 2023-2025 list climate change as one of the ESG risks.

Climate-related risks are mitigated depending on their potential impact. In addition, financial opportunities are seized as long as they do not result in consequential risks in other areas (compare the do-no-significant-harm principle in the EU Taxonomy Regulation) and can be implemented promptly.

If a climate risk meets the criteria of company-wide risk management, mitigation rules automatically apply. This includes the definition of responsibility, regular management reviews and dedicated, tracked countermeasures.

Climate risks are addressed, among other actions, through SBTi participation, which in turn is part of the company's strategy. The corresponding measures to reduce emissions are therefore subject to regular internal and external controls. Therefore, over time, appropriate countermeasures are initiated as soon as there are significant deviations from the emission reduction paths.

For the analysis, we mainly used two relevant references with regard to transitional and physical risks:

- OECD / IEA. 2017: Energy Technology Perspectives 2017, Catalyzing Energy Technology Transformations
- IPCC, 2013: Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, T.F., D. Qin, G.-K. Plattner, M. Tignor, S.K. Allen, J. Boschung, A. Nauels, Y. Xia, V. Bex and P.M. Midgley (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, 1535 pp.

The International Energy Agency (IEA) reference describes above all measures that must be taken to avoid dramatic climate change, and the IPCC AR5 describes regional and pathway-dependent climate and weather events to be expected. For the 2024 assessment, AR5 was also complemented by IPCC AR6.

2.4. Metrics and goals

Adtran pursues science-based emission-reduction targets in the SBTi, as described before. These targets are part of the company's strategy. They include net-zero targets and have been approved by the SBTi in 2024. These targets cover 98% of Adtran's total emissions.

The metrics that are used to calculate climate-related risks and opportunities in the form of scenario analyses essentially come from two references that have already been listed in Chapter 2.3. Both references (IEA and IPCC AR5) define several scenarios in which climate change can be mitigated to different extents. Of these scenarios, Better-2°C Scenario (B2DS) (IEA) and Representative Concentration Pathways 2.6 (RCP2.6) (IPCC AR5) or Reference Technical Scenario (RTS) (IEA) and RCP6.0 fit well together since they amount to roughly the same levels of global warming in 2100. In addition, the B2DS / RCP2.6 scenario fits well with our SBTi net-zero near-term targets.

The risks mentioned in the references (and opportunities in the case of considering the transition phase) are first assessed qualitatively to confirm whether they are relevant to Adtran.

For the risks of the transition phase, we predominantly consider the cost (and cost savings) related to emissions. An analysis of our emissions shows that it is primarily Scope-2 emissions and certain Scope-3 emissions that need to be considered. For Scope 2 and Scope 3, transportation, this results from the amount of emissions on the one hand and the risk of rising costs due to CO₂ tax on the other hand. The same holds for Scope 3, product use. The results are presented in Section 2.5. Other opportunities were also considered (see Section 2.3). However, these parameters were not further quantified, as certain relevant parameters can only be quantified imprecisely.

The physical climate risks were examined for their relevance to Adtran with the help of the IPCC AR5. The supply chain was also considered. This results in a relatively high weighting of increasing drought, on the one hand, and extreme precipitation, on the other hand, in the corresponding regions. Rising sea levels is only seen as a risk in the second half of the 21st century.

2.5. Scenario analyses

The TCFD recommends analyses using at least two climate scenarios from relevant references. We use the IEA and IPCC sources mentioned above. Two of the scenarios dealt with therein show good agreement. These are the B2DS of the IEA and the RCP2.6 of the IPCC. Both describe a path to maximum global warming of less than 2°C. This is also the path Adtran committed to with its SBTi net-zero targets. The second scenario is the RTS of the IEA or the RCP6.0 from the IPCC. These describe a path that, despite certain measures, leads to global warming of more than 2°C. These measures are better than business as usual, but have proven to be insufficient for a target of below 2°C global warming.

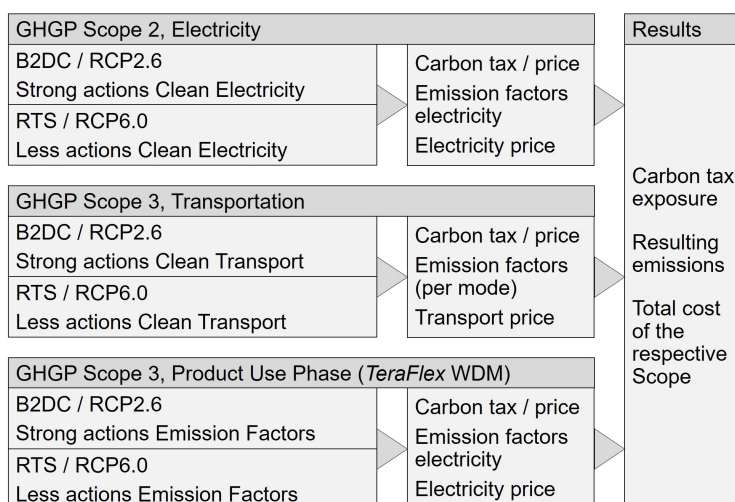
We analyze risks and opportunities in the transition phase for three areas: costs, cost savings and emissions, with regard to purchased electricity (Scope 2) and Scope 3, transportation and product use, respectively.

This is shown graphically below.

The resulting emissions and costs are calculated for the three cases (electricity, transport and product use). The cost consists of the prices to be paid to the respective supplier and additional CO₂ taxes.

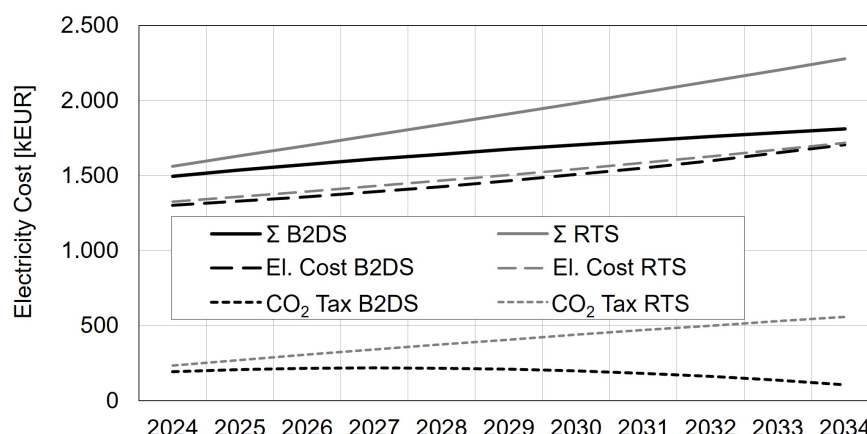
The best possible and realistic assumptions were made for all parameters – costs, taxes, emission factors, electricity consumption, tonnage volume, distribution of transport modes and product efficiency gain, which are supported with references

where possible. This inevitably leads to certain errors, but our analyses show clear trends that are retained, even if the parameters vary greatly.



Three climate scenario analyses. Risks and opportunities (potential costs and cost savings) in the transition phase in the areas of purchased electricity, transport and products use are examined. For this purpose, the scenarios B2DS / RCP2.6 or RTS / RCP6.0 according to IEA / IPCC are used.

The quantitative results for costs and possible savings in relation to purchased electricity are shown below. The timeline runs until 2032, the target year for our SBTi net-zero near-term goals. Costs are shown as a sum (Σ) and individually for CO₂ taxes and electricity costs for both scenarios, respectively.

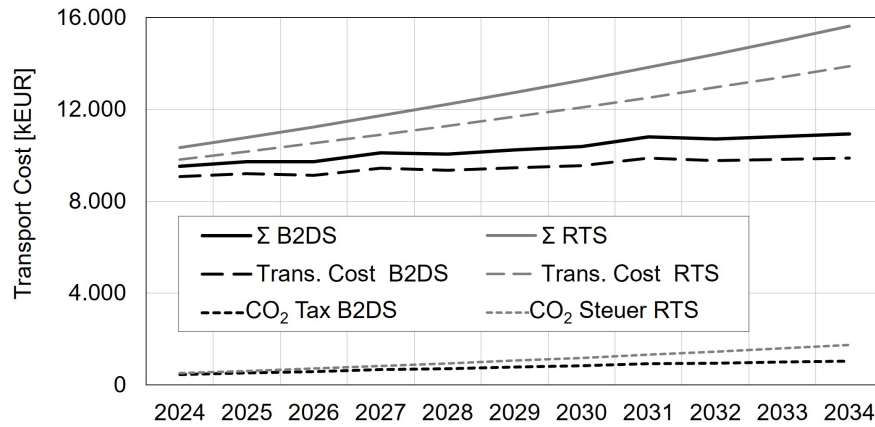


Scenario analysis of the costs of purchased electricity.

A stronger increase in the cost of green electricity was assumed, but at the same time a slight decrease in consumption as a result of more effective ISO 50001 measures was expected. Therefore, the electricity costs over time are almost identical for both scenarios. There is an increasing difference in the CO₂ tax, which results from the reduction in this tax as a result of an increasing share of green electricity.

Overall, there is an increasing cost advantage for the B2DS / RCP2.6 scenario. This scenario will also achieve the SBTi Scope 1+2 target in 2032. This goal is not achieved by the RTS / RCP6.0 path, although a certain emission reduction is achieved here, as well.

The quantitative results for the costs and possible savings in the area of transport are shown over time in the diagram below. For reasons of comparability, the time axis runs up to 2032, although transport emissions are not an SBTi target for Adtran Holdings, Inc. group. However, they are a significant Scope 3 contribution to our emissions. It is straightforward to show that the trends presented here will persist after 2032.



Scenario analysis of costs in the area of transport.

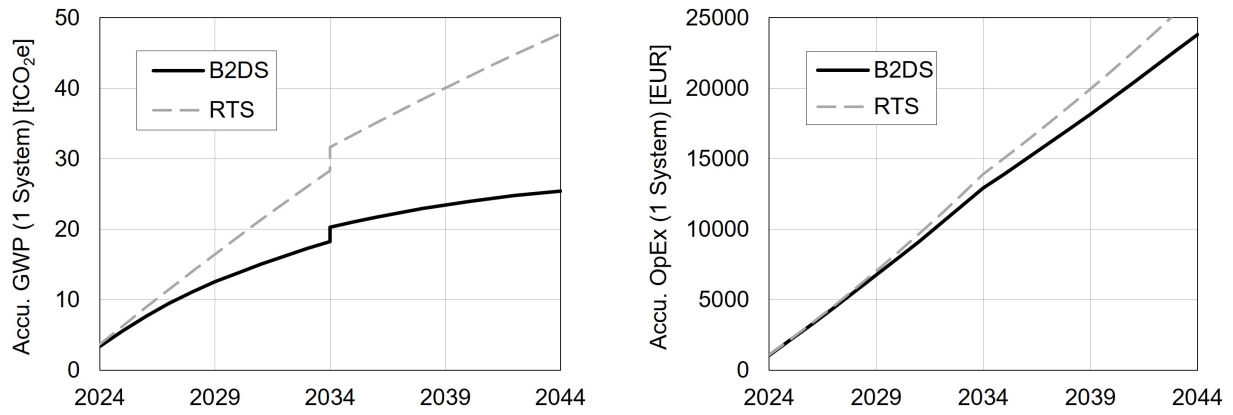
The diagram again shows transport costs, the related CO₂ taxes, and the sum of the two components for the two climate scenarios described above. It should be noted that the ordinate range shown is exactly eight times as large as in the diagram shown above for purchased electricity.

Cost and emission savings are achieved for the B2DS / RCP2.6 path by changing transport modes. Air freight is primarily to be reduced here. If applicable, this is supplemented by a certain shift of land transport to railway, as this has significantly better emission factors than road transport (difference of almost a factor of 10). Cost savings also result from reducing the CO₂ tax.

An annual increase in tonnage is assumed for this assessment. It is also assumed that, with the exception of rail transport, the emission factors of all other transport modes cannot be reduced significantly by 2032. In total, the emissions for the B2DS / RCP2.6 path are reduced, in contrast to the RTS / RCP6.0 path, where emissions continue to rise.

The development of the related emissions over time is not shown here; however, it is available upon request.

The third scenario analysis relates to the Scope-3 category product-use-phase emissions and the related cost. Here, we considered a member of our high-end coherent wavelength-division-multiplexing (WDM) products and the development of operational cost and emissions over a long period, up to 2044. We used the same scenarios as before. In addition, following lifetime-GWP optimization, we considered one product replacement with a more efficient successor product in the middle of the assessment period. The results for yearly cost and emissions global warming potential (GWP) are shown below.



Scenario analysis of accumulated operational GWP (left) and OpEx (right) in the area of product use.

In both scenarios, the yearly OpEx increases, whereas yearly GWP decreases. This is due to the energy cost and CO₂ tax increasing and emission factors for the energy consumed decreasing, respectively. The step or bend in the middle of the assessment period results from the product replacement. It adds CapEx, but afterwards, OpEx is lower due to better energy efficiency. Likewise, it adds the production emissions of the successor unit (the peak in the middle), but afterwards, yearly emissions decrease slightly faster. Apparently, regarding emissions, the replacement makes sense. For both parameters (cost and emissions), the B2DS scenario performs better. We regard this scenario analysis as an opportunity (rather than risk) example. Combined with the aspect of Greening-by-ICT, products like the one assessed here will be required in the future.

3. Combined separate non-financial reports according to HGB

3.1. General information

General basis for the preparation of the non-financial report

This chapter and the following Chapter 4 comprise the combined separate non-financial report for Adtran Networks SE and the Adtran Networks SE group, and are referred to below as the “non-financial report” for the sake of simplicity. This combined, separate, non-financial report for Adtran Networks SE and the Adtran Networks SE group is prepared in accordance with §§ 315b and 315c HGB in conjunction with 289c to 289e HGB and also considers the general principles of the European Sustainability Reporting Standards (ESRS). It is subject to voluntary limited assurance in accordance with ISAE 3000 (Revised). Only the non-financial report in this chapter and the EU Taxonomy Regulation report in Chapter 4 are subject to this assurance engagement. Any qualitative disclosure requirements related to Adtran Holdings, Inc. group are clearly marked as unaudited.

This chapter contains the components required by § 289c, namely a description of the business model and the material aspects that were identified. The business model is described in Chapter 3.1.2. Material aspects are identified in Chapter 3.1.3. and is described in Chapters 3.1.4, 3.2, and 3.3.

For 2024, no risks were identified in accordance with Section 289c Paragraph 3 No. 3 and 4 of the German Commercial Code, which are very likely to have or will have serious negative effects on the matters as defined in the German Commercial Code.

The scope of this non-financial report is the Adtran Networks SE group. In addition, qualitative statements are valid for both Adtran Networks SE and Adtran Holdings, Inc. group including the double materiality and risk assessments. However, the qualitative statements and the double materiality and risk assessments have only been assured in the context of their applicability to Adtran Networks SE. Any differences in quantitative metrics between Adtran Holdings, Inc. group and Adtran Networks SE have been clearly indicated. Statements regarding Adtran Holdings, Inc. group are not part of the limited assurance engagement performed by KPMG AG Wirtschaftsprüfungsgesellschaft (KPMG) .

Inclusion of upstream and downstream value chain

The statements, particularly the risk and materiality assessments, cover aspects of the upstream and downstream value chains. The supply chain is considered related to ESG aspects. Customers are considered primarily related to their environmental requirements. In this context, climate change is the most relevant aspect. The materiality assessment has been conducted according to HGB requirements, and an orientation towards the ESRS requirements, and covers the full value chain.

Omission of information due to intellectual property

No information was omitted due to intellectual property, know-how, or other reasons for confidentiality.

Disclosures in relation to specific circumstances

Time horizons

In orientation toward ESRS definitions, we consider a short-term time horizon to be between zero and one year, a medium-term time horizon between one and five years, and a long-term time horizon of five years or more. In addition, we use periods of three consecutive years in the context of our ERM assessment.

Value chain estimation

In-scope value chain data include production-related emissions of the components that we purchase upstream, and the use-phase emissions of our sold products downstream. For both, upstream and downstream emissions, we must rely on averaged emissions data, due to challenges related to primary data availability from our large number of suppliers and customers. For both upstream and downstream data, we use the emissions factors as proposed for the ICT industry in International Telecommunication Union - Telecommunication Standardization Sector (ITU-T) recommendation L.1470, which outlines GHG emission trajectories for the ICT sector. ITU-T L.1470 states emission factors that are slightly better than global average. For customers and suppliers, we regard these factors as appropriate, as relevant customers and suppliers use renewable-energy-powered data centers and facilities to operate their networks and operations already. We are working to improve primary data availability through the utilization of tools such as IntegrityNext, a supply chain management tool.

Sources of estimation and outcome uncertainty

We regularly assess our use of estimates and judgements in our non-financial reporting and seek to utilize only precise primary data wherever possible. Excluding averaged downstream emissions data and total hours worked, all quantitative metrics included within this report are precise. However, upstream environmental impacts are calculated using LCAs, which have inherent uncertainty due to the assumptions and scenarios utilized in the assessments.

Changes in the preparation or presentation of sustainability information

There is no change in scope related to qualitative statements. Qualitative statements are presented for the entire Adtran Holdings, Inc. group. However, we are not obligated to report quantitative numbers for Adtran Holdings, Inc. group, but only for the Adtran Networks SE group, with regards to HGB. Any quantitative disclosures for Adtran Holdings, Inc. group have been reported voluntarily, and any missing quantitative disclosures for Adtran Holdings, Inc. group will be published in a separate stand-alone report, which is not subject to the voluntary limited-assurance engagement by KPMG in accordance with ISAE 3000 (revised). Any qualitative information about Adtran Holdings, Inc. group is marked with < > as unaudited.

Similar to last year, the report also considers the general principles of the ESRS, but does not fulfill the extensive disclosure obligations and reporting requirements of the ESRS.

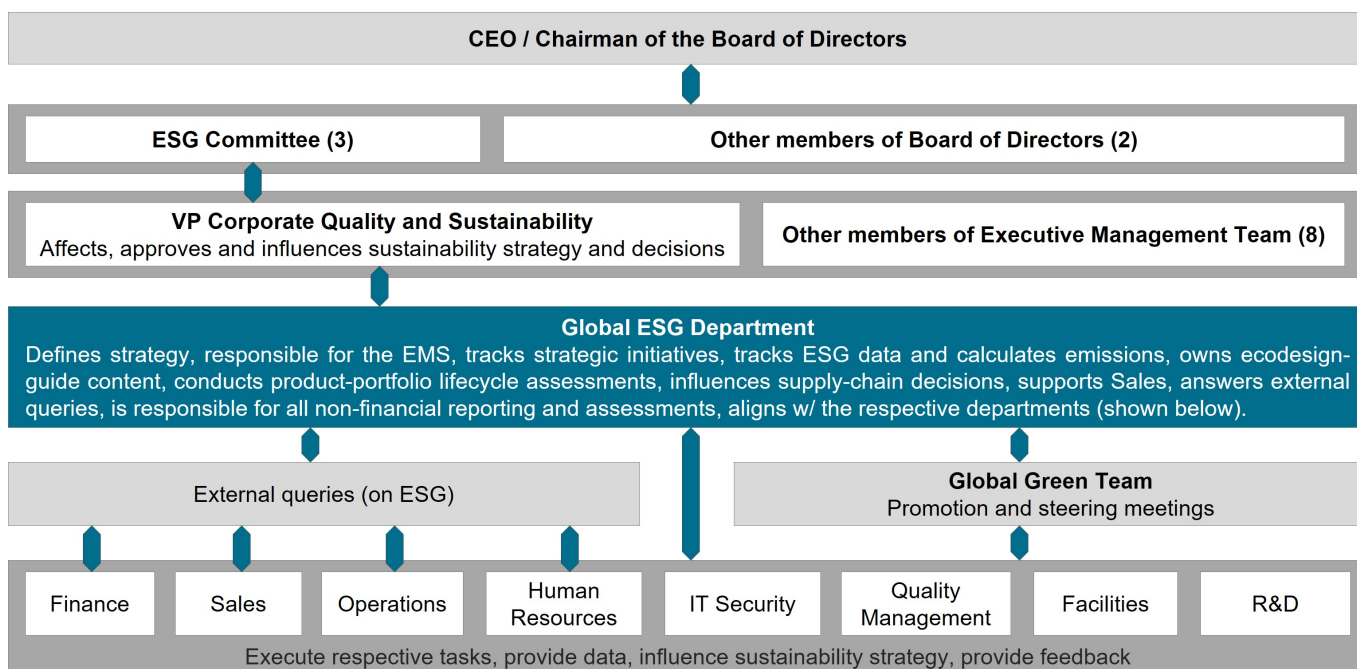
Reporting errors in prior periods

No material prior periods reporting errors have been identified.

3.1.1. Governance

The roles of administrative, management, and supervisory bodies

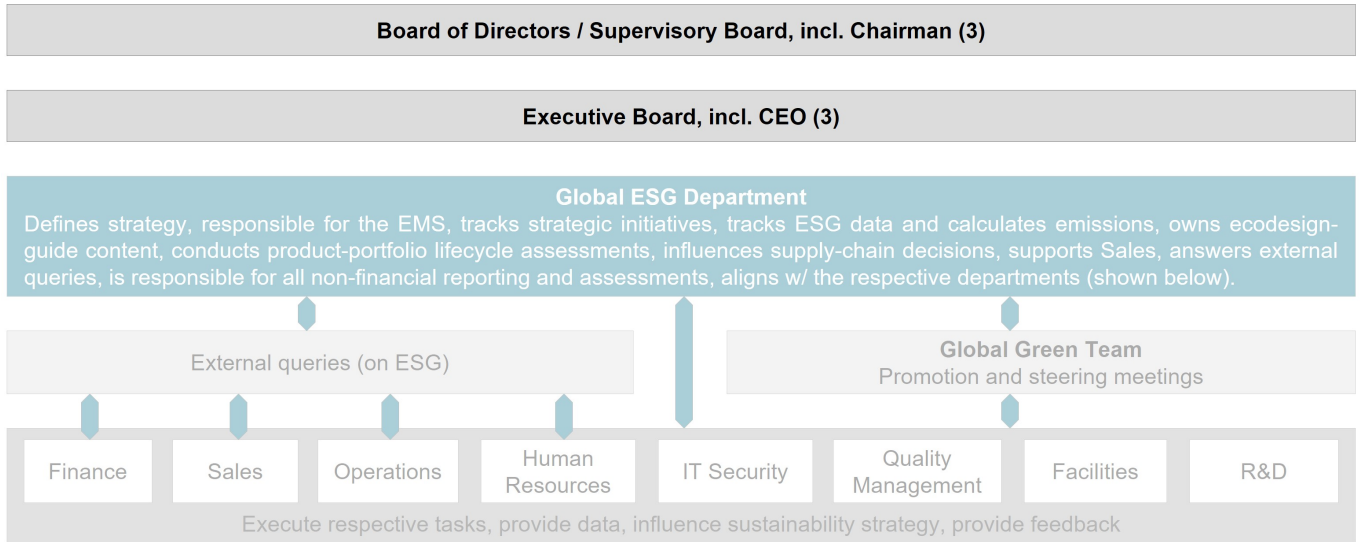
An overview of Adtran Holdings, Inc. group's sustainability-related governance bodies, including reporting lines, is outlined below. The three ESG Committee members and the two other members of the Board of Directors are independent non-executives, while all members of the Executive Management Team are executives. We start with Adtran Holdings, Inc. group overview since Adtran Networks SE does not have an ESG group or dedicated ESG Committee.



Within the Adtran Holdings, Inc. group, the Global ESG department is responsible for sustainability oversight, materiality and risk assessments, reporting and compliance, LCA and the content of our ecodesign recommendations. Similar to the Global Green Team, it consists of members of both Adtran Inc. and Adtran Networks SE. As such, the Global ESG department is also responsible for Adtran Networks SE. This includes the oversight and embedding of sustainability within the supply chain. The head of the Global ESG Department reports to the VP of Quality and Sustainability, who, as part of Adtran Holdings, Inc. group Management Team, reports directly to the CEO. The VP of Quality and Sustainability also regularly reports on sustainability matters to the ESG Committee, which is a sub-committee of the Supervisory Board. Within ESG Committee meetings, material sustainability matters and associated impacts, risks and opportunities, (IROs) are reviewed, and progress against each matter is assessed. The ESG Committee is also responsible for voicing stakeholder feedback and concerns in relation to Adtran's sustainability performance.

The CEO, the ESG Committee, the VP of Quality and Sustainability, and the Global ESG Department are responsible for the management of sustainability matters, including group-related policies and strategies. The CEO is responsible for decision-making on material IROs that have a significant impact on CapEx or OpEx, such as investment in the production or use of renewable energy.

The governance structure within Adtran Networks SE varies slightly, with key differences outlined in the diagram below. Within Adtran Networks SE, the Supervisory Board consists of three independent non-executive members, while the Executive Board consists solely of three executive members.



The Global ESG Department shown in this diagram is the one of the Adtran Holdings, Inc. group, as shown before. Neither the Adtran Networks SE executive or the supervisory boards are involved in the daily operations of the ESG department. However, they are involved in supervising the production of non-financial (ESG) reports.

Skills and expertise related to material sustainability matters

As described above, sustainability matters are followed by the Adtran Holdings, Inc. group's Executive Management Team and Board of Directors. Both bodies have a collective 20+ years of sustainability experience, with deep expertise in carbon management and energy efficiency. To broaden its pool of expertise, the Global ESG Department regularly undertakes sustainability trainings, collaborates with German research institutions, and actively participates in industry forums and associations. All members of Adtran's ESG governance structure also have in-depth knowledge of sustainability matters specific to the ICT sector, including regional specificities.

Employee representation

Employees and other workers are represented by the Senior Vice President (SVP) of Human Resources, who reports directly to the CEO. They are also represented, in terms of mediation between employees and the company, by the works council of Adtran Networks SE.

Board and management diversity

For Adtran Networks SE, 33% of Supervisory Board members are female, while 0% of Executive Board members are female.

Information provided to and sustainability matters addressed by the undertaking's administrative, management, and supervisory bodies

Sustainability matters are independently presented to, and discussed with, the CEO, Management Team, and Board of Directors, represented by the ESG Committee. These meetings take place quarterly at minimum, with additional meetings held as needed, in instances of material and unexpected events. Material impacts, risks, opportunities, and forward-looking planning and actions are also discussed during these meetings. Sustainability matters reviewed by the CEO, Management Team and Board of Directors in 2024 include the progress of our SBTi net-zero emissions targets, new ESG regulations and ESG activities related to the value chain.

Due-diligence processes

The Global ESG Department is responsible for the implementation of due-diligence processes related to all material sustainability matters. Due-diligence processes consider relevant regulatory requirements, best practice and industry guidance, and apply to how we engage with our suppliers, customers and investors. For our most material sustainability matters, including climate change and energy, we have set appropriate targets for minimum requirements, which inform our strategic decision-making, including decisions on CapEx or OpEx and risk management.

Integration of sustainability-related performance into incentive schemes

In 2024, sustainability-related performance was not reflected in any incentive schemes in Adtran Networks SE.

Statement on sustainability due diligence

All material sustainability matters, including associated IROs, are supported by respective due-diligence processes.

For the material sustainability matter of climate change, Adtran Holdings, Inc. group has group-wide net-zero targets and an energy-reduction strategy. Adtran Networks SE is covered by this and does not have independent targets or a related strategy. This is supported by regular monitoring of our Scope-1, Scope-2 and Scope-3 emissions and site management according to the ISO 50001 energy management system. For the circular economy, we regularly track relevant requirements, which have prompted us to begin offering refurbished products and increasing engagement with our suppliers in resource use and reduction. While we are still enhancing our due-diligence approach in relation to workforce-related sustainability matters, we monitor employee feedback via engagement surveys and track employee turnover and retention, as well as diversity metrics. We are working to further develop our due-diligence approach in this area throughout 2025.

Risk management and internal controls over sustainability reporting

ERM is a robust process within Adtran Holdings, Inc. group and is inclusive of ESG risks. It consists of continuous tracking of actual and potential risks, with quarterly reporting to the CEO, Management Team and Board of Directors. ESG risks are also monitored and managed by the ESG Committee in quarterly review meetings. Risks are rated based on their financial impact on the business, within a three-year period and the likelihood of occurrence. Financial impacts include loss of customers, loss of revenues, reputational damage or legal violations. Comprehensive risk tracking also enables us to identify appropriate mitigation actions. In 2024, the relevant ESG risks in the ERM were related to climate change, a circular economy, and new ESG regulations.

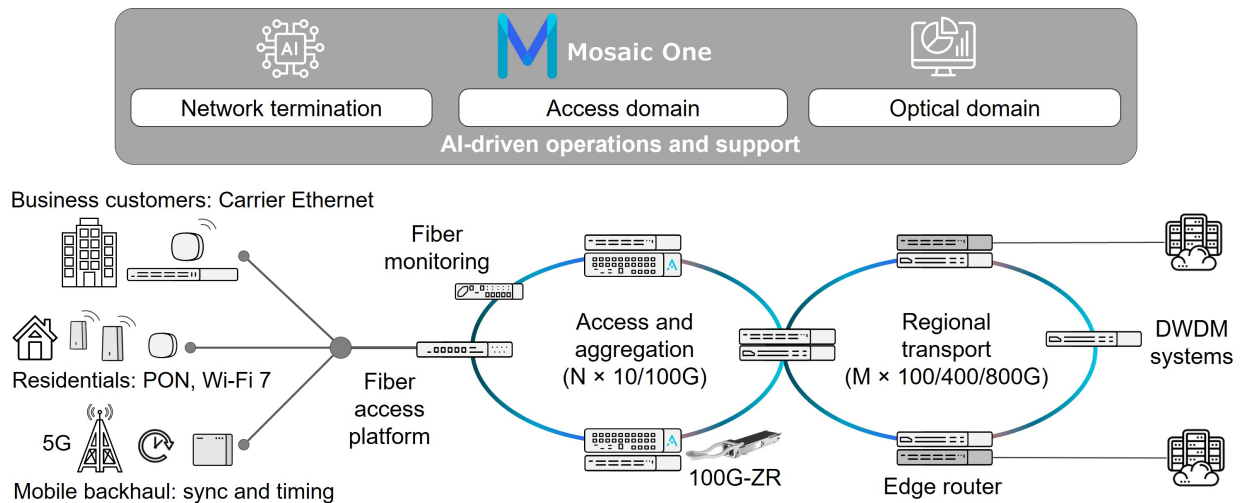
3.1.2. Strategy

Strategy, business model, and value chain

An overview on the products and services of Adtran Holdings, Inc. group is given in the following figure. The portfolio of ICT network products includes fiber-optic (WDM) transmission technology, Ethernet access and aggregation technology, PON and DSL subscriber solutions, and solutions for the virtualization of network functions. Within this portfolio, Adtran Networks SE covers WDM and Ethernet solutions. In addition, Adtran Networks SE supplies technologies for Layer-1 and Layer-2 encryption, network synchronization and monitoring, as well as the software necessary for the safe and efficient operation of the networks.

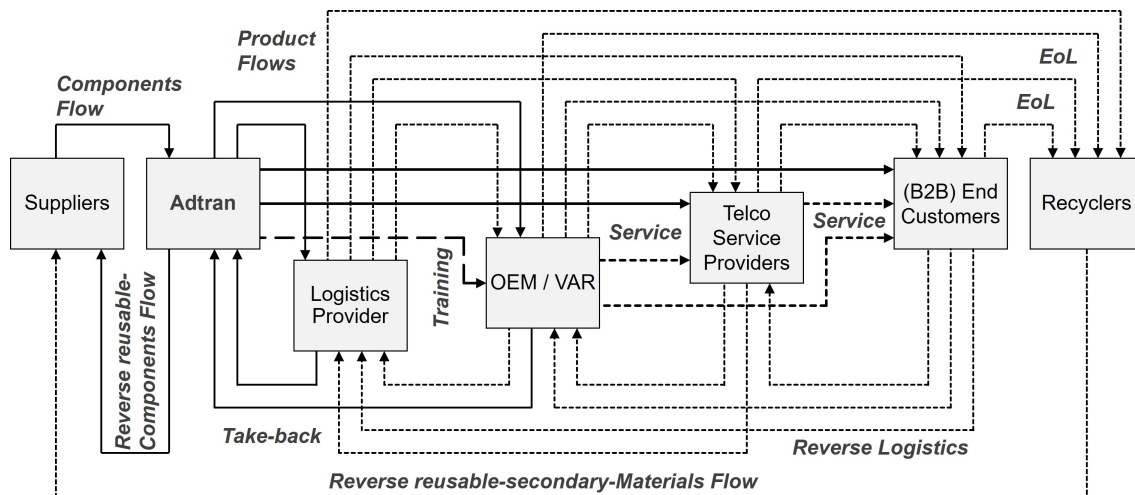
In addition, we offer maintenance and installation services, including the respective reverse logistics.

Adtran Holdings, Inc. group portfolio of services



Our markets are geographically distributed on all continents, with a focus on Europe and North America. However, we do not ship to North Korea, Iran, Sudan, Venezuela, Belarus, and Russia due to internal blacklisting. Our key customer groups in terms of revenue are tier-1 and tier-2 telecommunication networks operators, large enterprises with owned data centers, and data center and cloud operators. Unlike Adtran Holdings, Inc. group, Adtran Networks SE did not sell consumer products in 2024 or before; currently, we are not planning to do so. Our value chain consists of contract manufacturers, photonic and/or electronic components suppliers, logistics-service providers upstream, and our customers downstream. We serve our customers directly and indirectly via resellers or OEM partners. An overview of the Adtran Networks SE value chain is given in the following figure.

Adtran Networks SE. Value chain visualization



One of our main business roles as Adtran Networks SE is to be a systems integrator. In addition to our internalized production of certain product components, we also purchase optoelectronics components and integrate these into our self-developed products. The products are then shipped to our customers, either directly via logistics providers, or indirectly via resellers or OEM partners. Some of our customers, notably network operators, serve residential or commercial customers, while we also serve commercial customers, including enterprises and data centers, directly.

Revenue and headcount

Adtran Networks SE total revenues were EUR 438 million in 2024. These revenues were generated solely in the ICT sector. Adtran is not active in other sectors, and we are not directly involved in or sell to customers who are directly involved in any activities related to fossil fuel or chemical production, controversial weapons, or the cultivation and production of tobacco.

As of 31 December 2024, Adtran Networks SE had a total of 2,174 employees worldwide, with 1,570 in Europe, the Middle East and Africa (EMEA), 313 in the Americas and 291 in the Asia-Pacific region (APAC).

Sustainability-related goals of products and services

Aligned with the findings of our materiality and risk assessments, our main sustainability-related goal for our products is to achieve the highest possible energy efficiency. This results from the material (sub-) topics of climate-change mitigation and energy efficiency. This goal applies to all products and regions and primarily addresses customers as stakeholders. Achieving this goal directly benefits customers by helping them reduce their own carbon footprints. This overarching goal is also supported by embedding circularity into our product strategy by conducting product LCAs and utilizing ecodesign principles. The stakeholder groups that benefit most from this goal are our customers, resellers, OEM partners, and investors, as achieving energy efficiency in our products will accelerate downstream decarbonization, subsequently helping to reduce our customers, resellers and OEM partners' Scope-2 emissions while satisfying investor demands for energy efficient products.

Adtran is in the mid-sized vendor group (with a number of employees somewhere between 1,000 and 10,000) of the ICT network-equipment sector. Additionally, in specific product segments — including WDM transport and Ethernet access and aggregation equipment — we are among the top 10 vendors in each of these segments in terms of revenue. Therefore, we are in a credible position to pursue and achieve ambitious product-related sustainability targets.

Our product-level focus on improving energy efficiency and circularity will remain our priority in the medium and long term. Our energy-efficiency ambition is the most critical, as it impacts our products' use-phase emissions and, consequently, our Scope-3 emissions and our customers' Scope-2 emissions. Additionally, designing for circularity addresses the important challenges of raw material use, waste, and production-related emissions, affecting our upstream business activities and value chain. This can be done, for example, by designing products such that at the end of their life, recycling can achieve efficient results. In addition to our product-level focus, we are actively working with our suppliers to support them in their decarbonization journey by launching a dedicated bilateral engagement with selected suppliers in 2023. We are currently working to expand this initiative to include additional suppliers. We also plan to expand our circular-economy action plan to increase our refurbished-product offerings and add new standards to our ecodesign process.

The current and future sustainability benefits of ICT products include the enablement of climate-change mitigation and adaptation activities in other sectors, such as transportation, buildings or agriculture. Mitigation and adaptation activities in these sectors require real-time, extensive observation of their respective systems, generation of data-driven insights, and the use of those insights to drive process efficiency. These activities therefore require data transport, which is enabled by Adtran products.

Interests and views of stakeholders

In the context of sustainability, we define relevant stakeholder groups as those who have an interest in, influence on, or are influenced by Adtran's sustainability strategy, actions or reputation. We outline our key stakeholder groups and how we engage with them in the table below.

Stakeholder group	Type of interaction	Purpose of interaction	Outcome of interaction
Customers	Regularly, partially bilaterally, via customer alliances (JAC) or customer satisfaction surveys (CSAT)	Collect relevant views and requirements, particularly environmental and social	The influence on climate-change actions
Shareholders, investors	Regularly, bilaterally		
Employees	Regularly, via surveys, roundtables, townhalls, and bilaterally	Feedback on employee satisfaction	Voluntary turnover rate
Suppliers, contract manufacturers, logistics and energy suppliers	Regularly, partially bilaterally	Engage primarily regarding improvement of environmental impact of supply chain	Ongoing collection of LCA and other data
OEMs, VARs, service partners	Bilaterally		Provisioning of compliance data
Legal, government agencies	Purpose-driven	Collect upcoming requirements	Compliance, registrations where applicable
Associations, alliances, NGOs	Purpose-driven and partially regularly	Collect requirements and actively engage regarding environmental aspects	Cooperation, e.g., chairing working groups and working on whitepapers
Communities	Partially regularly	Engage regarding social or environmental aspects	Charity events and volunteer engagement

Since we do not have access to our end-users, they have not been included in the table above. End-user interests are communicated to us via our customers.

Adtran's approach to stakeholder engagement is to maintain a dialog with the respective parties as regularly as possible. For certain stakeholders, including strategic customers, our largest investors, and important industry associations, this interaction often occurs daily. For other stakeholders, engagement is facilitated on a quarterly basis or on demand.

Examples of engagement include dedicated on-demand activities with key customers and investors, customer satisfaction surveys, employee surveys, and active participation in industry associations, such as the TIA and FBA, where Adtran Holdings, Inc. group chairs sustainability working groups.

These activities provide us with regular insight into the sustainability priorities of our most important stakeholders and give us valuable feedback on their perspectives and evaluation of our sustainability activities. Relevant results are reported internally to the Management Team and Board of Directors. If any feedback is related to material risks or opportunities and requires immediate attention, corrective actions are taken.

Details on how stakeholder interests and views are taken into account in our materiality assessment process will be provided in the next section.

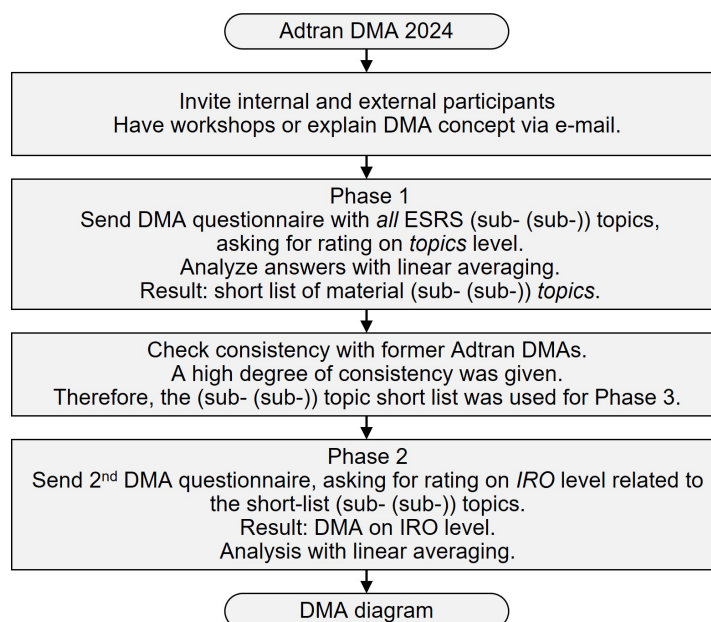
3.1.3. Material impacts, risks and opportunities and their interaction with strategy and business model

In preparation for mandatory Corporate Sustainability Reporting Directive (CSRD) reporting in Germany, our 2024 double materiality assessment (DMA) process was oriented toward the ESRS while ensuring compliance with HGB requirements.

Our process

Our 2024 assessment builds on the approach we have taken for several years, assessing double materiality through two dimensions: financial and impact materiality. Consistent with both ESRS and HGB definitions, we consider financial materiality from an "outside-in" perspective, assessing how society and the environment impacts our business, while impact materiality relies on an "inside-out" perspective, considering how our business impact society and the environment. This year's assessment expands on previous approaches by assessing materiality at the level of IROs, in addition to the topic level, oriented toward the ESRS.

An overview of the DMA process is given in the following flow chart.



Value chain and stakeholder mapping

To conduct our assessment, we began by first identifying relevant value chain and business activities, affected stakeholders and users of sustainability information to determine potentially relevant sustainability topics. Our understanding of our value chain, business activities and stakeholders is consistent with previous years' materiality assessments, as outlined in this report. From the stakeholder groups identified in this report, we determined that the most relevant or affected groups are customers, investors and our own workforce. We determined this based on the stakeholders' levels of interest and engagement with our ESG strategy and performance.

Identification of relevant sustainability topics

Leveraging our understanding of our value chain and stakeholders, we used the ESRS 1 AR-16 list of sustainability matters as our primary topic list. Additionally, in line with Section 289 c (2) of HGB, we must also consider environmental, employee-related and social aspects, as well as aspects related to respect for human rights and combating corruption and bribery.

Surveys were shared with internal subject matter experts from Adtran Holdings, Inc. group's Global Green Team, as well as colleagues selected as a proxy for external stakeholder groups, to determine which topics should be assessed at the IRO level. For this year's assessment, a broader group of internal participants was selected for input to ensure balanced representation. In addition, 5 representatives of different customers participated the assessment. The participants were instructed to rate each topic according to a five-point scale, with a score of one indicating a minimal rating and a score of five indicating a critical rating. A threshold of 3.5 (above average of the 1-5 range) was chosen. However, for the final averaging, a lower threshold of 2.7 was chosen since otherwise (due to averaging between the participants), no topic would have been rated material. This threshold was similar to the one used in the 2023 Adtran Networks SE DMA.

Assessed topics

The list of ((sub-) sub-) topics that resulted from phase 1 according to the previous flow chart and that was used for IRO scoring in phase 2 is summarized in the following table.

		Topic	Sub-topic	Sub-sub-topic
Environment	E1	Climate change	Climate-change mitigation	
			Climate-change adaptation	
			Energy	
	E5	Circular economy	Resource inflows	Increase of circular product design Increase of circular material use Minimization of primary raw material Sustainable sourcing and use of renewable resources
			Resource outflows	Durability of the products Repairability of the products Recyclable content in products and their packaging
			Waste management	
Social	S1	Own workforce	Working conditions	Work-life balance
				Health and safety

While topics shortlisted for the assessment were largely consistent with the findings of previous years' materiality assessments, the topic of diversity and inclusion did not meet the threshold for progression to IRO identification, a change from the previous reporting period.

Identification and assessment of material impacts, risks and opportunities

Following the assessment of relevant topics, we identified corresponding IROs that could potentially be material for the business. This process again involved engagement with internal subject matter experts from the Adtran Holdings, Inc. group's Global Green Team, as well as colleagues selected as a proxy for external stakeholder groups. A total of 20 impacts, 7 financial risks and 14 financial opportunities were identified for assessment; for each IRO identified, the following characteristics were considered:

Positive or negative impacts
Actual or potential impacts
Risks and opportunities
Short-, medium- or long-term time horizons
Place in the value chain
Relevant business activity
Global versus Europe specific IRO

Materiality determination

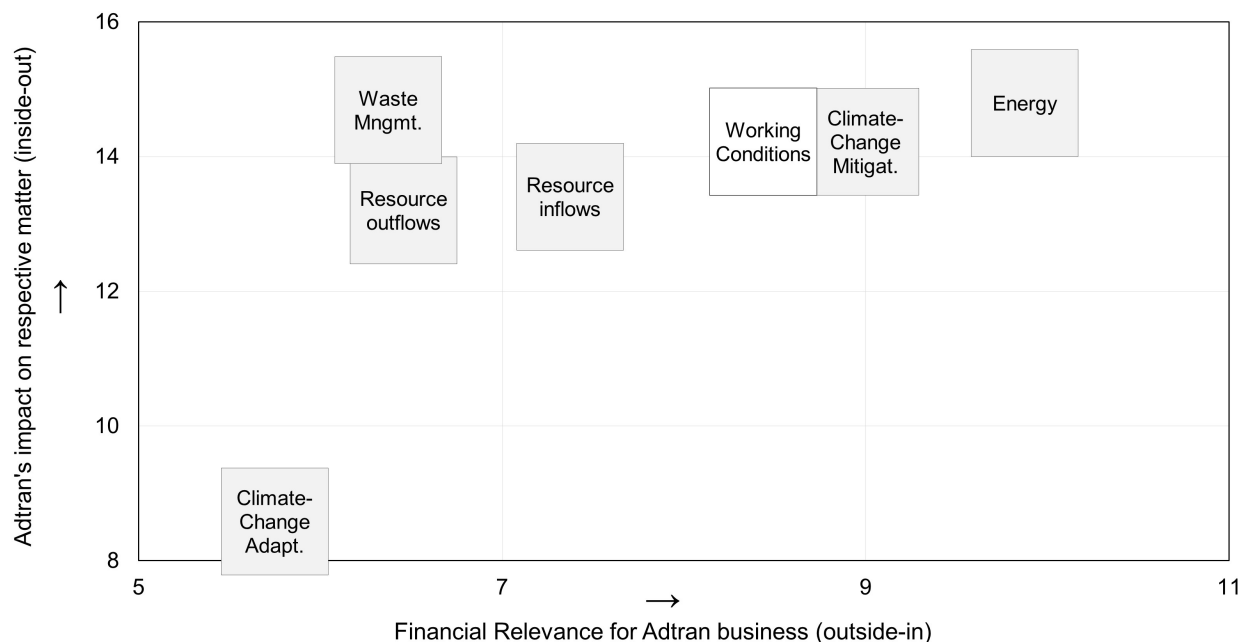
To determine the materiality of the identified IROs, surveys were again shared with the stakeholders of the previous flowchart. The respondents were instructed to score each impact according to scale, scope, irremediability, negative impacts, and likelihood. In addition, each financial risk and opportunity was scored according to magnitude and likelihood. For all scoring, a five-point scale was used.

Impact Materiality	Financial Materiality
Scale: how grave or beneficial the impact is on society or the environment	Magnitude: size of the financial risks or opportunities
Scope: how widespread the impact is on society or the environment	
Irremediability: how difficult it is to reverse negative impacts	
Likelihood: how likely it is that the potential impact, risk or opportunity will occur	

Scale, scope, irremediability, magnitude and likelihood each scale between 1 and 5. Scale, scope and irremediability are linearly averaged and then, similar to magnitude, multiplied by likelihood. Therefore, both DMA dimensions scale between 1 and 25.

The assessment resulted in two clearly separated clusters of related topics. The materiality threshold was set approximately in the middle of the gap between the two clusters. The following diagram only shows the cluster above the threshold, i.e., our material (sub-) topics.

In the diagram, the inside-out axis represents the averaged impact, while the outside-in axis represents the averaged risks and opportunities. Adtran's risks and opportunities depend on its impacts; therefore, each point in the diagram below maps sustainability matters across two dimensions.



The diagram presents a zoom in the full range of 1-25 for both axes. This has been done for clarity. The abbreviated material topics are climate-change adaptation and mitigation, and waste management.

Internal participant responses were weighted equally, as subject-matter experts together provide a more holistic perspective of the most material IROs for our business.

Decision-making, internal controls and interaction with risk management processes

The results of the DMA were approved by the Adtran Holdings, Inc. group's Board of Directors. Decision-making and controls related to the oversight and management of material IROs are the joint responsibility of Adtran's Global ESG Department, ESG Committee and Executive Management Team, as outlined in Section 3.1.1.

The DMA process is aligned with the Adtran Holdings, Inc. group's risk management process. ESG-related financial risks are within the scope of the Group's enterprise risk register, and are assessed according to their potential impact on the business, and likelihood of occurrence, similar to the scoring methodology used in the DMA. The thresholds used to assess the magnitude of risks are the financial impact of EUR 3 million within three years, with a likelihood of greater than 50%. ESG-related financial risks and, where applicable, opportunities are re-evaluated on a quarterly basis.

Interaction of material impacts, risks and opportunities with Adtran's strategy and business model

The material sustainability matters and corresponding IROs identified throughout the DMA are directly linked to Adtran's strategy and business model, as described in the table below.

Material sustainability matter		Interaction with strategy and business model
E1	Climate change	Climate change adaptation and mitigation and energy-use considerations are reflected in the Adtran Holdings, Inc. group product strategy and Net-Zero ambition. This covers Adtran Networks SE as well. Our plans to transition to a low-carbon product portfolio and reduce our own carbon footprint not only help to mitigate any climate change-related negative impacts or financial risks but also create positive impacts and financial opportunities. Offering low-carbon products can increase Adtran's revenues and enable climate-change mitigation activities in other sectors and for our customers. This is true, for example, for customers who do not yet run their networks or data centers with renewable energy.
E5	Circular economy	Circular economy considerations, including resource inflows, outflows and waste, are also integrated into the Adtran Holdings, Inc. group product strategy and increasingly into our core business model. Applying circular-economy principles is challenging for products whose LCA is dominated by the use phase. For such products, lifetime extension beyond nominal lifetime may lead to negative effects on the resulting total lifetime emissions. We expect that in the medium-term, the ability to offer recycled and refurbished products will lead to positive impacts and financial opportunities. Our business model might also evolve to include product and/or service leasing offerings.
S1	Own workforce	Our workforce-related IROs focus on work-life balance and health and safety, which are both also linked to talent attraction and retention. Workforce-related considerations are a priority within our business strategy. The ICT sector is highly competitive and experiences a large employee turnover. Effective people management, including offering work-life balance and maintaining robust health and safety protocols, can help improve employee satisfaction, retain talent and mitigate against the financial risk of high turnover, a subsequent business slowdown, or loss of knowledge and expertise in the long-term.

Disclosures covered within the non-financial report

Disclosures covered within this report include selected ESRS disclosure requirements related to material sustainability matters (environment, social) and IROs outlined in the previous sections, as well as EU Taxonomy Regulation disclosures. Section 3.2 covers environmental information, and Section 3.3. covers social information. Our EU Taxonomy Regulation disclosures are included in Chapter 4. Although our 2024 DMA did not find governance-related IROs material, governance is still an important aspect of our strategy and business model. We have voluntarily provided a brief description of our governance activities in Section 3.4 for reasons of continuity.

Policies adopted to manage material sustainability matters

Adtran Holdings, Inc. group has compiled a comprehensive policy document, the Adtran Management System policy, that applies to all material sustainability matters. This includes details on our approach to emissions reduction, energy use, raw-material consumption and waste generation, and applies to our own operations as well as across our value chain to account for the full life cycle of our products. The policy also covers non-material matters, including water use, biodiversity protection and pollution. The document is valid for both Adtran Holdings, Inc. group and Adtran Networks SE. The policy mandates product- and operations-related emissions reductions, in line with our SBTi commitment. Additionally, it outlines our plans to improve energy performance by increasing the use of renewable energy in operations. Regarding our circular-economy commitments, the policy covers the transition to a circular economy and the conservation of natural resources. Additionally, the policy addresses the health, safety and welfare of our employees and others affected by our business activities. Lastly, quality, information security and business continuity are covered. Where applicable, the policy also extends to our supply chain. Our supply chain policies include the procurement of environmentally friendly products and services, as well as renewable energy.

In addition to our main policy document, Adtran Holdings, Inc. group also has a detailed handbook. The handbook is revised regularly and approved by the CEO.

Our policies are managed with respective management approaches and processes, including the assignment of internal responsibilities and process owners, internal audits, compliance trainings and external verification each year through assessments and audits conducted by third-parties. Additionally, employee-satisfaction-survey feedback ensures that our policies remain in line with employee expectations.

Upholding policies related to the management of material environmental matters is the specific responsibility of the VP of Quality and Sustainability for emissions, the SVP of Global Operations for circular economy and the combined responsibility of the SVP of Finance and the CEO for energy. Upholding policies related to the management of material social matters is the responsibility of the SVP of Global Human Resources.

Corrective actions are taken in cases of deviations or violations against the policy (e.g., critical occupational health and safety findings). This involves analysis of the deviation / violation, identification of improvement actions and the implementation of improvement actions.

Interaction of enterprise risk management processes with Adtran's strategy and business model

ESG risks are considered part of Adtran Holdings, Inc. group's ERM process. This process is semi-quantitative in nature and covers the Adtran Networks SE group. In addition, the Adtran Networks SE group conducts a fully quantitative assessment of the related risks. ESG risks are treated similarly to all other risks (i.e., by the product of probability of the occurrence and potential monetary impact within three successive years). This includes ERM thresholds. The thresholds are 3 million EUR impact in three successive years and a probability of higher than 50%. Therefore, ESG risks can be consistently rated against other non-ESG risks.

Risks that are above a defined threshold for the product of probability of occurrence and monetary impact are listed in the ERM and presented to, and discussed with, the CEO and the management board. They also require defined mitigation pathways.

ESG risks are also presented to the ESG Committee. They are re-considered on a quarterly basis. Where applicable, opportunities are also considered.

Our risks and opportunities are captured by a comprehensive risk management system. This includes ESG as a strategic objective of Adtran Holdings Inc. group, of which sustainability management is an important aspect. This is led by our Head of Global Sustainability, who ensures consistency between non-financial and financial risks.

External consultants so far have not been asked about ERM ESG risks.

The ESG risks and opportunities in Adtran Holdings, Inc. group's ERM have a strong overlap with the material sustainability matters identified in our DMA (see page 23).

A summary of the ESG risks and opportunities in the ERM is provided in the following table. Compared to the DMA, the topic of ESG regulations has been added. This topic was not assessed in the DMA, which was oriented at the ESRS ((sub-)sub-) topics.

Risks and opportunities according to ERM	Interaction with strategy and business model
Climate change	Climate change poses a risk for Adtran in that the company might not successfully follow its net zero targets. This can potentially lead to loss of business mid-term since customers expect us to achieve the targets. Climate change also has a certain potential as an opportunity, since Adtran can sell low-carbon products, which at the same time can enable climate-change mitigation and adaptation activities in other sectors. Therefore, no change in the related strategy is seen. The same holds for Adtran's business model.
Circular Economy	Circular economy poses some risk, but also opportunities. Risks result because not all parts of our portfolio are equally well suited for circular-economy processes. Opportunities include added business, (e.g., through refurbished products). We expect that in the mid-term, business with refurbished products will increase and that the business model might be complemented by product and/or services leasing offerings.
ESG regulations	New and upcoming ESG regulations potentially influence Adtran's strategy, particularly related to our products, as well as our business model. They pose a potentially significant risk since the number of ESG regulations grew exponentially in the past two decades, and the aggregated effort that is required to achieve compliance is already very high.
Attract and retain talent	Attracting and retaining talent (two separate risks in our ERM) are a risk for Adtran as a company working in a highly competitive high-tech environment. It links to work-life balance and voluntary employee fluctuation and in the worst case has the potential to slow down the successful implementation of our strategy and the business model. This is particularly true since mid-term, the baby-boomer part of our staff will start retiring.
Train and develop talent	Loss of knowledge and skills can be caused by dissatisfied employees and their fluctuation. In some cases it can lead to both, major operational and innovation problems. It must be addressed via actions regarding the aspect of employee satisfaction, which includes training and (career) development. As an opportunity, it leads to motivated staff. This risk and opportunity aspect has an impact on our strategy by taking related strategic actions. Influence on the business model is low.

Adtran's resilience related to material ESG impacts and risks is equal to its resilience against any other relevant impact or risk. It does not depend on specific ESG risks but rather on general economic conditions.

Adtran regards its (ESG) strategy and its business model as resilient to the identified risks, impact, opportunities, and material aspects on a short-to mid- term time horizon. This is mainly due to the pace at which ESG risks, opportunities and stakeholders' requirements develop, and due to the fact that relevant mid- to long-term initiatives have already been started. Examples include our climate-change- and energy-related actions and initiatives (i.e., our SBTi net-zero approach and our ISO 50001 energy activities).

Actions and resources in relation to material sustainability matters

A summary of actions and resources in relation to material sustainability matters is outlined in the table below. Key resources include OpEx in the form of necessary personnel. Specific quantitative details cannot be disclosed due to overlap with other activities unrelated to material sustainability matters. OpEx is also impacted by purchasing renewable energy. Further details on OpEx and CapEx in the context of climate change and circular economy can be found in the EU Taxonomy Regulation disclosures in Chapter 4.

Adtran Networks SE action plan, resources and targets

Aspect	Key objectives	Targets in more detail	Key initiatives/actions	Resources
Climate change	Decrease of the global Adtran CO ₂ footprint	Net-zero targets on Scopes 1+2 and the majority of Scope 3, approved by the SBTi, two targets each near term (2032) and long term (2034; 2048)	Reduce emissions of own operations (partially subject to availability of renewable energy) Ecodesign (energy efficiency) Participation of the Joint Alliance for CSR (JAC) supply-chain initiative targeting decarbonization of integrated-circuit manufacturers	Resources budgeted for Scope 1+2 targets (e.g., purchase of renewable energy certificates, responsible: Facility) and Scope 3 targets (responsible: R&D, Operations and ESG)
Energy	Decrease of the global Adtran energy consumption	1.9% yearly reduction of the energy consumption of Adtran Networks SE up to 2030, to be defined beyond 2030 later	ISO 50001 activities including efficiency improvements for laboratories and LED lighting	All ISO 50001 activities are budgeted (responsible: Facility)
Circular economy (CE)	Scale circular economy business Improve cooperation with the supply chain	Implementation and ramp-up of refurbished-products offering ESG risk assessment covers >95% of active manufacturers and suppliers (spending-based) by 2026	Extend take-back, maintenance and refurbishment, attract related projects (near- to long-term) Increase coverage of supply-chain tool IntegrityNext (near- to mid-term)	Resources for refurbished-products offerings and supply-chain management (IntegrityNext) are budgeted in Operations, with support from ESG and Sales
Work-life balance	Implement a global flexible working model (mix of remote and office working) in 2024	Align our new policy in all regions we operate	Monitor employee satisfaction with regard to work-life balance across regions.	Resources for work-life balance are budgeted in HR
Health and safety	Provide healthy work environment	Lowest possible number of injuries of our employees (knowing that "0" will not be achievable)	Nomination of first aiders and fire-protection officers, regular trainings on occupational health and safety, provision of personal protection equipment where necessary	Resources for health and safety are budgeted in Facility and HR

3.1.4. Metrics and targets

Adtran uses different mechanisms to track the effectiveness of its policies and targets. These include the results of external assessments, such as CDP and EcoVadis, proprietary customer ratings and the results from our own customer satisfaction surveys. This is complemented by our own internal and external sustainability audits, aligned with ISO 14001 and ISO 50001.

Climate change

Since mid of 2024, Adtran Networks SE has no longer had its own climate-change-related targets. By that time, the net-zero targets of the entire Adtran Holdings, Inc. group, including Adtran Networks SE, were approved by the SBTi. Adtran Holdings, Inc. group's figures are not subject to limited assurance engagement. However, the SBTi targets are also the main climate-change-related targets that will be followed by Adtran Networks SE. Their base-year figures, set points and status are reported hereinafter for the first time. These targets also have no history prior to and including 2023, as only Adtran Networks SE had SBTi targets.

The new SBTi net-zero targets consist of two near-term (2032) and two corresponding long-term targets (2034, 2048). The targets cover total combined Scope-1+2 emissions and the two Scope-3 categories of purchased goods (components) and products' use-phase emissions. For all targets, impacts on company growth, availability of new energy efficiency technologies and development of average electricity emission factors have been considered. Our core levers for emission reductions are conversion of the vehicle fleet to e-mobility (Scope 1), purchasing and installing renewable energy (Scope 2), persistent work on the highest possible energy efficiency of our products (Scope 3, sold-products use phase), and supply-chain decarbonization (Scope 3, purchased goods).

Our targets are published on the SBTi webpage. The overall net-zero target for Adtran Holdings, Inc. group is to reach net-zero GHG emissions across the value chain by 2048. Near-term targets are the reduction of absolute Scope-1+2 GHG emissions by 74.5% in 2032 from a 2016 base year and absolute Scope-3 GHG emissions by 40% within the same timeframe. Long-term targets are the reduction of absolute Scope-1+2 GHG emissions by 90% and absolute Scope-3 GHG emissions from purchased goods and services and the use of sold products by 95% in 2048 from the same base year. Following this, we state the status for 2024.

Status of the SBTi net-zero targets of the entire Adtran Holdings, Inc. group

	<2016* Base>	2034 / 2048 long-term Targets		2024 Target	2024 Status
	GWP [tCO ₂ e]		[%]	GWP [tCO ₂ e]	
Scope 1+2	31,292	3,129 in 2034	-90%	18,600	11,500
Scope 3**, purchased-goods emissions	72,029	3,602 in 2048	-95%	54,900	43,474
Scope 3**, sold-products use-phase emissions	1,056,362	52,818 in 2048	-95%	805,400	648,138

*) The emission figures for the year 2016 are not covered by the voluntary assurance of the non-financial report.

**) The two parts of the combined Scope-3 target.

The Science Based Targets initiative is a collaboration between CDP, the UN Global Compact, the World Resources Institute (WRI), and the World Wide Fund for Nature (WWF). It was established to help companies set emission reduction targets that, according to the SBTi, align with the goals of the Paris Agreement, aiming to limit global warming to 1.5°C above pre-industrial levels.

A science-based target is a specific greenhouse-gas emission reduction goal based on the latest scientific findings and climate research, aiming to limit global warming to well below 2°C, ideally to 1.5°C. These targets are tailored to individual companies, considering factors such as industry affiliation and emission reduction capacities. For the Adtran Holdings, Inc. group, the cross-sectoral pathway was used in the absence of ICT-specific pathways.

Our greenhouse-gas reduction targets were set using the SBTi methodology. This methodology includes accounting for greenhouse-gas emissions according to the Greenhouse Gas Protocol and setting short- and long-term targets. The SBTi methodology is subject to inherent uncertainties in the underlying forward-looking assumptions. The methodology published in 2021 is currently being revised, and newer scientific evidence and assessments could lead to changes. The ambition level of the targets may not be sufficient to limit global warming to 1.5°C.

Energy

For Adtran Networks SE, the energy-related target is the yearly reduction target of 1.9%, as stated in the table above. This is the continuation of the formerly existing ISO 50001 energy-reduction target of 1.5% per year.

Circular economy

Circular-economy-related targets are the realization of refurbished-products offerings, an increase of the supplier response rate in IntegrityNext, and improved engagement with our supply chain. IntegrityNext is the supply-chain risk and ESG management tool used by Adtran. This tool can be used, e.g., for collecting products- or materials-related data. The refurbished-products target is currently a qualitative target, as we work to understand the acceptance rate among our customer base. The target is ongoing and not restricted to any region but likely to initially focus on Europe. The IntegrityNext target rate will increase incrementally to well beyond 90%. Engaging with dedicated customers in a bilateral way on circularity is an initiative that was implemented in 2023. In 2024, we changed our focus toward suppliers of integrated circuits because these suppliers have a high environmental impact according to LCAs. In that respect, we started joint co-operation with certain key customers and other suppliers. The intended medium-term outcome is improved LCA data, lifetime optimization of our products, and support for supply-chain decarbonization.

Work-life balance

Maintaining work-life balance for our employees was a key focus area in 2024. This was supported by an Adtran-wide employee survey conducted in September 2024. Analyses of this survey were not yet finished by the time of the production of this report; hence, the resulting initiatives may only be defined later. One work-life balance-related initiative that was implemented in 2024 is our global flexible working model. This enables eligible employees to work three days in the office and two days remotely across all regions in which we operate. Our human resources team is leading this initiative and will monitor our implementation process, reporting progress toward our goals.

Regarding the issue of work-life balance, a target of a voluntary turnover rate of no more than 8% was defined. This target was narrowly missed in 2024. Additionally, we offer our own employees family leave (e.g., parental leave, child-sick leave) that is flexible regarding start and end point. This is not quantitatively defined in detail.

3.2. Environmental information

Based on the results of the DMA, climate change and circular economy have been rated as material environmental matters. These topics also align with environmental matters that must be considered under HGB requirements. For climate change, material IROs relate to climate-change adaptation and mitigation, and energy use. For circular economy, material IROs relate to resource outflows and inflows, and waste. The following sections include our qualitative and quantitative disclosures related to these topics.

3.2.1. Climate change

Governance

Integration of sustainability-related performance into incentive schemes

In 2024, sustainability-related performance was not reflected in any incentive schemes for Adtran Networks SE. We are working on the integration of climate-change-related targets in incentive schemes. However, this will likely be done at the level of the Adtran Holdings, Inc. group.

Strategy

Transition plan for climate-change mitigation

According to our climate-change risks and opportunities analyses, climate-change mitigation, specifically the acute physical and transitional aspects, bears a higher risk compared to adaptation. In addition, Adtran Networks SE has a greater ability to deliver positive impacts related to climate change mitigation as opposed to adaptation.

Emission reductions are pursued strategically by Adtran Holdings, Inc. group. This started in 2019, when the targets of ADVA Optical Networking SE were officially approved by the SBTi after target submission in 2016. Later, ADVA Optical Networking SE became part of the Adtran Holdings Inc. group and was renamed Adtran Networks SE. The SBTi targets were originally compatible with the 2.0°C target of maximum global warming compared to the preindustrial state. They increased in their ambition toward the 1.5°C target a year later. Consequently, these targets were part of ADVA's strategic company goals. This approach to emission reduction continued in 2023, when the entire Adtran Holdings, Inc. group submitted net-zero near- and long-term targets to the SBTi. These targets were approved by SBTi in July 2024.

For all emission-reduction targets, the effects of company growth, opportunities related to new energy-efficiency technologies and the development of average electricity emission factors have been considered. Our main levers for emission reductions are the conversion of our vehicle fleet to e-mobility to reduce our Scope-1 footprint, purchasing and installing renewable energy to reduce our Scope-2 footprint, and continued progress against our targets to deliver energy-efficient, low-carbon products and support supply-chain decarbonization. The latter targets will enable significant Scope-3 reductions.

Details on OpEx and CapEx spend

Significant OpEx invest is needed in order to deliver on the Net Zero Transition Plan. These potential expenses include labor costs for implementing ecodesign principles. Ecodesign is part of our R&D activities and is not followed in a dedicated program. R&D spending is already our most material OpEx in the medium-term time horizon, related to investment in hardware development and ecodesign. Please see the EU Taxonomy section of this report for more details on our eligible activities that support climate mitigation and the transition to a circular economy, as well as the corresponding total CapEx and OpEx allocated to Taxonomy-eligible and Taxonomy-non-eligible activities.

Integration of Transition Plan into strategy and business model

Adtran Holdings, Inc. group's Transition Plan is integrated into our business strategy. The aspects related to emissions reductions and circular economy are reflected in product ecodesign, including LCAs, which is a strategic part of product development. Product-related emission-reduction activities can be split into targets that address use-phase emission reductions and circular economy. The product-related targets are complemented by Scope-1 and Scope-2 net-zero targets, which were approved by SBTi in July 2024. Circular economic activities primarily look at material efficiency and indirectly support emissions reductions as well. The targets cover the critical area of achieving carbon neutrality and cover the full value chain, including suppliers and customers. As such, they also cover Adtran departments: R&D, Operations, Facilities and, indirectly, Sales.

Climate-related IROs are also regularly reviewed in Adtran's highest governance layers. At Adtran Holdings, Inc. group, including Adtran Networks SE, the Global ESG Department is responsible for ESG reporting, compliance, materiality and risk assessments, supply chain management and ecodesign. The head of the ESG Department reports to the VP of Quality and Sustainability, who, as part of Adtran Holdings, Inc. group's Management Team, is a direct report of the CEO and who also regularly reports on ESG matters to the ESG Committee, a sub-group of the Board of Directors of the Adtran Holdings, Inc. group. Section 3.1.1. provides more detail on Adtran's full ESG governance structure, including the governance of climate-

related IROs. <Further details on the Net Zero Transition Plan can be found in Chapter 1.> This chapter is not part of the limited assurance engagement.

Material impacts, risks and opportunities and their interaction with strategy and business model

Climate-related physical and transition risks

Adtran Networks SE regularly performs analyses of our physical and transition-related climate risks and opportunities. The scope of these analyses takes into account the location of our sites, our suppliers' sites, and short-, medium-, and long-term time horizons.

Climate-related scenario analyses have been used to inform the identification and assessment of physical and transition risks by evaluating the risks and opportunities in the transition phase for three aspects: costs, cost savings, and emissions with regard to purchased electricity (Scope 2) and Scope 3, transportation and product use. The analysis considers the potential impact, probability of occurrence, and time horizon for these risks and opportunities, allowing for a structured approach to understanding how climate change may affect the company over short-, medium-, and long-term periods.

Physical and transition-related risks are reviewed annually and examined systematically. First, a climate risk analysis is conducted by the Global ESG Department using relevant reference documents, such as the IPCC AR5 and AR6. In the second stage of assessing climate risks, they are integrated into the company-wide ERM if they meet the related requirements for consideration. To do this, they must meet certain criteria with regard to potential impact, probability of occurrence and time horizon. If this is the case, the relevant climate risks are listed in the company report. Conversely, they are not listed there if they merely represent a comparatively lower risk. The risk report 2023-2025 lists climate change as one of the ESG (non-financial) risks. <Further details on climate-related risks can be found in Chapter 2.> This chapter is not part of the limited assurance engagement.

Risk and opportunity management

Climate-related risks and opportunities are assessed in the ESG department as one part of Adtran Holdings, Inc. group's ERM. ERM also falls under the responsibilities of the VP of Corporate Quality and Sustainability. Therefore, climate-related risks and opportunities are also regularly reviewed in Adtran's highest governance layers. Climate risks are mitigated depending on their potential impact. In addition, financial opportunities are seized as long as they do not result in consequential risks in other areas. If a climate risk meets the criteria of company-wide risk management, its mitigation rules automatically apply. This includes the definition of responsibility, regular management reviews and dedicated, tracked countermeasures. Climate risks are addressed, among other actions, through our SBTi net-zero participation, which in turn is part of the company strategy. The corresponding measures to reduce emissions are therefore subject to regular internal and external controls.

Policies related to climate-change mitigation and adaptation

Adtran has compiled a main policy document that covers the environmental aspects of emissions, energy and raw-material consumption and waste generation. This holds for our operations as well as throughout the life cycle of our products. The policy holds for the entire Adtran Holdings, Inc. group and as such covers Adtran Networks SE.

Actions and resources in relation to climate-change policies

Adtran Networks SE's climate-change (mitigation) actions can be summarized as follows:

- Achievement of SBTi near-term and net-zero long-term targets for Scope 1+2 and Scope 3 (sold-products use-phase and purchased-goods emissions). The net-zero near-term targets have a target year of 2032 and long-term targets have a target year of 2034 (Scope 1+2) and 2048 (Scope 3). Base years are 2016.
- Improved product-portfolio energy efficiency, ongoing without an end date
- ISO 50001 energy-consumption reduction target, ongoing, defined until 2030
- Bilateral climate-change engagement with selected suppliers. This has been redefined in 2024 to specifically address integrated-circuit manufacturers since these have high environmental impact according to LCA. This is a mid-term, ongoing engagement.
- Supplier response rate in IntegrityNext; LCA coverage of relevant new products; ongoing without end date.

These actions require different resources in terms of labor input and OpEx. A significant amount of effort is devoted to developing highly energy-efficient products across our entire portfolio. This target must be followed persistently since improvements in energy efficiency are partially compensated by the ever-increasing internet bitrates. It is also part of our R&D strategy and is addressed through our SBTi Scope-3 climate-change mitigation target.

The ability to implement actions depends on the availability and allocation of resources, primarily OpEx in the form of necessary personnel. Added costs may arise from an increasing amount of purchased renewable energy, which is influenced by the price

of renewable energy and carbon taxes. CapEx for key initiatives relies on governmental funding (funded projects) and general economic conditions; therefore, precise values for budgeting cannot be provided.

Metrics and targets

Targets related to climate change mitigation and adaptation

As part of Adtran Holdings, Inc. group, Adtran Networks SE has science-based net-zero emission-reduction targets. These targets were approved by the SBTi and have been summarized on page 30. The company has also set a target for the reduction of site-related energy consumption by 1.9% per year up to 2030. The base year for this target is 2022. The target is part of our ISO 50001 activities. Since it is only defined until 2030, it must be re-defined beyond 2030.

Our SBTi targets cover our entire Scope-1+2 emissions. Scope-3 targets on purchased goods and sold-products use-phase emissions cover ~96% of our total Scope-3 emissions. This holds for the base year 2016. Therefore, the vast majority of all direct and indirect emissions and our activities is covered, as is also requested by the SBTi. The base year, 2016, was chosen since it was the most recent year when former ADVA Optical Networking SE, now Adtran Networks SE, started its SBTi activities. The base year has not been audited. It was also the first year that dedicated decarbonization considerations started in the company. When extending ADVA's targets to the entire Adtran Holdings, Inc. group, we kept the base year in accordance with SBTi recommendations. We also do not have indications that the base year should have changed due to external factors.

Adtran Holdings, Inc. group uses different mechanisms to track the effectiveness of our policies and targets, including the results of the external CDP and EcoVadis assessments and input from customers. This includes proprietary customer ratings and results from our own customer satisfaction survey, complemented by internal and external ESG audits (ISO 14001 and ISO 50001). The targets are science-based and, according to the SBTi, contribute to the 1.5°C long-term net-zero target, ensuring consistency with GHG inventory boundaries.

Energy consumption and mix

Energy consumption and mix	Adtran Networks SE group
(1) Fuel consumption from coal and coal products [MWh]	0
(2) Fuel consumption from crude oil and petroleum products [MWh]	0
(3) Fuel consumption from natural gas [MWh]	1,311
(4) Fuel consumption from other non-renewable sources [MWh]	1,322
(5) Consumption from nuclear products [MWh]	0
(6) Consumption of purchased electricity, heat, steam, and cooling from non-renewable sources [MWh]	8,473
(7) Total non-renewable energy consumption [MWh] (calculated as the sum of lines 1 to 6)	11,106
Share of non-renewable sources in total energy consumption (%)	68
(8) Fuel consumption for renewable sources (biomass, biogas, non-fossil fuel waste, renewable hydrogen, etc.) [MWh]	0
(9) Consumption of purchased or acquired electricity, heat, steam, and cooling from renewable sources [MWh]	5,344
(10) The consumption of self-generated non-fuel renewable energy [MWh]	0
(11) Total renewable energy consumption [MWh] (calculated as the sum of lines 8 to 10)	5,344
Share of renewable sources in total energy consumption (%)	32
Total energy consumption [MWh] (calculated as the sum of lines 7 and 11)	16,450

Energy	Adtran Networks SE group
Non-Renewable [MWh]	11,106
Renewable [MWh]	5,344
Total [MWh]	16,450
Renewable Share [%]	32

Gross Scopes 1, 2, 3 and total GHG emissions

The following table summarizes the 2024 emissions of the Adtran Networks SE group. To contextualize these emissions, the table is repeated on the next page for the entire Adtran Holdings, Inc. group. The latter emission figures have not been subject to the voluntary assurance of the non-financial report. The same is true for the 2016 base-year column in the following table.

Gross Scopes 1, 2, 3¹ and total GHG emissions 2024 (Adtran Networks SE group)

	Retrospective		Milestones and target years			
	<Base year (SBTi) 2016> ²	2024	2032 (SBTi)	2034 (SBTi)	2048 (SBTi)	Annual % target / Base year
Scope 1 GHG emissions						
Gross Scope 1 GHG emissions [tCO ₂ e]	1,162	582	See next table. There are only targets for Adtran Holdings, Inc. group			5%
Percentage of Scope 1 GHG emissions from regulated emission trading schemes (%)		0				
Scope 2 GHG emissions						
Gross location-based Scope 2 GHG emissions [tCO ₂ e]	5,511	6,564	See next table. There are only targets for Adtran Holdings, Inc. group			
Gross market-based Scope 2 GHG emissions [tCO ₂ e]		5,423				5%
Scope 3 GHG emissions						
Total Gross indirect (Scope 3) GHG emissions [tCO ₂ e]	388,145	228,877	See next table. There are only targets for Adtran Holdings, Inc. group			
Purchased goods and services [tCO ₂ e]	41,697	24,144				3%
Capital goods [tCO ₂ e]	4,500	41,187				
Fuel and energy-related activities [tCO ₂ e]	281	2,220				
Waste generated in operations [tCO ₂ e]	5.7	48.4				
Use of sold products [tCO ₂ e]	322,000	152,098				3%
End-of-life treatment of sold products [tCO ₂ e]	1,260	238				
Upstream transportation and distribution [tCO ₂ e]	7,795	4,222				
Downstream transportation and distribution [tCO ₂ e]	3,794	1,993				
Business travels [tCO ₂ e]	3,462	1,027				
By air [tCO ₂ e]		972				
By car [tCO ₂ e]		55.6				
By train [tCO ₂ e]		0				
Employee commuting [tCO ₂ e]	3,450	1,700				
Total GHG emissions [tCO ₂ e]						
Total GHG emissions (location-based) [tCO ₂ e]	394,818	236,023				
Total GHG emissions (market-based) [tCO ₂ e]	388,185	234,882				

¹ For most Scope-3 emissions, estimations were used. Limitations result from the unavailability of primary data.

² Base-year data is not part of the voluntary assurance of the non-financial report.

< Gross Scopes 1, 2, 3 and total GHG emissions 2024 (Adtran Holdings, Inc. group³, not subject to the voluntary assurance of the non-financial report).

	Retrospective		Milestones and target years			
	Base year (SBTi) 2016	2024	2032 (SBTi)	2034 (SBTi)	2048 (SBTi)	Annual % target / Base year
Scope 1 GHG emissions						
Gross Scope 1 GHG emissions [tCO ₂ e]	1,280	695	10,264 S1 + S2 combined	3,129 S1 + S2 combined		5%
Percentage of Scope 1 GHG emissions from regulated emission trading schemes (%)		0				
Scope 2 GHG emissions						
Gross location-based Scope 2 GHG emissions [tCO ₂ e]	30,012	13,573	See Scope 1, combined S1+S2			
Gross market-based Scope 2 GHG emissions [tCO ₂ e]		10,805				5%
Scope 3 GHG emissions						
Total Gross indirect (Scope 3) GHG emissions [tCO ₂ e]	1,165,117	755,035				
Purchased goods and services [tCO ₂ e]	72,029	43,474	43,217		3,601	3%
Capital goods [tCO ₂ e]	4,673	41,700				
Fuel and energy-related activities [tCO ₂ e]	1,171	3,970				
Waste generated in operations [tCO ₂ e]	91	216.9				
Use of sold products [tCO ₂ e]	1,056,362	648,138	633,817		52,818	3%
End-of-life treatment of sold products [tCO ₂ e]	1,560	428				
Upstream transportation and distribution [tCO ₂ e]	10,473	9,575				
Downstream transportation and distribution [tCO ₂ e]	4,043	3,476				
Business travels [tCO ₂ e]	8,351	1,257				
By air [tCO ₂ e]		1,188				
By car [tCO ₂ e]		69				
By train [tCO ₂ e]		0				
Employee commuting [tCO ₂ e]	6,364	2,800				
Total GHG emissions [tCO ₂ e]						
Total GHG emissions (location-based) [tCO ₂ e]	1,196,409	769,303				
Total GHG emissions (market-based) [tCO ₂ e]	1,165,117	766.535				

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³ The table for Adtran Holdings, Inc. group is not part of the voluntary assurance of the non-financial report.

GHG intensity per net revenue	Adtran Networks SE group
Total GHG emissions (location-based) per net revenue	0.000539 tCO ₂ e/EUR

<GHG intensity per net revenue	Adtran Holdings Inc., group ⁴
Total GHG emissions (location-based) per net revenue	0.000834 tCO ₂ e/USD

GHG removals and GHG mitigation projects financed through carbon credits

In 2024, there were no GHG removal projects within the Adtran Networks SE group.

<However, for 2024, Adtran Holdings, Inc. group has purchased RECs from its energy supplier TVA in Huntsville, equaling 9,000 MWh. This equaled 43% of TVA's total delivery to Huntsville and almost 40% of the total consumption of non-renewable energy by the Adtran Holdings, Inc. group in that year. The RECs were Green e-certified.> This information is unaudited, as this concerns only the Huntsville location and not Adtran Networks SE.

Internal carbon pricing

In 2024, we continued the internal carbon pricing scheme. We apply a shadow price to purchased electricity, transportation emissions, and sold-product use-phase emissions. This supports our net-zero activities and is also used in our TCFD scenario analyses. The shadow price is based on the German carbon tax. This tax started in 2021 with 25 EUR/tCO₂. By 2026, it is projected to increase linearly to 65 EUR/tCO₂. This also means that for 2024, the shadow price was 49 EUR/tCO₂. Applied to the total electricity, transportation, and sold product use-phase emissions, respectively, this leads to an overestimation, since German carbon tax is relatively high, e.g., compared to the carbon tax in the United States. Additionally, effects such as customers already running their networks with 100% renewable energy are not considered. Consequently, an upper bound of carbon cost is derived, which is relevant for risk considerations. For the same reason, the shadow price is applied to the total emissions.

This carbon pricing is used to predict future carbon tax and to analyze possibilities to reduce this tax.

3.2.2. Resource use and circular economy

Impact, risk and opportunity management

Policies related to resource use and the circular economy

Adtran Holdings, Inc. group's overarching policy document includes circular-economy considerations and the conservation of natural resources, energy and raw-material consumption and waste generation. As with our other policies, this covers our operations as well as our products throughout their life cycle, and where applicable, our supply chain. The policy also creates awareness that ultimately fosters a circular economy. Moreover, full compliance with legal and regulatory requirements (e.g., WEEE directive) is covered, which does include aspects of the circular economy.

Actions and resources related to resource use and circular economy

Actions related to resource-use and circular-economy IROs address our customers and own operations, and engagement with suppliers. There are no restrictions of these circular-economy-related actions with regard to specific products, regions, customers or suppliers. The time horizon of these activities is short-, medium- and long-term. In 2023, we began offering refurbished products to our large European customers and are exploring how we can expand this product offering to additional customers in the future. However, a challenge with market expansion is that not all products are equally well suited to lifetime extension via refurbishment. The main reason is that some products develop very quickly in terms of their use-phase energy efficiency so that lifetime extension via refurbishment may lead to increased total-lifetime emissions compared to an alternative where these products are taken out of service and replaced. In 2024, an ITU-T recommendation, which was authored by Adtran and addresses the effects of a lifetime extension, was consented. It is meanwhile available under the name ITU-T L.1028.

We also started a dedicated environment-related supply-chain initiative with the first key suppliers in 2023. This initiative was revised in 2024. It now focuses on integrated-circuit manufacturers in a dedicated way, since these manufacturers have comparatively high environmental impact according to LCA. Moreover, this engagement is now part of a consolidated engagement of several members of the Joint Alliance for CSR (JAC) and their tier-1 suppliers. JAC members include Deutsche Telekom AG, BT Group, AT&T, Verizon, Orange, Telecom Italia, Telefónica, Vodafone, A1 Telekom Austria and other network operators, which altogether cater for a significant part of Adtran Networks SE's business. It is thus expected that it will have better impact compared to the case where all participating partners act independently. In the medium-term, the initiative will

⁴ The table for Adtran Holdings, Inc. group is not part of the voluntary assurance of the non-financial report.

cover all relevant parts of our purchased goods and services and lead to impact on both, supply-chain decarbonization and insight into optimum lifetime of various integrated circuits with regard to total-lifetime emissions.

Related to our products, circular economy is one of the aspects that falls under our ecodesign process and activities. Ecodesign is part of our R&D activities and as such, requires substantial amounts of OpEx. We cannot calculate the exact proportion of our R&D budget spent on ecodesign activities. The circular-economy-related ecodesign activities focus on preparation for reuse, where applicable, and recycling. Reuse is addressed by incorporating modularity into most of our products and ensuring long product lifetimes, which is supported by maintenance activities. Recycling is addressed by a design for manual disassembly, and avoidance, where possible, of hazardous substances. In addition, the prevention of material consumption and waste is addressed by ongoing development toward the miniaturization of parts of our product portfolio.

In 2022, we began implementing initiatives aimed at optimizing the total-lifetime environmental footprint of our products. These activities consist of analyses related to the optimum product lifetime. This is relevant for ICT equipment and as such, for our portfolio. Due to quick development cycles, there are substantive improvements in product energy efficiency, which is measured in energy or power consumption per throughput (where throughput is measured in Gbit/s – gigabits per second). In these analyses, we calculate whether lifetime extension after several years of use is advisable in terms of the total-lifetime environmental impact. This considers the production impact of any successor products for cases where the original products are replaced after a certain use period by a more-efficient successor product. These analyses reveal that for some of our products, including coherent high-speed wavelength division multiplexing (WDM), replacement is advisable to avoid adverse effects on global warming. Hence, the analyses can be used for the EU Taxonomy Regulation's requirement for the do-no-significant-harm check. This is true in cases where circular-economy-related activities, aimed at enabling lifetime extension, have to undergo this check. The analyses indicate whether reuse and refurbishment are beneficial for specific products or whether these products should be maintained or repaired within a certain nominal lifetime and then be recycled. In 2023, we brought these analyses into ITU-T standardization, Question 7/5. As already mentioned, the related recommendation was consented to in 2024 and is available as ITU-T L.1028.

Repurpose technically is not an option for the products within Adtran Networks SE's portfolio. Further circular-economy actions relate to the optimization of packaging, including its reuse, in order to minimize downstream waste generation. Moreover, packaging that cannot be reused is fed into material-specific recycling. This is supported by reducing plastic in packaging.

Metrics and targets

Targets related to resource use and the circular economy

One of our circular-economy-related targets is the creation of refurbished-product offerings. The related activities started with selected customers and selected products. Activities include take-back, inspection of the respective products and refurbishment if required. Remanufacturing or repurposing are not in scope. The target also addresses our company policy ("transition to a circular economy") and the EU circular economy action plan. For 2024, this has been a qualitative target, and we do not plan to change it in the near-term. It is not restricted to specific regions however, we plan to introduce refurbished-product offerings for WDM products and extend this later to other product lines. Thus far, no significant business with refurbished products has been made. There were several early pilot projects, but their relative revenue was very small. Therefore, we use the year 2022 as the base year for future evaluation. The target replaces an older legacy-ADVA target that aims to introduce product-service systems (PSS). This replacement specifies the considered range to those PSS that involve take-back and refurbishment. It has a long-term scope, as customer interest in PSS other than purchase of products plus related maintenance services remains low. Maintenance services are a substantive part of Adtran Networks SE's revenue. However, there is no joint target on product-plus-maintenance-services revenue.

In terms of operational reverse-logistics, maintenance and refurbishment capabilities, no additions are required in that period. The target does not lead to additional requirements on circular design or waste management. Product design – modularity, longevity and maintainability – already supports this target, and end-of-life treatment in the form of WEEE recycling remains.

One limitation of using refurbished products has been identified. It has been described in the previous section "Actions and resources related to circular economy" and is given by optimum product lifetime. Above a certain – product-specific – use phase, further lifetime extension may not be advisable and can lead to adverse environmental impact. This must be considered for refurbished product offerings.

The highest level of responsibility for our resource use and circular economy-related activities within Adtran Holdings, Inc. group is with the SVP of Global Operations, who reports to the CEO. This governance structure holds for Adtran Networks SE. Supportive targets are the ones for supplier engagement, either directly or via IntegrityNext. This primarily addresses emissions but can be used to extend the circular economy in the supply chain. Over time, this target aims to improve collaboration in relation to supply-chain decarbonization and circular-economy activities. This outcome is qualitative for now, as metrics for

quantitative tracking have not yet been developed. The use of recycled materials and recyclability are part of our ecodesign guidelines.

Resource inflows

Resource inflows are not a component of our reporting obligation according to the EU Circular Economy Action Plan 2020 as we do not manufacture ICT products that are within the scope of this action plan.

In general, Adtran Networks SE's products have a long lifetime, often exceeding 10 years and limited only by functional or energy-efficiency obsolescence. The lifetime is supported by product modularity, maintainability and the related maintenance services. Precise data for industry average lifetime is not available. We believe that consumer-equipment lifetime is determined by customer behavior rather than technical lifetime.

Recycled content in our products is <50% by weight, which is solely determined by the portion of recycled metal in the chassis. The recycled content in packaging is higher (in the range of 50+%), driven by recycled cardboard. In addition, we eliminate plastic in packaging where possible from the viewpoint of g-force protection.

Resources outflows

Waste generation and disposal for Adtran Networks SE are shown in the following table. As an ICT-equipment manufacturer, Adtran has three sector-specific waste streams. These are WEEE, cardboard from used packaging, and plastic, which is mostly used in packaging. In most cases, packaging plastic consists of polyethylene (PE) foam and polyurethane (PU) foam. WEEE contains precious metal, rare-earth metal, aluminum, steel, nonmetallic minerals like phosphorus, and plastic. The latter in most cases consists of low- and high-density PE and polypropylene (PP). WEEE also contains batteries.

Waste disposal and GWP 2024 (options not shown were not used, i.e., only recycling occurred).

Waste disposal	Adtran Networks SE group 2024			
	Incineration		Recycling	
	Weight [t]	GWP [tCO ₂ e]	Weight [t]	GWP [tCO ₂ e]
Hazardous waste	0	0	0	0
Radioactive waste	0	0	0	0
Cardboard	0	0	188	6.23
Plastic	0	0	135	32.8
WEEE	0	0	6	0.12
Other	69	9.22	0	0
Total waste [t]	398			
Total amount of non-recycled waste [t]	69			
Percentage of non-recycled waste	17%			

WEEE: waste electrical and electronic equipment.

Adtran is not using, and does not intend to use, third-party rating systems to identify the reparability of our products. Compared to other (electronic) products, our products have an almost niche character, hence no global rating is available. On the other hand, Adtran has an interest in efficient maintenance services. Therefore, reparability is one of our design criteria. This is enabled, for example, by the high degree of modularity of our products.

Anticipated financial effects from resource use and circular economy-related impacts

The transition to a circular economy will undoubtedly have financial effects on our business, even though these effects cannot be quantified precisely. Refurbished products could lead to cannibalization of the market and diminished opportunity for revenue generation. This holds true when our savings in primary component costs do not compensate for the reduced revenue. This is likely to happen since critical components, such as application-specific integrated circuits (ASICs), have a limited lifetime since they become obsolete quickly and may have to be replaced for refurbished products. In turn, extending the lifetime of such ASICs poses an environmental risk of increased total-lifetime emissions.

Positive financial effects related to the transition to a circular economy include the potential for additional revenue from products that otherwise would have already been taken out of service and recycled. This could lead to an expanded customer base and new business models, such as eco-leasing services. Eco-leasing services could enable recurring revenue streams and better long-term customer relationships. We see this only on the long-term horizon. In the context of circular economy, we consider several relevant aspects. These include reverse logistics, stocks for (refurbished) components, lifetime limitations due to efficiency and functional obsolescence, characteristics of our electronic components (e.g., lifetime limitation due to electromigration), size of customer, geographical dispersion, maintenance and refurbishment costs, potential revenues and potential new business models. Some of these considerations include customers as well as our suppliers.

Adtran Networks SE has already implemented reverse logistics, maintenance services, take-back, and stocks for refurbished components. Uncertainty primarily results from the uptake rate of circular-economy offerings by customers. In the recent past, this uptake has been below expectations, since we were not yet able to ramp up related refurbished-products business.

3.3. Social information

3.3.1. Own workforce

The term "own workforce" refers to the individuals who are directly employed by the organization. This includes both permanent and temporary employees, as well as non-employee workers who are part of the organization's workforce.

Material IROs related to our own workforce focus on work-life balance and health and safety. Related risks, according to the Adtran Holdings, Inc. group's ERM system, are the potential inability to attract, retain, train and develop talent. These material IROs and related risks are managed through established policies, processes and actions across the entire group, which covers Adtran Networks SE. Material IROs and their interaction with our strategy and business model, as well as our processes for capturing the interests and views of stakeholders, have been described in Section 3.1.2. The processes for engaging our employees are described in more detail throughout this section.

Certain non-material topics are also reported hereinafter. This is for reasons of consistency with older reports.

Impact, risk and opportunity management

Policies related to own workforce

Adtran Networks SE's workforce-related policies and processes are based on, and comply with, relevant international standards, including but not limited to the United Nation's Universal Declaration of Human Rights, the fundamental Conventions developed by the International Labor Organization (ILO), and the United Nations Guiding Principles on Business and Human Rights. Adtran also actively pursues conformance to the Responsible Business Alliance (RBA) Code of Conduct and the guidance established by ISO 26000:2010. We uphold a zero-tolerance policy for human rights, human trafficking and forced and/or child labor violations, particularly in jurisdictions where there is an increased risk of these incidents. The current company declaration on modern slavery can be viewed on our website at <https://www.adtran.com/de-de/about-us/esg/reports-and-policies>.

Our policies and actions also cover workplace health and safety. This includes safe working practices and similar provisions from different regions, including EMEA, the US and the rest of the world. We also follow a zero-tolerance policy concerning any forms of discrimination and harassment, and promote equal opportunities and diversity and inclusion. This is reflected in our diversity, equity and inclusion (DEI) policies, Code of Conduct and within our transparent Workday-based recruitment process. Our non-discrimination and anti-harassment policy covers several grounds for potential discrimination including but not limited to racial and ethnic origin, sex, sexual orientation, disability, age and religion. As such, we have taken action to enhance transparent recruitment activities, establishing a recruitment training program for managers and others involved in the recruitment process. Recruitment aims at improving diversity in our teams. This is supported by employee and manager trainings on prevention of sexual harassment, anti-harassment and diversity on a global level.

Further, we conduct pulse engagement surveys to proactively identify and address gaps/concerns. There are no specific governmental obligations related to inclusion and assistance measures for specific vulnerable groups; however, policies and related actions and achievements are regularly reviewed to ensure the maintenance of an inclusive approach.

Cases of policy violations can be reported via the WhistleB Reporting hotline, a third-party provider that allows employees to anonymously report concerns about potential improper activities within the workplace. Further detail on our whistleblowing procedures are provided in Section 3.4 of this report.

Processes for engaging with own workforce and workers' representatives about impacts

Adtran has several processes and policies for engaging with our workers and workers' representatives about our impacts. This includes direct engagement with our workers and the instantiation of an Adtran Networks SE Workers Council (AWC), where applicable. Our engagement comprises of an HR open-door policy, which is also applicable for substantive parts of our leadership team. It also includes employee satisfaction surveys. Though the employee satisfaction surveys were temporarily put on hold due to the COVID-19 pandemic, and the integration between Adtran Networks SE and Adtran Holdings, Inc. group, the survey resumed in 2024. These activities are complemented by town hall meetings, round tables, which consist of smaller groups of employees with an executive lead, departmental meetings, and employee-manager one-on-one meetings, which are facilitated through Workday. Altogether, these meetings occur frequently, at least on a quarterly basis, or on an ad-hoc basis as required. In addition to the meetings listed above, there are also regular worker meetings organized by the AWC, and attended by members of the Management Team. The AWC also offers regular (weekly) consultation hours, where employees can raise work-related concerns. The effectiveness of these engagements is tracked via the voluntary turnover rate.

Some of the engagement processes described here (e.g., town hall meetings, departmental meetings and one-on-one meetings) also hold for non-employees in our workforce.

Processes to remediate negative impacts and channels for own workforce to raise concerns

Adtran Networks SE both requires and encourages its employees to report actual or potential violations. If employees are aware of conduct that may violate the Code of Conduct, they are encouraged to report the violation. Reporting a potential violation demonstrates a sense of commitment, responsibility and fairness to Adtran Holdings, Inc. group's customers, shareholders, business associates and fellow employees. Adtran Networks SE also offers an ethics and compliance hotline to report potential violations, as mentioned above and detailed in Section 3.4. These violations include, but are not limited to:

- Fraudulent activity / theft
- Misconduct
- Unethical behavior
- Health and/or safety violations
- Data-privacy concerns
- Discrimination/harassment

Whenever potential violations are investigated, employees must cooperate completely and provide full, accurate, timely and truthful information to the involved neutral department(s) leading the investigation. At the end of an investigation, Adtran Networks SE will decide on prompt and consistent actions, which may require external disclosure of the violation or legal action. Action may also include termination of employment for employees, and termination of the business relationship with business partners. Unsubstantiated allegations reported in good faith will not have any effect. The reporting channel is published for employees in the Code of Conduct and in trainings. External stakeholders are made aware about the reporting channel on the website <https://investors.adtran.com/corporategovernance/default.aspx>.

While we are committed to ensuring that our employees are aware of the grievance channels and processes available to them as a way to raise their concerns or needs and have them addressed, we are also committed to ensuring they trust the channels and processes enough to use them. Adtran Networks SE's employees will not experience any form of retaliation for raising concerns. All employees should be comfortable raising questions or concerns. Adtran Networks SE strictly prohibits any form of retaliation against any individual making a report based on a reasonable belief of a violation of its Code of conduct or the policies. The Non-Retaliation policy is set forth in the Code of Conduct, chapter Non-Retaliation. This policy is the incorporation of the EU Directive 2019/1937 on the protection of persons who report breaches of Union law and other national legislation around victimization/ retaliation.

Taking action on material impacts on own workforce, and approaches to managing material risks and pursuing material opportunities related to own workforce, and effectiveness of those actions

Our material IROs related to work-life balance are managed by our Human Resources department, which is led by the SVP of Global Human Resources who reports directly to the CEO. HR reviews the results of our employee engagement survey, voluntary turnover rate, and any reported violations to our Code of Conduct.

Measures for supporting the work-life balance in 2024 included the hybrid-working policy (for the entire Adtran Holdings, Inc. group), an additional vacation day for Adtran Networks SE in Germany and the unlimited vacation policy for the US. Measures in support of health and safety included yearly OHS trainings for all Adtran employees, dedicated additional trainings, where necessary, on laser safety, dealing with hazardous substances, and work in logistics areas. In addition to that, we nominate, for large sites, first aiders and fire-safety engineers and provide regular trainings for them. Moreover, we provide employees that work in workshops or certain laboratories the necessary personal protective equipment (PPE).

Resources for actions and initiatives are available, with HR headcounts of >20 (Adtran Networks SE group).

Adtran Networks SE evaluates material risks and opportunities that arise from the impacts and dependencies on our workforce. Material negative impact on our workers can result from any internal or external events or actions that increase our ERM risk of inability to attract, retain, train and develop talent. This is addressed by several ongoing actions and processes, such as our engagement surveys and other feedback mechanisms. The effectiveness of all these activities is partially tracked via the engagement processes explained in the section "Processes for engaging with own workers and workers' representatives about impacts." We regard this approach as sufficient since in the past, voluntary attrition has been close to the corporate target figure of 8%.

In addition, we started considering the EU Taxonomy Regulation's do-no-significant-harm principle as it relates to ESG topics. It can be applied to other actions and practices, not only for Taxonomy reporting. It then provides a sense check as to whether our actions and practices cause harm in other areas, in this case, to our workforce. As we move closer toward climate neutrality, we understand that this change could impact employment opportunities and the roles necessary to continue our operations, and

plan to develop a strategy to minimize this impact. As we are early in our climate transition we have not developed targets for workforce training for employees to understand their own necessary transitions but plan to do so in the next few years.

Metrics and targets

Targets related to managing material negative impacts, advancing positive impacts, and managing material risks and opportunities

In 2024, the Adtran Holdings, Inc. group, covering the Adtran Networks SE group, adopted a new global flexible working model and policy in select regions, and has the target to adopt this model in all regions of operation. This policy addresses the sub-topic of work-life balance. The associated target for 2024 was a voluntary attrition rate of 8%.

Related to the second material sub-topic, health and safety, the relevant metric that is tracked is the number of work-related accidents. Since zero occurrences are not realistic numerical targets, and since number of employees changes year over year, the respective target is qualitative in nature. Our target is the lowest possible number of work-related accidents, in particularly accidents with severe outcomes. The 2024 numbers are reported later in this report.

Characteristics of the undertaking's employees

Adtran Networks SE employee characteristics are presented in the tables below, split by gender, region and contract type. The data for the combined separate non-financial report includes all employee classifications, including students and temporary employees. All data are as of December 31, 2024.

Employee headcount by gender

Number of employees (headcount as of Dec. 31, 2024)	
Gender	Adtran Networks SE group
Male	1,693
Female	476
Other*	1
Not declared	4
Total employees	2,174

*Gender as specified by the employees themselves

Employee headcount in countries with at least 50 employees

Number of employees (headcount as of Dec. 31, 2024)	
Country	Adtran Networks SE group
United States of America	289
Germany	630
Poland	590
India	214
United Kingdom	105
Israel	99
China	51

Employees by contract type, broken down by gender

Adtran Networks SE group, as of December 31, 2024				
Female	Male	Other*	Not declared	Total
Number of employees (headcount)				
476	1,693	1	4	2,174
Number of permanent employees (headcount)				
453	1,640	1	2	2,096
Number of temporary employees (headcount)				
23	53	0	2	78
Number of full-time employees (headcount)				
393	1,647	1	2	2,043
Number of part-time employees (headcount)				
83	46	0	2	131

*Gender as specified by the employees themselves

Employees by contract type, broken down by region

Adtran Networks SE group, as of December 31, 2024			
Region EMEA	Region Americas	Region APAC	Total
Number of employees (headcount)			
1,570	313	291	2,174
Number of permanent employees (headcount)			
1,498	310	288	2,096
Number of temporary employees (headcount)			
72	3	3	78
Number of full-time employees (headcount)			
1,466	307	290	2,043
Number of part-time employees (headcount)			
124	6	1	131

Employee turnover

Adtran Networks SE group, as of December 31, 2024	
Number of employees who left the organization during reporting period (headcount)	233
Employee turnover for reporting period	10.8%
Voluntary employee turnover	8.1%

Characteristics of non-employees in the undertaking's own workforce

The number of non-employee workers at year end 2024 is shown in the following table, broken down into the applicable departments. We use Workday to compile, track and report data on all workers, including non-employees.

Headcount	Adtran Networks SE group
Agency Workers	13
CTO	7
Operations	6
Services	0
Contractors	112
ANS	2
CFO	30
CIO	4
CRO	24
CTO	48
Operations	1
Services	3
Other	0
Total	125

Health and safety metrics

Relevant OHS indicators are summarized in the following table for Adtran Networks SE. Our health-and-safety management system is not externally certified. However, we provide training for the staff on certain aspects of the health and safety management system, e.g., fire protection procedures. Formal joint management worker health and safety committees operate on a per-site level.

OHS indicators as of December 31, 2024	Adtran Networks SE group
Percentage of own workers covered by OHS management system	100%
Number of fatalities as a result of work-related injuries or ill health (including other workers working at our sites)	0
Number of recordable work-related accidents	3
Number of recordable cases of work-related ill health	0
Number of days lost to work-related injuries and ill health	23.5
Lost time injury frequency rate	0.84

Work-life balance metrics

Family Leave

100% of employees of the entire Adtran Networks SE group are entitled to family-related leave through our social policies.

Employees who took family-related leave (as of Dec. 31 2024)	
	Number of employees (headcount)
Female	119
Male	281
Not declared	1
Total	401

Incidents, complaints and severe human rights impacts and incidents

In 2024, one case of harassment was reported. A compliance investigation was initiated, which resulted in an extraordinary termination.

Additionally, in 2024, no reported incidents of severe human rights impacts occurred. No material fines, penalties or compensation for damages were asserted.

Potential additional entity specific information

The topics of persons with disabilities, training and skills development and diversity indicators have not been rated material. They are reported hereinafter for reasons of consistency.

Persons with disabilities

As of December 31, 2024, the percentage of persons with disabilities in our own workforce was 1.0% for Adtran Networks SE. The number of our employees, subject to legal restrictions on the collection of data, was 1.0% as well.

Training and skills development metrics

All Adtran Networks SE employees participated in performance and career development reviews. This is for permanent full- and part-time employees. The review is managed via the platform Workday. Training is tracked via our human resources information system. In 2024, a total of 7,453 hours of training were taken in Adtran Networks SE group, equaling an average of 3.4 hours per employee. The duration per training was between 30 minutes and a full week (5 days).

Diversity metrics

Diversity indicators for the Adtran Networks SE group are presented in the tables below. They are split into total employees versus employees in management, gender and age. During 2024, we continued our reviews on diversity and inclusion. All data presented here are as of December 31, 2024.

	Adtran Networks SE group	
	Headcount	%
Males total	1,693	77.9%
Males in management	326	15.0%
Females total	476	21.9%
Females in management	58	2.7%
Other total	1	—
Other in management	0	—
Not declared total	4	0.2%
Not declared in management	0	—

Management	Adtran Networks SE group
Males not in management	1,367
Females not in management	418
Other not in management	1
Not declared not in management	4
Total not in management	1,790
Males in management	326
Females in management	58
Other in management	0
Not declared in management	0
Total in management	384

Gender	Age group	Adtran Networks SE group
Male	<30 years	277
	30-50 years	902
	>50 years	514
Male total		1,693
Female	<30 years	84
	30-50 years	285
	>50 years	107
Female total		476
Other	<30 years	0
	30-50 years	1
	>50 years	0
Other total		1
Not declared	<30 years	2
	30-50 years	2
	>50 years	0
Not declared total		4
Employees total		2,174

Workers in the value chain, affected communities, consumers and end-users

The matters of workers in the value chain, affected communities and consumers and end-users have not been deemed material. Adtran works in the ICT space and regularly monitors and audits its suppliers. It does not regard the labor conditions of the workers in its supply chain as a severe risk. The same is true for customers in our downstream value chain.

Adtran is a large employer, particularly in locations with larger sites. As a large employer, it is our responsibility to lead charity initiatives and community engagement activities. Moreover, we indirectly, via our business-to-business customers, serve end-users with telecommunications services. Therefore, in comparison with the matters found to be material, these matters did not meet our threshold for materiality and no further information will be disclosed. The omission of the respective information does not prevent a true and fair view of the development and performance of the business, the results of operations, the position of the corporation and the impact of its activities.

3.4. Governance information

The results of our 2024 DMA did not find governance-related IROs to be material; however, governance is still a relevant part of our strategy and business model. We still regard governance aspects as important and have specific processes in this area. In the recent years, we also did not have severe breaches in this area. Following this, we report on governance aspects for reasons of consistency with older reports.

Corporate culture and business conduct policies

Adtran Networks SE upholds a zero-tolerance approach to any form of human rights violation, or to instances of corruption or bribery. This is defined in our Group Code of Conduct and our Supplier Code of Conduct, which are reviewed and refreshed annually. Our Supplier Code of Conduct addresses specific points for our suppliers and is modeled on the framework from the RBA. We also do not tolerate any violations of the ILO Labor Standards.

Prevention and detection of corruption or bribery

Integrity underpins all our actions. We strive to meet the highest ethical standards, anchored in our values and documented in our Code of Conduct. All employees must comply with these standards. Although the topics of bribery and corruption were not found to be material, they are still important to our business and addressed by our compliance management system (CMS). Our long-term target is to maintain our strong track record on combating corruption and bribery by using the measures described in this report.

Adtran Networks SE's CMS is supported by a central compliance department located in Munich, Germany, and six regional compliance officers (RCOs) that support compliance in addition to their day-to-day roles. The RCOs strengthen Adtran Networks SE's culture of compliance, eliminate any potential barriers that prevent employees from reporting concerns, and contribute their specific functional expertise to the CMS. Their activities are coordinated by the chief compliance officer (CCO) who reports to the CFO and the Supervisory Board. Whenever employees have questions or suggestions related to compliance or suspect incidents of non-compliance, they are encouraged to speak up. In addition to a variety of clearly-defined and actively-communicated internal points of contact, an external ombudsman and an externally operated ethics and compliance hotline enable confidential and anonymous reporting.

Our compliance activities are evaluated and assessed both internally and externally. While some reviews are conducted annually and/or continuously, others may apply only once in several years. In cases where there are material findings, corrective actions are taken immediately.

The aim of our CMS is the complete avoidance of corruption and bribery in the entire company. Accordingly, CMS is applied to all employees and at all locations. It is the Adtran Networks SE group's aim to train all employees on a regular basis. The implementation of this takes place based on a defined process and is supported and tracked by the group human resources department.

Our commitment to compliance extends to our sales partners, distributors and service providers, collectively referred to as our business partners. We procure a wide variety of products and services, including hardware components and expert services to manufacture, maintain or dispose of our products, resulting in a diverse supplier base. For this reason, there are higher risk levels in our supply chain related to both environmental and workforce-related matters.

For business partners, we adopt a three-step risk-based due-diligence approach. First, risk-based due diligence is carried out for new business partners and updated periodically for existing business partners. Then, detailed framework agreements with stringent compliance obligations are negotiated with all new business partners. Finally, risk-based monitoring enables the corresponding compliance risks to be further reduced. Apart from non-disclosure agreements, the Adtran Networks SE group's aim is not to enter into contractual relationships without first completing the necessary due-diligence activities. Similar to all internal processes, business partners' due diligence is subject to regular internal assessments. This is also coordinated by the CCO, so that, in turn, the CFO is responsible at the highest level.

Accordingly, various goals were set for this area, such as an increased response rate for the supply-chain management software IntegrityNext and an increase in the number of full-material declarations for the components we procure. These processes and management approaches include the employees responsible for this and the responsibility at the highest level on the part of the SVP of Global Operations. The management approaches are reviewed at least once a year through external assessments (EcoVadis) and audits (leveraging the most recent ISO audit, and validating the sustainability report), as well as accompanying internal risk analysis and assessment. Corrective actions are taken in instances of imminent deviations from the goals, but also in cases where re-evaluation is needed. This includes analyses of causes if goals are not achieved, as well as the identification and implementation of improvement measures.

Adtran Networks SE has had zero confirmed cases of corruption or bribery in the last 5 years, a testament to the strength of our approach.

Whistleblowing procedures

Adtran Networks SE requires the reporting of potential and actual violations of the Code of Conduct. Reporting a potential violation demonstrates vigilance, and a sense of commitment, responsibility and fairness to customers, shareholders, partners and employees. Violations can be reported on the Adtran Networks SE ethics and compliance hotline. The hotline is managed by WhistleB Reporting, a third-party provider, ensuring that employees can anonymously report incidents, without any fear of retaliation. The WhistleB Reporting line is available 24 hours a day, seven days a week, and is accessible online (<https://report.whistleb.com/en/adtran> - client code: 453581), or by phone (1.800.218.8954).

In instances where corrupt activities or Code of Conduct violations have been attempted or executed, the CCO is responsible for conducting a thorough review of the nature, extent, origins and consequences of the misconduct. At the end of an investigation, Adtran Networks SE will decide on corrective and disciplinary actions, that may require external disclosure of the violation or legal action. Disciplinary action may also include termination of employment for employees, or termination of working relationships with business partners. Unsubstantiated allegations reported in good faith will not have any consequences.

All reported violations and complaints will be kept confidential to the extent permitted by law and by the company's need to investigate the situation. All investigations will be conducted by appropriate personnel, in an ethical manner and in compliance with the law. Adtran Networks SE prohibits any form of retaliation against employees who submit reports, participate in the investigation of violations, raise complaints or concerns, or ask questions. Retaliation can take many forms, from microaggressions, bullying or harassment to unfair dismissal. All claims of retaliation are taken seriously.

Comprehensive anti-corruption training is provided to ensure proper adherence to the outlined procedures. These trainings typically form part of annual compliance trainings, which are offered as live or web-based trainings for all employees.

All governance activities related to the respect of human rights and combating corruption and bribery are coordinated by the CCO of Adtran Networks SE, who reports to the CFO.

Management of relationships with suppliers and business partners

We work to ensure that our suppliers adhere to our policies related to environmental, workforce-related and human rights matters. We conduct risk assessments for new suppliers as part of our due-diligence processes. This assessment is used to uncover any potential risks or instances of non-compliance and develop mitigation plans. The process consists of a supplier survey, risk assessment of the supplier's products and/or services, and on-site audits. Instances of serious violations can lead to termination of the supplier relationship.

We conduct robust screening, qualifications and contracting processes for our strategic suppliers and other selected business partners. Our measures include standardized questionnaires, technical and operational support, and contracting according to predefined master purchasing agreements that require compliance with our ethical values and applicable laws or regulations. These screening, qualification and contracting processes are applied continuously.

In addition to new suppliers, existing suppliers are periodically re-evaluated to ensure ongoing compliance. The frequency with which existing suppliers are re-evaluated is dependent on the supplier's level of strategic relevance for our business, and associated risk profile. In 2024, one supplier was re-audited on site against sustainability criteria. Based on the audit results, one minor nonconformity was found, leading to respective corrective action. No business relationships were terminated. Corrective measures from the previous audits were followed up. For this, we use a supplier corrective action tracker. The actions and processes described here consider environmental matters, as well as those of employees and human rights in the supply chain. The latter includes modern slavery.

No other violations related to respect of human rights and combating corruption and bribery were identified in 2024. For 2025, we plan to increase the number of on-site audits.

Prevention of modern slavery

Adtran works to ensure that modern slavery does not occur in any part of our business or value chain. The actions and processes described above are used to address slavery and human trafficking in areas where they can occur. This is also done in compliance with the requirements of the Modern Slavery Act of the United Kingdom of 2015 and the California Transparency in Supply Chains Act of 2010 (SB 657). Our declaration on modern slavery can be accessed on our website at www.adtran.com/en/about-us/esg/reports-and-policies.

Political influence and lobbying activities

Adtran Networks SE does not make political contributions neither in cash nor in kind — and does not reimburse private political contributions. Any outside employment, board membership or political activity that involves customers, competitors or business partners of Adtran or otherwise has the potential for creating a conflict of interest and requires approval by Adtran's compliance department.

Payment practices

The Adtran Networks SE group maintains standard supplier terms and conditions with payment terms of 90 days. Fees and discounts shall be mutually agreed upon in writing by the parties for products and/or services. Fees exclude all taxes that suppliers are obligated to pay. Undisputed payment is due no less than 90 days after the inspection period and acceptance, provided that Adtran may set off any liability of Adtran to the supplier against any liability of the supplier to Adtran Holdings, Inc. group.

Currently, around 55% of our suppliers are subject to these supplier terms and conditions. With our main suppliers, payment terms with an average of 75 days are agreed upon. Our company has a payable outstanding ratio, consolidated for Q3 2024, of 54 days. There are no legal proceedings currently outstanding for late payments.

4. EU Taxonomy Regulation disclosures

4.1. Disclosures pursuant to Article 8 of Regulation (EU) 2020/852 (EU Taxonomy KPIs)

Regulatory context

The EU Taxonomy is a classification system for sustainable economic activities. Over the years, the scope of the EU Taxonomy Regulation has increased and serves as a key pillar in advancing the objectives of the European Green Deal, aiming to mobilize private capital spending to promote environmentally sustainable activities.

Adtran Networks SE is obliged to release a combined non-financial group report in accordance with section §315b paragraph 3 of the HGB, which requires companies to disclose to what extent their economic activities qualify as environmentally sustainable under the EU Taxonomy. For our 2024 fiscal year, we report against the EU Taxonomy for the fourth time.

Our economic activities

Given that Adtran Networks SE is the only entity obliged to report against the EU Taxonomy, the scope of information included on eligibility or alignment against the EU Taxonomy is limited to the Adtran Networks SE group. Adtran Networks SE conducted a comprehensive analysis of all business activities outlined in the EU Taxonomy.

This analysis included evaluating activity descriptions provided by the EU Taxonomy, particularly those that reference the Nomenclature of Economic Activities (NACE) codes relevant to our products and services (“core activities”), as well as those activities that are not core to our business but support internal operational activities (“non-core activities”). Where there may be activities that fall under one or more eligible activities, we determined and documented a single activity for reporting to prevent double counting. Once we identified core and non-core activities, we proceeded with an assessment of their eligibility and alignment with the EU Taxonomy.

According to the analysis conducted, Adtran Networks SE considers the following activities eligible in 2024. This analysis did not find any of these activities aligned with the EU Taxonomy in 2024.

Type of activity	Taxonomy objectives	Adtran Networks SE's activities	Relevant financial KPIs
Repair, refurbishment and manufacturing	Circular economy [CE5.1]	Prolonging the lifespan of products as part of Adtran Networks SE's “Care” business and maintenance and repair services	Turnover, CapEx, OpEx
Transport by motorbikes, passenger cars and light commercial vehicles	Climate-change mitigation [CCM6.5]	Leasing of a vehicle fleet, of which a portion is hybrid or electric. Adtran Networks SE does not derive turnover from this fleet or track operational expenses from fuel or electricity consumed.	CapEx

Please note that in 2024, Adtran Networks SE did not install any renewable energy installations or efficiency initiatives at our owned or leased facilities. Therefore the activities “Installation, maintenance and repair of renewable energy technologies” and “Acquisition and ownership of buildings,” although eligible and or aligned in 2023, were not eligible for Adtran Networks SE in 2024. Furthermore, upon further review of the latest guidance published by the European Commission, we have determined that our products are not an eligible activity under “Data-driven solutions for GHG emissions reductions”. Financial KPIs associated with this activity have been removed in 2024.

No turnover, CapEx, or OpEx activities were identified related to climate-change adaptation, the sustainable use and protection of water and marine resources, pollution prevention and control, or the protection and restoration of biodiversity and ecosystems. Adtran Networks SE continues to not have any economic activities in the area of fossil fuels and nuclear energy.

Accounting policy

Article 8 of the EU Taxonomy Regulation requires the disclosure of three key performance indicators (KPIs) — turnover, CapEx, and OpEx — that are linked to activities, products or services related to Taxonomy-eligible and Taxonomy-aligned economic activities. These KPIs are derived in accordance with Annex I of the delegated act regarding Article 8 of the EU Taxonomy Regulation and, as of the balance sheet date, on the basis of the International Financial Reporting Standards (IFRS) of the International Accounting Standard Board (IAS), also considering the interpretations of the IFRS IC (IFRIC).

Turnover

[Activity] Repair, refurbishment and remanufacturing: Adtran Networks SE has a “Care” business that aims to prolong the lifespan of our products through reuse, disassembly, and repair. Any components resulting from this activity are either reused or, in case no further use is possible, recycled. Therefore, this activity qualifies as contributing significantly to the transition to a circular economy. As such, turnover from services provided to customers through our “Care” business fall under repair, refurbishment and manufacturing and is an EU Taxonomy-eligible activity. We plan to better document our waste-management plan for these activities to meet the technical screening criteria and align with the circular-economy objective.

Turnover calculation: The portion of economic activities that are eligible and compliant with the EU Taxonomy Regulation, related to our total revenues, is calculated as part of the net revenue that results from products and services in the context of economic activities that are eligible and compliant with the EU Taxonomy Regulation (numerator), divided by the net revenue (denominator). The numerators are included in our EU Taxonomy tables. The denominator of the revenue KPI is based on our consolidated net revenue for Adtran Networks SE in accordance with IAS 1.82(a) and can be aligned with our consolidated financial statement. In 2024, our total turnover is EUR 438 million.

CapEx

[Activity] Repair, refurbishment and remanufacturing: As described under the “Turnover” section above, Adtran Networks SE provides services that prolong the lifespan of our products through reuse, disassembly, and repair, and therefore qualifies as contributing significantly to the transition to a circular economy. CapEx associated with providing these maintenance and repair services as part of our “Care” business, consists of property, plant and equipment costs.

[Activity] Transport by motorbikes, passenger cars and light commercial vehicles: Adtran Networks SE leases vehicles, some of which are hybrids or electric vehicles, as part of its fleet to support operations. Their lower emissions intensities compared to non-hybrid, non-electric counterparts qualifies as contributing significantly to climate-change mitigation. CapEx associated with this leased fleet includes lease payments, which also cover insurance and maintenance. We have not formally conducted the assessment for our latest fleet of vehicles regarding reusability, recyclability or recoverability in order to check the do-no-significant-harm criteria. Thus, this activity does not meet criteria to be Taxonomy-aligned; we aim to evaluate this in the future.

CapEx calculation: The CapEx KPI is defined as CapEx eligible and compliant with the EU Taxonomy Regulation (numerator), divided by our total CapEx (denominator).

The denominator shall cover additions to tangible and intangible assets during the financial year considered before depreciation, amortization and any remeasurements, including those resulting from revaluations and impairments, for the relevant financial year and excluding fair value changes. The denominator shall also cover additions to tangible and intangible assets resulting from business combinations. For non-financial undertakings applying IFRS, as adopted by Regulation (EC) No 1126/2008, CapEx shall cover costs that are accounted for based on property, plant and equipment; intangible assets; investment property and IFRS 16 leases. Our total CapEx in 2024 is EUR 67 million.

The numerator equals the part of the CapEx included in the denominator that is any of the following: *a.* related to assets or processes that are associated with Taxonomy-eligible or -aligned economic activities; *b.* part of a plan to expand Taxonomy-eligible or -aligned economic activities or to allow Taxonomy-eligible economic activities to become Taxonomy-aligned; and *c.* related to the purchase of output from Taxonomy-eligible or -aligned economic activities and individual measures enabling the target activities to become low-carbon or to lead to GHG reductions, provided that such measures are implemented and operational within 18 months. Specifically in 2024, CapEx was included in the numerator for:

- The “Repair, refurbishment and remanufacturing” activity falls under Category A CapEx. CapEx is directly associated with providing maintenance and repair services.
- The “Transport by motorbikes, passenger cars and light commercial vehicles” activity falls under Category C CapEx. Leasing hybrid or electric vehicles supports GHG emissions reductions from operational transportation activities.

OpEx

[Activity] Repair, refurbishment and remanufacturing: As described in the “Turnover” section above, Adtran Networks SE provides services that prolong the lifespan of our products through reuse, disassembly and repair, and therefore qualifies as contributing significantly to the transition to a circular economy. OpEx associated with providing these services as part of our “Care” business consists of third-party costs of goods and services and departmental expenses for our maintenance and repair services.

OpEx calculation: The OpEx KPI is defined as OpEx that is eligible and compliant with the EU Taxonomy Regulation (numerator) divided by our total OpEx (denominator).

The denominator shall cover direct non-capitalized costs that relate to research and development, building renovation measures, short-term lease, maintenance and repair, and any other direct expenditures relating to the day-to-day servicing of assets of property, plant and equipment by the undertaking, or third party to whom activities are outsourced, that are necessary to ensure the continued and effective functioning of such assets. Our total OpEx in 2024 is EUR 127 million and includes the following:

- Expenditures for R&D that are captured in the profit and loss statement for the reporting period as operating expense. In accordance with our consolidated financial statement (IAS 38.126), this comprises all non-capitalized expenses that can directly be assigned to research and development activities.
- The amount of non-capitalized, short-term leases as derived according to IFRS 16.
- Maintenance and repair costs as well as other direct expenses in the context of daily service of tangible assets were compiled on the basis of the maintenance and repair cost assigned to our internal cost centers. These include costs associated with maintenance and repair as a service through our “Care” business, as well as costs associated with servicing tangible assets used to support other businesses and expenses for building renovation measures for our Meiningen factory.

The numerator equals the part of the OpEx included in the denominator and, like for CapEx, can be categorized into the three categories described for the CapEx numerator above.

Specifically for 2024, the “Repair, refurbishment and remanufacturing” activity falls under Category A OpEx. OpEx is directly associated with providing maintenance and repair services.

Proportion of turnover from products or services associated with Taxonomy-aligned economic activities – disclosure covering year 2024

Financial year				2024		Substantial contribution criteria					DNSH criteria								
Economic activities (1)	Code (2)	Turnover (3)	Proportion of turnover, 2024 (4)	Climate-change mitigation (5)	Climate-change adaptation (6)	Water and marine resources (7)	Circular economy (8)	Pollution (9)	Biodiversity and ecosystems (10)	Climate-change mitigation (11)	Climate-change adaptation (12)	Water and marine resources (13)	Circular economy (14)	Pollution (15)	Biodiversity and ecosystems (Y16)	Minimum safeguard (17)	Proportion of Taxonomy aligned (A.1) or eligible (A.2) turnover, 2023 (18)	Category enabling activity (19)	Category transitional activity (20)
		kEUR	%	Y/ N					Y/ N					Y/ N	%	E	T		
A. Taxonomy-eligible activities																			
A.1. Environmentally sustainable activities (Taxonomy-aligned)																			
Turnover of environmentally sustainable activities (Taxonomy-aligned) (A.1)		0	—%														—%		
Of which enabling		0	—%														—%	0	
Of which transition		0	—%														—%		0
A.2. Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)																			
				EL; N/EL															
Repair, refurbishment and remanufacturing		CE 5.1	€80,604	18.4%	N/EL	N/EL	N/EL	EL	N/EL	N/EL							14.5%		
Transport by motorbikes, passenger cars and light commercial vehicles		CCM 6.5	0	—%	EL	N/EL	N/EL	N/EL	N/EL	N/EL							—%		
Turnover of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		€80,604	18.4%														14.5% ⁵		
Taxonomy-eligible turnover (A.1+A.2)		€80,604	18.4%														14.5%		
B. Taxonomy-non-eligible activities																			
Turnover of Taxonomy-non-eligible activities		€357,481	81.6%																
Total (A+B)		€438,085	100%																

⁵ The difference between the shown values for the previous year and the sum of the shown economic activities results because in 2023, one further activity (CCM 8.2) was listed as Taxonomy-eligible.

Proportion of turnover / total turnover

	Taxonomy-aligned per objective	Taxonomy-eligible per objective
CCM	—%	—%
CCA	—%	—%
WTR	—%	—%
CE	—%	18.4%
PPC	—%	—%
BIO	—%	—%

Proportion of CapEx from products or services associated with Taxonomy-aligned economic activities – disclosure covering year 2024

Financial year				Year		Substantial contribution criteria					DNSH criteria									
Economic activities (1)	Code (2)	CapEx (3)	Proportion of CapEx, 2024 (4)	Climate-change mitigation (5)	Climate-change adaptation (6)	Water and marine resources (7)	Circular economy (8)	Pollution (9)	Biodiversity and ecosystems (10)	Climate-change mitigation (11)	Climate-change adaptation (12)	Water and marine resources (13)	Circular economy (14)	Pollution (15)	Biodiversity and ecosystems (16)	Minimum safeguard (17)	Proportion of Taxonomy aligned (A.1.) or eligible (A.2.) CapEx, 2024 (18)	Category enabling activity (19)	Category transitional activity (20)	
		kEUR	%	Y/ N						Y/ N						Y/ N	%	E	T	
A. Taxonomy-eligible activities																				
A.1. Environmentally sustainable activities (Taxonomy-aligned)																				
CapEx of environmentally sustainable activities (Taxonomy-aligned) (A.1)		0	—%														—%			
Of which enabling		0	—%														—%	0		
Of which transition		0	—%														—%		0	
A.2. Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)																				
				EL; N/EL																
Repair, refurbishment and remanufacturing	CE 5.1	€798	1.2%	N/EL	N/EL	N/EL	EL	N/EL	N/EL								0.9%			
Transport by motorbikes, passenger cars and light commercial vehicles	CCM 6.5	€332	0.5%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								1.7%			
CapEx of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		€1,130	1.6%														2.6% ⁶			
Taxonomy-eligible CapEx (A.1+A.2)		€1,130	1.6%														2.6%			
B. Taxonomy-non-eligible activities																				
CapEx of Taxonomy-non-eligible activities		€66,289	98.3%																	
Total (A+B)		€67,419	100%																	

⁶ The difference between the shown values for the previous year and the sum of the shown economic activities results because in 2023, one further activity (CCM 7.7) was listed as Taxonomy-eligible.

Proportion of CapEx / total CapEx

	Taxonomy-aligned per objective	Taxonomy-eligible per objective
CCM	—%	0.5%
CCA	—%	—%
WTR	—%	—%
CE	—%	1.2%
PPC	—%	—%
BIO	—%	—%

Proportion of OpEx from products or services associated with Taxonomy-aligned economic activities – disclosure covering year 2024

Financial year				Year			Substantial contribution criteria						DNSH criteria									
Economic activities (1)	Code (2)	OpEx (3)	Proportion of OpEx, 2024 (4)	Climate-change mitigation (5)	Climate-change adaptation (6)	Water and marine resources (7)	Circular economy (8)	Pollution (9)	Biodiversity and ecosystems (10)	Climate-change mitigation (11)	Climate-change adaptation (12)	Water and marine resources (13)	Circular economy (14)	Pollution (15)	Biodiversity and ecosystems (16)	Minimum safeguard (17)	Proportion of Taxonomy aligned (A.1.) or eligible (A.2.) OpEx, 2024 (18)	Category enabling activity (19)	Category transitional activity (20)			
		kEUR	%	Y/ N						Y/ N						Y/ N	%	E	T			
A. Taxonomy-eligible activities																						
A.1. Environmentally sustainable activities (Taxonomy-aligned)																						
OpEx of environmentally sustainable activities (Taxonomy- aligned)		0	—%														—%					
Of which enabling		0	—%														—%	0				
Of which transition		0	—%														—%		0			
A.2. Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)																						
				EL; N/EL																		
Repair, refurbishment and remanufacturing	CE 5.1	€17,739	14.0%	N/EL	N/EL	N/EL	EL	N/EL	N/EL								18.4%					
Transport by motorbikes, passenger cars and light commercial vehicles	CCM 6.5	€—	—%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								—%					
OpEx of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)		€17,739	14.0%														18.4% ⁷					
Taxonomy-eligible OpEx (A.1+A.2)		€17,739	14.0%														18.4%					
B. Taxonomy-non-eligible activities																						
OpEx of Taxonomy-non-eligible activities		€109,038	86.0%																			
Total (A+B)		€126,777	100%																			

⁷ The difference between the shown values for the previous year and the sum of the shown economic activities results because in 2023, one further activity (CCM 8.2) was listed as Taxonomy-eligible.

Proportion of OpEx / total OpEx

	Taxonomy-aligned per objective	Taxonomy-eligible per objective
CCM	—%	—%
CCA	—%	—%
WTR	—%	—%
CE	—%	14.0%
PPC	—%	—%
BIO	—%	—%

Nuclear and fossil gas related activities



Nuclear energy related activities		
1	The undertaking carries out, funds or has exposures to research, development, demonstration and deployment of innovative electricity generation facilities that produce energy from nuclear processes with minimal waste from the fuel cycle.	No
2	The undertaking carries out, funds or has exposures to construction and safe operation of new nuclear installations to produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production, as well as their safety upgrades, using best available technologies.	No
3	The undertaking carries out, funds or has exposures to safe operation of existing nuclear installations that produce electricity or process heat, including for the purposes of district heating or industrial processes such as hydrogen production from nuclear energy, as well as their safety upgrades.	No
Fossil gas related activities		
4	The undertaking carries out, funds or has exposures to construction or operation of electricity generation facilities that produce electricity using fossil gaseous fuels.	No
5	The undertaking carries out, funds or has exposures to construction, refurbishment, and operation of combined heat/cool and power generation facilities using fossil gaseous fuels.	No
6	The undertaking carries out, funds or has exposures to construction, refurbishment and operation of heat generation facilities that produce heat/cool using fossil gaseous fuels.	No

Assurance report of the independent German Public Auditor on a limited assurance engagement in relation to the combined separate non-financial report¹



To the Adtran Networks SE, Meiningen-Dreißigacker

Assurance Conclusion

We have conducted a limited assurance engagement on section 3. "Combined Separate Non-Financial Reports According to HGB" and section 4. "EU Taxonomy Regulation Disclosures" of the ESG Report 2024 of Adtran Networks SE, Meiningen-Dreißigacker (hereinafter "company" or "Adtran Networks SE"), prepared to fulfil the requirements of sections 315b and 315c of the HGB [Handelsgesetzbuch: German Commercial Code] for a consolidated non-financial statement and Sections 289b to 289e of the HGB for a non-financial statement of the company, including the information contained in this combined separate non-financial report to fulfill the requirements of Article 8 of Regulation (EU) 2020/852 (hereinafter the "non-financial reporting") for the financial year from January 1, 2024 to December 31, 2024.

Not subject to our assurance engagement are the disclosures which are marked as unassured with „“ at the beginning and „“ at the end and the external sources of documentation or expert opinions as well as links to web pages mentioned in the non-financial reporting.

Based on the procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the accompanying non-financial reporting for the financial year from January 1, 2024 to December 31, 2024 is not prepared, in all material respects, in accordance with sections 315b and 315c of the HGB for a consolidated non-financial statement and Sections 289b to 289e of the HGB for a non-financial statement of the company, the requirements of Article 8 of Regulation (EU) 2020/852 and the supplementary criteria presented by the executive directors of the Company.

We do not express an assurance conclusion on the disclosures which are marked as unassured with „“ at the beginning and „“ at the end. Furthermore, we do not express an assurance opinion on the external sources of documentation or expert opinions as well as links to web pages mentioned in the non-financial reporting.

Basis for the Assurance Conclusion

We conducted our assurance engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000 (Revised): Assurance Engagements Other Than Audits or Reviews of Historical Financial Information issued by the International Auditing and Assurance Standards Board (IAASB).

The procedures in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Our responsibilities under ISAE 3000 (Revised) are further described in the section "German Public Auditor's Responsibilities for the Assurance Engagement on the non-financial reporting".

We are independent of the company in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. Our audit firm has applied the requirements for a system of quality control as set forth in the IDW Quality Management Standard issued by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW): Requirements for Quality Management in the Audit Firm (IDW QMS 1 (09.2022)) and International Standard on Quality Management (ISQM) 1 issued by the IAASB. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our assurance conclusion.

Responsibilities of the Executive Directors and the Supervisory Board for the non-financial reporting

The executive directors are responsible for the preparation of the non-financial reporting in accordance with the applicable German legal and other European requirements as well as with the supplementary criteria presented by the executive directors of the Company and for designing, implementing and maintaining such internal control that they have considered necessary to enable the preparation of a non-financial reporting in accordance with these requirements that is free from material misstatement, whether due to fraud (i.e., fraudulent sustainability reporting in the non-financial reporting) or error.

¹ Our engagement applied to the German version of the combined separate non-financial report. This text is a translation of the Independent Assurance Report issued in the German language, whereas the German text is authoritative.

This responsibility of the executive directors includes establishing and maintaining the materiality assessment process, selecting and applying appropriate reporting policies for preparing the non-financial reporting, as well as making assumptions and estimates and ascertaining forward-looking information for individual sustainability-related disclosures.

The Supervisory Board is responsible for overseeing the process for the preparation of the non-financial reporting.

Inherent Limitations in Preparing the non-financial reporting

The applicable German legal and other European requirements contain wording and terms that are subject to considerable interpretation uncertainties and for which no authoritative, comprehensive interpretations have yet been published. As such wording and terms may be interpreted differently by regulators or courts, the legality of measurements or evaluations of sustainability matters based on these interpretations is uncertain.

These inherent limitations also affect the assurance engagement on the non-financial reporting.

German Public Auditor's Responsibilities for the Assurance Engagement on the non-financial reporting

Our objective is to express a limited assurance conclusion, based on the assurance engagement we have conducted, on whether any matters have come to our attention that cause us to believe that the non-financial reporting has not been prepared, in all material respects, in accordance with the applicable German legal and other European requirements and the supplementary criteria presented by the company's executive directors, and to issue an assurance report that includes our assurance conclusion on the non-financial reporting.

As part of a limited assurance engagement in accordance with ISAE 3000 (Revised), we exercise professional judgment and maintain professional skepticism. We also:

- obtain an understanding of the process used to prepare the non-financial reporting, including the materiality assessment process carried out by the company to identify the disclosures to be reported in the non-financial reporting.
- identify disclosures where a material misstatement due to fraud or error is likely to arise, design and perform procedures to address these disclosures and obtain limited assurance to support the assurance conclusion. The risk of not detecting a material misstatement resulting from fraud is higher than the risk of not detecting a material misstatement resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations or the override of internal control. In addition, the risk of not detecting a material misstatement in information obtained from sources not within the company's control (value chain information) is ordinarily higher than the risk of not detecting a material misstatement in information obtained from sources within the company's control, as both the company's executive directors and we as practitioners are ordinarily subject to restrictions on direct access to the sources of the value chain information.
- consider the forward-looking information, including the appropriateness of the underlying assumptions. There is a substantial unavoidable risk that future events will differ materially from the forward-looking information.

Summary of the Procedures Performed by the German Public Auditor

A limited assurance engagement involves the performance of procedures to obtain evidence about the sustainability information. The nature, timing and extent of the selected procedures are subject to our professional judgment.

In performing our limited assurance engagement, we have, among others:

- evaluated the suitability of the criteria as a whole presented by the executive directors in the non-financial reporting
- inquired of the executive directors and relevant employees involved in the preparation of the non-financial reporting about the preparation process, including the materiality assessment process carried out by the company to identify the disclosures to be reported in the non-financial reporting, and about the internal controls relating to this process
- a risk assessment, including a media analysis, on relevant information on sustainability performance
- evaluated the methods used by the executive directors to prepare the non-financial reporting
- evaluated the reasonableness of the estimates and related information provided by the executive directors.
- performed analytical procedures and made inquiries in relation to selected information in the non-financial reporting
- conducted site visits
- considered the presentation of the information in the non-financial reporting
- considered the process for identifying taxonomy-eligible and taxonomy-aligned economic activities and the corresponding disclosures in the non-financial reporting.

Restriction of Use/Clause on General Engagement Term

This assurance report is solely addressed to Adtran Networks SE, Meiningen-Dreißigacker.

The engagement, in the performance of which we have provided the services described above on behalf of Adtran Networks SE, Meiningen-Dreißigacker, was carried out on the basis of the General Engagement Terms for Wirtschaftsprüferinnen, Wirtschaftsprüfer und Wirtschaftsprüfungsgesellschaften (Allgemeine Auftragsbedingungen für Wirtschaftsprüferinnen, Wirtschaftsprüfer und Wirtschaftsprüfungsgesellschaften) dated as of January 1, 2024 (www.kpmg.de/AAB_2024). By taking note of and using the information as contained in our report each recipient confirms to have taken note of the terms and conditions stipulated in the aforementioned General Engagement Terms (including the liability limitations to EUR 4 million specified in item No. 9 included therein) and acknowledges their validity in relation to us.

Munich, April 28, 2025

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