



AIXTRON

Sustainability report

in addition to the annual report 2023



		Group				
		II	III	IV	V	VI
		9.0 Be	10.8 B	12.0 C	14.0 N	16.0 O
3	Mg		Al	Si	P	S
4	Ca		Ga	Ge	As	Se
5	Sr		In	Sn	Sb	Te
6	Ba		Hg	Tl	Pb	Bi
						Po

TABLE OF CONTENTS

Foreword	4
About this report	6
Sustainable corporate management and sustainability strategy	12
Environment	20
Technology and climate protection	21
EU taxonomy	23
Innovations as a competitive factor	33
Climate balance sheet	34
Energy management and consumption indicators	37
Waste management	40
Mobility	41
Social	45
Occupational health and safety	46
Diversity and equal opportunities	48
Flexible working, employee recruitment & retention	49
Personnel development, training and continuing education	56
Company suggestion scheme	57
Regional and social engagement	58
Corporate governance	61
Legal conformity, compliance and information security	62
Quality management and product safety	66
Key figures on supplier relations	67
Associations and initiatives	68
Overview of non-financial indicators	72
GRI Content Index	76
Independent auditor's report	87

AIXTRON-Group

2023 at a glance

73%

EU taxonomy-aligned revenues*

Previous year: 58%

207

New hires

Previous year: 238

79%

EU-taxonomy-aligned capital expenditures (CapEx)*

Previous year: 38%

61

Nationalities

Previous year: 50

65%

EU-taxonomy-aligned operating expenses (OpEx)*

Previous year: 73%

32

Learning hours per employee

Previous year: 33

1,385

Suppliers worldwide

Previous year: 1,202

79% · 21% · 1%

Europe · America · Asia

Distribution of purchasing volume

Previous year: 83% · 16% · 2%

* In terms of the EU taxonomy regulation

Ladies and Gentlemen,

Climate change is one of the greatest challenges of our time. To stop it, we need joint and coordinated efforts from all stakeholders. This is the only way we can sustainably secure the future of future generations.

Business, science and academic research are important pillars and drivers of change. They must develop and offer sustainable innovations that replace fossil fuels. Industry should seize this opportunity, invest in sustainable technologies and align their business and operating processes ecologically. Because we have a great responsibility for the societies in which we operate and for the global community.

At AIXTRON we are aware of this responsibility and act accordingly. The topic of sustainability has two aspects for us: On the one hand, we operate energy-efficiently and climate-neutrally¹ at our locations. On the other hand, we use our systems to promote the spread of particularly energy-efficient technologies and research even more sustainable solutions for the future.

This strategy is bearing fruit and is paying off on several levels:

- The year 2023 was economically very successful for AIXTRON. We achieved sales of EUR 630 million, of which 73% were taxonomy-aligned (2022: 58%). This corresponds to sales revenue of EUR 462 million, which was ecologically sustainable in the sense of the EU taxonomy (2022: EUR 271 million).
- We have launched our new G10 product family with G10-SiC, G10-AsP and G10-GaN, covering the entire spectrum in power electronics and optoelectronics. This means we are once again significantly increasing the key performance indicators for the production of particularly energy-efficient applications such as e-mobility, data transmission, renewable energy and Micro LED displays. The response from our customers shows that we have hit the nerve of the times with our technologies.
- We have started with the construction of our new innovation center, in which we are investing around EUR 100 million. Once finished, we will continue to expand our own research & development activities and work together with our suppliers and customers on the sustainable innovations of tomorrow.
- We have continued to align our operating and investment expenditure sustainably in accordance with the EU Taxonomy Regulation. The share of taxonomy-aligned operating expenses (OpEX) was 65% and our share of taxonomy-aligned capital expenditures (CapEx) was 79%.
- We maintained our high level in the MSCI rating with AA (2022: AA).

We are not only responsible for greater sustainability and society in general, but also, first and foremost, for our workforce. It forms the backbone of our success and our innovative strength in all areas. Our employees are characterized by their expertise, passion and creativity.

¹ related to Scope 1 and Scope 2

They maintain a special corporate culture that is based on teamwork, diversity and internationality. We employ people from 61 nations and have expanded our workforce by around 200 highly qualified colleagues in 2023. We also promote the health and social commitment of our employees, for example through the AIXTRON Virtual Run, which involves a donation to a charitable institution.



Our board members Dr. Felix Grawert and Dr. Christian Danninger (f.l.t.r.).

Our financial and non-financial success is based on effective and efficient corporate governance. It defines the crucial framework conditions for good corporate governance. AIXTRON has had highly developed corporate governance systems for many years, which we are constantly developing further.

With this sustainability report we provide you with an overview of our sustainability strategy and its implementation. The results clearly illustrate what we are working on today and in the future.

The Executive Board of AIXTRON SE

Handwritten signature of Felix Grawert in black ink.

Dr. Felix Grawert
Chairman of the Board

Handwritten signature of Christian Danninger in black ink.

Dr. Christian Danninger
Member of the Board



01

About this report

About this report

With this sustainability report, AIXTRON documents the ecological and social performance and the progress made in implementing its sustainability goals for the 2023 reporting year. This should make it clear to our stakeholders how ecological and social goals and measures have contributed to the company's success.

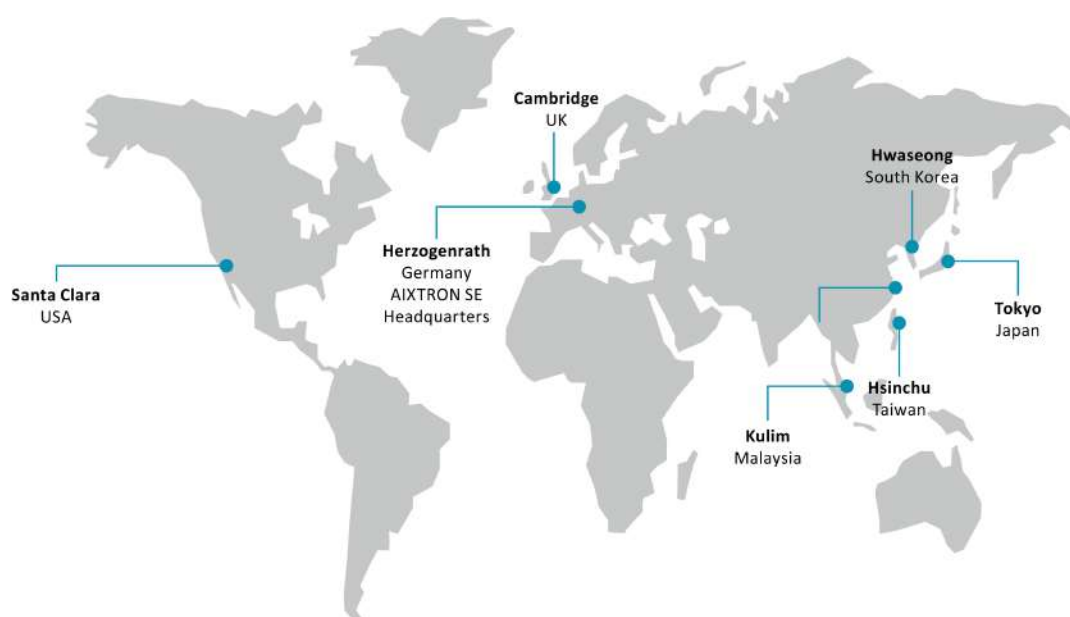
You can find the financial data and performance of AIXTRON for the 2023 financial year in our annual report.

The reporting period corresponds to the 2023 financial year, i.e. the period from January 01, 2023 to December 31, 2023.

The report covers the following locations and subsidiaries of the AIXTRON Group. These essentially include:

- AIXTRON SE, Germany
- AIXTRON Ltd., UK
- AIXTRON Inc., USA
- AIXTRON K.K., Japan
- AIXTRON Korea Co. Ltd., Korea
- AIXTRON China Ltd., China
- AIXTRON Taiwan Co. Ltd., Taiwan
- AIXTRON Sdn. Bhd., Malaysia

As of December 31, 2023, AIXTRON has one production site and one research/development site in Herzogenrath and one in Cambridge (UK) as well as sales and service sites in the USA and Asia. The vast majority of our employees work at our location in Germany and a considerably smaller number in Great Britain. The focus of the reporting is therefore on these two locations.



Main site	Country	Utilization in 2023	Size (approx.)	Thereof biodiverse	Share of m ²	Share of employee
Herzogenrath	Germany	Company headquarters, R&D, production	61,806 m ²			
Herzogenrath		Production	10,295 m ²	Europe 28.4%	Europe 95.0%	Europe 82.7%
Cambridge	UK	R&D, production, customer service	4,416 m ²			
Santa Clara	USA	Sales, customer service	491 m ²	USA 0.0%	USA 0.6%	USA 4.0%
Hwasung	South Korea	Sales, customer service	1,151 m ²			
Shanghai	China	Sales, customer service	594 m ²			
Hsinchu	Taiwan	Sales, customer service	677 m ²	Asia 0.0%	Asia 4.4%	Asia 13.3%
Tokio	Japan	Sales, customer service	364 m ²			
Kulim	Malaysia	Customer service	766 m ²			

Overview of the locations per country including use, size, distribution of employees and distribution of biodiverse areas by region. AIXTRON understands biodiverse areas to include green areas, meadow meadows, hedges, shrubs, areas for insect hotels, etc.

We refer here to further information e.g. on the structure and management of the company in the chapters "Fundamental information on the Group" of the current annual report of the AIXTRON Group.

Editorial note

For better readability we refer to "employees" throughout this report. That includes all genders. The same applies to similar terms such as participants, representatives, etc.


This document is an English language translation of a document in German language. In case of discrepancies, the German language document shall prevail and shall be the valid version.

Framework and Reporting

The sustainability report is prepared in accordance with the Sustainability Reporting Standards of the Global Reporting Initiative (GRI). The table at the end of the report provides information on the assignment of the content to the requirements of the GRI framework. On our AIXTRON website under the menu item "Sustainability," you will find accompanying explanations of the information and projects presented in this report.


With the report, we primarily want to give our interest groups (stakeholders) the most comprehensive possible picture of the non-financial aspects and key figures of our business activities. Individual key figures were recorded for the first time in the 2023 reporting year and included in this report. If in individual cases, we do not have any data from previous years, it is not possible to compare these key figures with previous years. In this case, this is indicated by a corresponding note.

The requirements of the German CSR Directive Implementation Act oblige AIXTRON to publish a non-financial statement. With our separate non-financial report, we meet the requirements that arise for us from Section 315b (1-3) HGB.

All sections of text, tables, and graphics in the sustainability report that are assigned to the non-financial report are marked with an omega symbol . Therefore, not all information contained in this report is also a mandatory part of the separate non-financial statement. References to information in the management report are part of the non-financial statement.

According to Section 289c (3) HGB, we are obliged to examine topics for their "double materiality". Dual materiality requires disclosures on non-financial aspects to be made as soon as the following criteria are met:

1. The information is necessary to understand the course of business, the business result, and the position of the company.
2. The information makes it possible to understand how the company's business activities affect non-financial aspects.

We checked the issues identified for this double materiality. The topics that fit this definition are also marked in the report by an omega sign . These topics are assigned to the respective chapters in this report. In terms of Sections 289c Paragraphs 2 and 3, 315c HGB, no "material risks" have been identified either with regard to our business activities or with regard to our business relationships, products, and services that have or will have "very likely serious negative effects".

The non-financial information and key figures on our sustainability activities given in this report were subjected to an independent review with "limited assurance" by KPMG AG Wirtschaftsprüfungsgesellschaft, Duesseldorf (Germany) using the relevant auditing standards for sustainability reporting (ISAE 3000 Revised).

Dialogue with our stakeholders

We maintain trusting and long-term partnerships with our stakeholders. In doing so, it is important to us - just as in our company to each other - that we treat each other in a spirit of partnership, respectful and constructive. We see ourselves as part of this society. That is why we are committed to community and social projects – particularly in the region where our headquarters are located.

The key interest groups for AIXTRON are:

- Customers
- Employees
- Capital market participants
- Delivery
- State and politics
- Media
- Science and Research

The identification of the most important stakeholders and their interests are crucial for a successful stakeholder dialogue (see also the chapter on [sustainable corporate management and sustainability strategy / materiality analysis](#)). The interest groups were categorized and prioritized based on the following criteria:

- Interests of the stakeholders
- Stakeholder Influence
- Stakeholder expectations of AIXTRON
- Dependence of stakeholders on AIXTRON
- Value for AIXTRON to get in touch with this stakeholder

We regularly reflect on the process for identifying the most important stakeholders and the relevant topics and adjust them where necessary.

Stakeholder	Topics of dialog	Forms of dialog
Capital market	<ul style="list-style-type: none"> • Business performance • Product innovations • Application possibilities • Sustainability • Strategy 	<ul style="list-style-type: none"> • Roadshows and (telephone) conferences • Quarterly reporting • Annual financial statements and annual report • Annual General Meeting • Sustainability reporting • Company visits
Customers	<ul style="list-style-type: none"> • Product quality and safety • Sustainable technologies • Product energy efficiency • Human rights • Compliance 	<ul style="list-style-type: none"> • Audits • Expert support • AIXTRON after-sales • Product requirements • Joint developments with customers • Fairs and conferences
Suppliers and business partners	<ul style="list-style-type: none"> • Product quality and safety • Environmental protection • Responsible purchasing • Compliance with AIXTRON's standards 	<ul style="list-style-type: none"> • Supplier evaluation • Purchasing principles • Workshops • Audits
Employees	<ul style="list-style-type: none"> • Health and safety • Career advancement • Co-determination • Training opportunities • Compensation and benefits • Work-life balance / parental leave • Diversity & equal opportunities 	<ul style="list-style-type: none"> • Intranet • Staff meetings • Internal publications • Employee survey • Employee survey • Employee improvement suggestion scheme • Training and employee appraisals • Employee interviews
Science and university	<ul style="list-style-type: none"> • Development of new technologies • Promotion of research and teaching • Networking of industry and research • Recruitment / PhD students 	<ul style="list-style-type: none"> • Teaching assignment • Research projects • Fairs & conferences • University group visits • Allocation of doctoral positions
Media representatives	<ul style="list-style-type: none"> • Innovation and technologies • Semiconductor technology • AIXTRON as employer • Finance 	<ul style="list-style-type: none"> • Interviews • Press releases • Company receptions
Government and politicians	<ul style="list-style-type: none"> • Eco-efficiency • Innovation and technology promotion • Economic and labor policy 	<ul style="list-style-type: none"> • Meetings and committees • Participation in forums and events

Most important stakeholders, topics and forms of dialogue



02

**Sustainable corporate management
and sustainability strategy**

Sustainable corporate management and sustainability strategy

🔗 Who we are and what we do

The AIXTRON Group (“AIXTRON” or “the Company”) is a leading provider of deposition equipment for the semiconductor industry. The company was founded in 1983 and is based in Herzogenrath (Aachen region) with branches and representative offices in Europe, the USA, and Asia. At the end of 2023, we employed a total of 1,147 people (headcount). Since 2020, AIXTRON has been listed in the MDAX in addition to the TecDAX.

AIXTRON's business activities include the development, production, and installation of systems for the deposition of complex semiconductor materials, the development of process technologies, consulting, and training as well as customer support.

Our products are used by customers worldwide to manufacture high-performance components for power electronic and optoelectronic applications based on compound semiconductors. These devices are used in a variety of innovative applications, technologies and industries. These include, for example, Micro LED and display technologies, data transmission, communication, signaling and lighting technology, sensors and power electronics based on silicon carbide (SiC) and gallium nitride (GaN), as well as many other high-tech applications.

In the 2023 reporting year, we invested EUR 88 million (2022: EUR 58 million) in research and development with revenues of EUR 630 million (2022: EUR 463 million). This corresponds to around 14% of our revenues, with an equity ratio of 75% (2022: 73%). Asia accounted for the lion's share of our revenues at almost 50% (2022: 68%), followed by Europe at 30% (2022: 14%) and America at 20% (2022: 18%).



Our self-image and our values

In addition to economic success, our business activities also focus on ecological and social challenges. Sustainability is a prerequisite for long-term economic success.

As a supplier to pioneering key industry, we conduct our business prudently and responsibly, taking into account the interests of key stakeholders. The aim is to act sustainably at all levels of the value chain and to further promote sustainability in the company.

Acting responsibly is one of four corporate values at AIXTRON and is therefore a central part of our corporate culture. The Board of Directors and our managers have a particular responsibility and act as role models.

As a future-oriented technology company, efficient and resource-optimized management has always been part of our core business. Thanks to our technologies and systems, semiconductors are becoming more and more efficient and resource-saving, which increases the efficiency of a large number of end products.

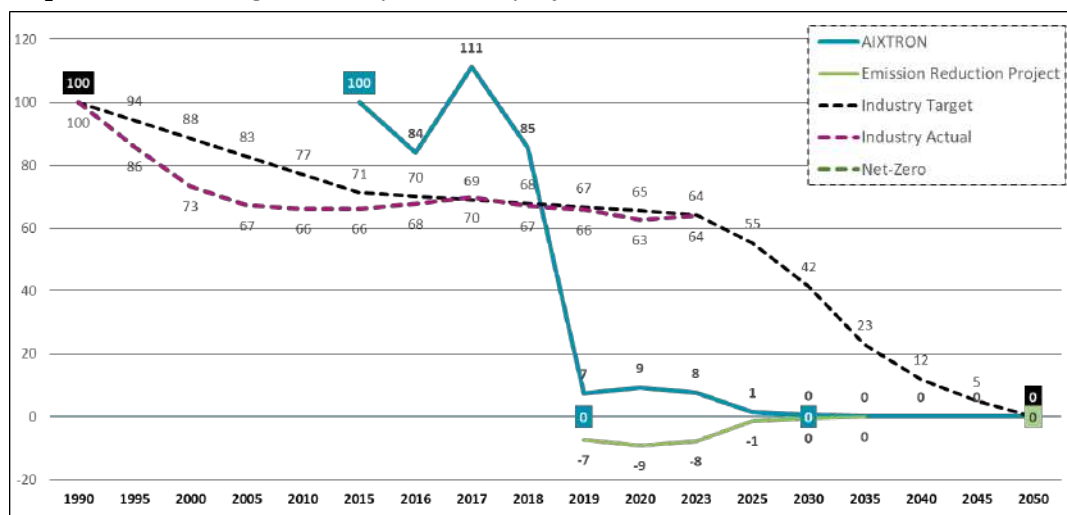
This applies to applications from areas such as energy supply, electromobility, entertainment electronics, or communication. Our products thus contribute to reducing not only our own ecological footprint but also that of our customers and especially that of the end consumers in these areas (see also the chapter on [innovations as a competitive factor](#)).

Our values	Excellent. Leading position through goal-oriented action.
	Forward thinking. Provide impulses for the future instead of following them.
	Open minded. Communicate openly for a healthy corporate culture.
	Responsible. Setting a good example for sustainable success.

Our sustainability strategy

In recent years, sustainability has been increasingly anchored in our company as an important principle of corporate management. The cornerstone for our current strategy was laid in 2018. Two years later, concrete sustainability goals were defined and incentivized by the Supervisory Board and Board of Directors. In doing so, we have also given non-financial goals greater weight.

An important goal as part of our sustainability strategy was to become carbon neutral, which we achieved in 2019 for scope 1 and 2. That is why we purchase gray electricity plus green electricity certificates in the corresponding amount and reduce all unavoidable CO₂ emissions through climate protection projects.



Scope 1&2; AIXTRON Index 100 = 7.411 t CO₂e in 2015; Industries Index 100 = Climate targets BMUV (284 Mio. t CO₂e in 1990)

Since the 2021 reporting year, we have also been reporting on the upstream value chain (Scope 3). This analysis was further optimized in the following reporting years. This is in line with our aim to continuously improve our sustainability activities and the associated guidelines, standards and programs. In this way, we can meet the needs and expectations of our stakeholders even better.

Against this background, we have defined five priority topics in our sustainability strategy.



The five core topics of the AIXTRON sustainability strategy

Some of these topics were defined in our “Sustainability Policy” and are also based on the United Nations Sustainable Development Goals (United Nations Sustainable Development Goals - SDG).

The SDGs we support relate to the following goals:

- No poverty
- Good health and well-being
- Quality education
- Gender equality
- Affordable and clean energy
- Decent work and economic growth
- Industry, innovation and infrastructure
- Responsible consumption and production
- Climate Action
- Life on land

These goals serve as orientation for our daily and strategic work.



The SDGs supported by AIXTRON relate to the above goals

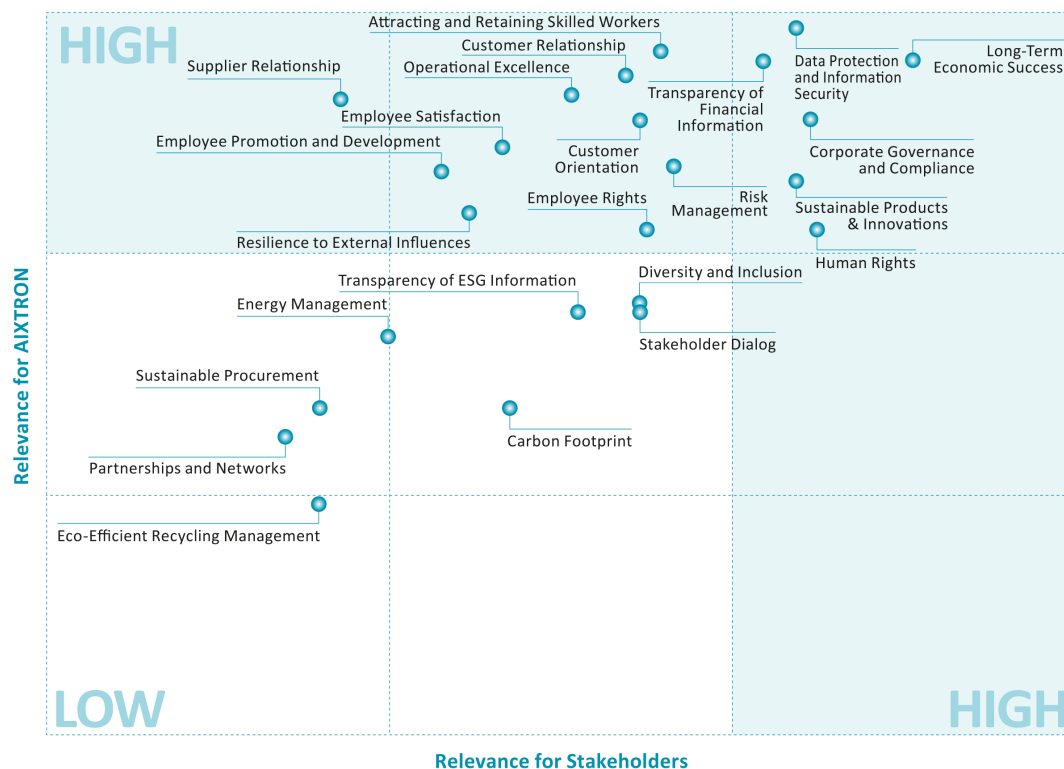
🔍 Identification of material issues

For identification of the material topics for the 2023 reporting year, the materiality analysis from the previous year was used and reviewed with regard to the changes from the current financial year. No new material themes were identified, therefore the results are in line with those of the previous year. This materiality analysis was used to evaluate the economic, ecological and social issues relevant to us.

The analysis focused on aspects that have a significant impact on our company. For this purpose, internal specialists and employees who are in constant communication with our stakeholders were surveyed. Through this comprehensive internal survey, which was based on the expertise and many years of experience of our employees, we were also able to cover the external perspective.

As a result, five topic clusters were defined, that are depicted in the overview on page 15.

The following two graphics illustrate the importance of the respective topic complexes as well as their chronological order - across all stakeholders.



AIXTRON materiality analysis 2022 and 2023

The following overview shows the stakeholders' assessment of the respective time horizon of the subject areas considered to be material.

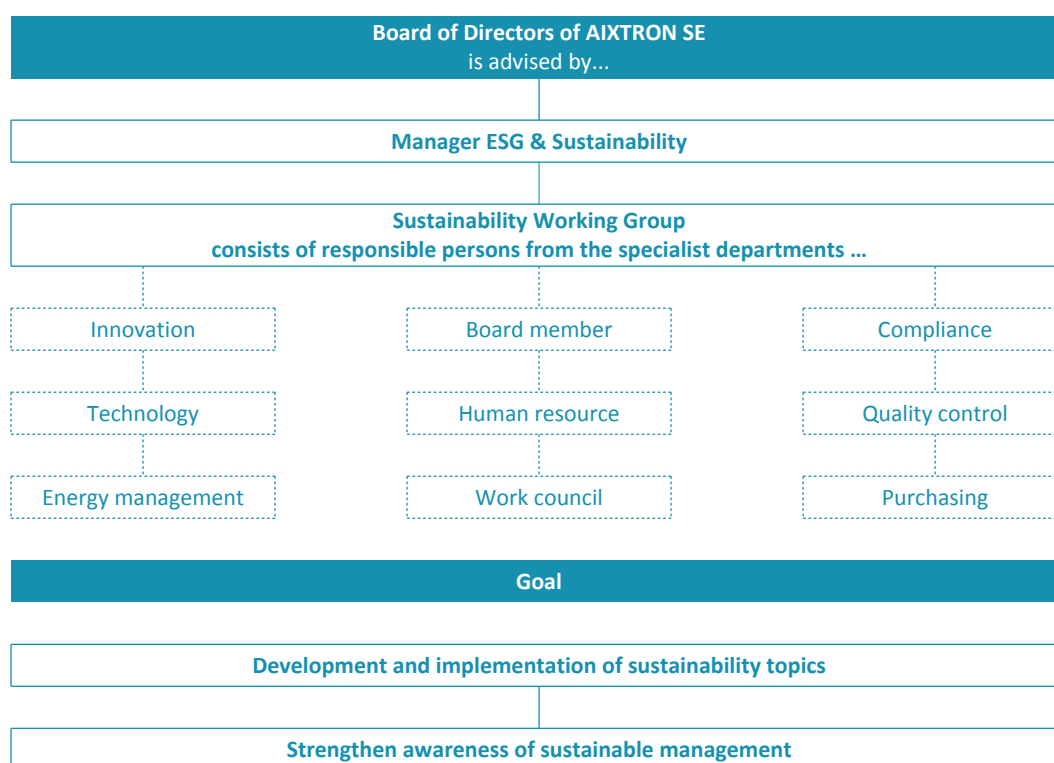
Data protection and information security		
Transparency of Financial Information		
Corporate Governance and Compliance	Long-term economic success	
Attracting and retaining qualified workers	Sustainable products and innovation	
Customer relationships	Human rights	
Customer focus	Operational excellence	
Risk management	Workers rights	
Supplier relationships	Employee satisfaction	
Resilience to external influences	Employee promotion and -development	...
1-2 years	3-5 years	> 5 years

In the following overview, the subject areas considered essential by the stakeholders are assigned to the three overarching subject areas of environment, social affairs, and corporate management.

Environment	Social	Corporate governance
Sustainable products and innovation	Human rights	Long-term economic success
Carbon footprint	Workers rights	Data protection and information security
	Employee satisfaction	Transparency of Financial Information
	Employee promotion and -development	Corporate Governance and Compliance
	Attracting and retaining qualified workers	Customer relationships
		Customer focus
		Risk management
		Operational excellence
		Supplier relationships
		Resilience to external influences

Organizational anchoring

The Board of Directors of AIXTRON SE bears overall responsibility for the topic of sustainability. It is advised by the ESG and Sustainability department and decides on important sustainability issues. The respective departments and branches of AIXTRON SE are responsible for implementing the goals and projects decided by the Board of Directors. The sustainability working group consists of those responsible for the respective topic, e.g. B. innovation, technology, energy management, human resources, works council, compliance, quality assurance or purchasing. The aim is to develop relevant sustainability topics along the corporate strategy, to strengthen awareness of sustainable management, and to anchor it in all areas of the company. Within the working group, the responsible individuals report the progress of individual projects to the ESG and Sustainability department and manage the respective implementation. The cornerstones of our sustainability management are defined in our CSR guidelines and are binding for all units of AIXTRON SE.





03

Environment

Environment

We see the protection of the environment as a key factor in the sustainability of our business model and align our actions accordingly. In addition, we are in close contact with our customers and suppliers. Our innovative technologies and products, on which our success is based and whose efficiency and performance convince our customers worldwide, make a decisive contribution.

Technology and climate protection

The basis for a sustainable future lies in electrifying the world and moving away from fossil fuels. The further spread of e-mobility, renewable energies and energy-efficient technologies is crucial for this. This is of utmost importance, especially given the current expansion of energy-hungry applications of artificial intelligence. With our systems, we ensure greater efficiency and significant CO₂ savings in all of these areas. At the same time, we are already working on the solutions of tomorrow today and are currently investing around EUR 100 million in a new innovation center.

Dr. Felix Grawert · Chairman of the Board (CEO)



Our customers benefit from forward-looking solutions that save costs, conserve resources, and are energy-efficient in equal measure. Our customers include companies from the areas of electromobility (drive trains, charging infrastructure), renewable energies (network circuits), IT infrastructure (power supply), consumer electronics (3D sensors, fast chargers) as well as data transmission (fiber optic networks) and telecommunications (5G network).

We also make a significant contribution to digital progress in the areas of display technology (mini and Micro LEDs), lighting and UV radiation for disinfection/hygiene. Components for a variety of innovative applications, technologies and industries are manufactured on AIXTRON systems.

Highest precision in the manufacture of power electronics

As a technology leader, we have been shaping the further development of power electronics and their manufacturing processes for more than 30 years.

Due to their superior material properties, applications based on gallium nitride (GaN) and silicon carbide (SiC) deliver significantly higher energy efficiency than classic silicon. GaN technology, for example, is able to reduce energy losses during conversion by up to 40 percent. In expert circles, we assume that GaN technology can save a total of 43 megatons of CO₂ per year across the EU in the long term. In addition, we are currently working on the technologies of the future and expect further energy saving potential, for example through the use of quantum technology.

Prof. Dr. Michael Heuken
Vice President Advanced Technologies



Our technologies are at the heart of sustainable power electronics and thus support global efforts to combat climate change.



EU Taxonomy

With the Action Plan on Sustainable Growth, the EU Commission aims to make the economic and financial system in the EU more sustainable. Climate neutrality should be achieved by 2050, i.e. the same amount of CO₂ emissions should then be avoided or eliminated as is emitted. The core of this action plan is the EU taxonomy regulation, a standardized classification system for sustainable economic activities. It defines six environmental goals:

Climate protection	Adaptation to climate change	The sustainable use and protection of water and marine resources	The transition to a circular economy	Prevention and reduction of environmental pollution	The protection and restoration of biodiversity and ecosystems
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According to EU taxonomy guidelines, economic activities are “environmentally sustainable” if they

- make a significant contribution to achieving one or more of the six environmental goals mentioned,
- do not significantly harm the achievement of the five other EU environmental targets (“Do no significant harm”; DNSH), and
- comply with minimum regulations in accordance with Article 18 of the EU taxonomy, including human rights including occupational safety, corruption prevention, taxes, compliance and antitrust law (“Minimum Safeguards”)

Whether an economic activity makes a significant contribution to one of the goals and does not significantly affect the five other goals must be assessed using technical assessment criteria. In the 2023 financial year, information on how they can be allocated to the environmental goals must be provided for all six goals. In the previous year, information only had to be provided on the first two objectives in terms of their taxonomy eligibility and taxonomy conformity.

- Economic activities are “taxonomy-eligible” if they can be assigned to taxonomy descriptions.
- Activities are “taxonomy-aligned” if the taxonomy-eligible activities meet the above-mentioned criteria for environmental sustainability.

Against the background of the EU Taxonomy Regulation, in the 2023 financial year we will report on the taxonomy-eligible and taxonomy-aligned share of sales revenue, capital expenditure (CapEx) and operating expenses (OpEx) of our economic activities. The individual values can be found in the reporting forms in the Key figures chapter.

Method

As in the past two years, the EU taxonomy requirements were reviewed and analyzed in the 2023 reporting year with the help of a project team in relation to the six EU environmental goals.

In the first step, the project team, which consists of experts from various disciplines, confirmed that the economic sector “Manufacture of machines for other specific economic sectors a.n.g.” (NACE Code 28.99) and the economic activities of the “Construction and Real Estate” category are currently applicable to AIXTRON.

In addition, we report 3.6 CapEx and OpEx B in connection with economic activities in accordance with paragraphs 1.1.2.2 and 1.2.3.2. of Annex I of Delegated Act (EU) 2021/2178. This includes investment expenditure for the construction of a new innovation center, which will serve to expand our taxonomy-compliant economic activities in the future. In addition, research activities for the expansion of technologies are reported under economic activity 3.6.

Interviews and workshops with the respective contacts and experts from the departments were then used to check whether our economic activities could be assigned to the taxonomy descriptions (eligibility check).

The experts' assessments were documented for sales, CapEx and OpEx and the relevant evidence and supporting documents were examined. The analysis was carried out taking into account materiality aspects and cost/benefit considerations. AIXTRON has identified the environmental goal “1 climate protection” as applicable. No taxonomy-eligible economic activities within Environmental Goals 2 to 6 were identified. The following economic activities were identified as eligible for taxonomy:

- 3.1 Production of renewable energy technologies
- 3.6 Manufacturing other low-carbon technologies
- 7.3 Installation, maintenance and repair of energy efficient devices
- 7.6 Installation, maintenance and repair of renewable energy technologies



Unlike criteria sets 3.1, 7.3 and 7.6, criteria set 3.6 contains a higher number of terms that require interpretation and are defined below. The set of criteria “Production of other low-CO₂ technologies” is of particular relevance for the supplier industry in mechanical and plant engineering. This set of criteria includes economic activities that produce technologies that aim to achieve significant savings in life-cycle greenhouse gas emissions and are proven to achieve them compared to the best performing alternative technology available on the market.

For the identification of taxonomy-eligible economic activities that fulfill the description of activity 3.6, those technologies were identified from AIXTRON's technology portfolio that have low CO₂ emissions in their application. The reduction in greenhouse gas emissions must be significant. However, no minimum value is specified.

It can be assumed that the purpose pursued with the "EU Action Plan on Financing Sustainable Growth" is to focus on technological leaps rather than efficiency increases within the existing system: A saving of 20% should regularly be significant and thus a significant one contribute to climate protection. AIXTRON has set this value as the minimum value for significant savings in CO₂ emissions. A reference technology is the technology that dominates the market and not a possibly very efficient niche technology with only a very small market share. With regard to the reference standard, we therefore only used this reference technology for the evaluation.

The analysis of the taxonomy conformity was carried out as follows:

- **Substantial Contribution:** Compliance with the technical assessment criteria was checked individually for each taxonomy-eligible business activity.
- **Do not significant harm (DNSH):** DNSH compliance with the EU environmental goals **2. Adaptation to climate change**, **3. Sustainable use and protection of water and marine resources** and **6. Protection and restoration of biodiversity and ecosystems** were assessed for locations with taxonomy-eligible economic activities for the Herzogenrath and Cambridge locations. The DNSH conformity with regard to the EU environmental goals **4. Circular economy** and **5. Pollution prevention and control** were assessed at the group level and at the level of the business activity.
- **Minimum Safeguards:** A Group-wide approach to ensuring the Minimum Safeguards requirements with regard to the topics of corruption, fair competition, taxes and human rights was pursued, which appropriately takes into account the risk situation, the circumstances, and the context of AIXTRON. We have conducted an impact analysis that includes our own business unit as well as the upstream and downstream supply chain. Since no higher risk was identified for our own business unit and the downstream supply chain, we focused on the upstream supply chain as part of a risk-based approach. Country and product-specific aspects in particular were taken into account as part of the risk-based approach. Due to the focused business model and the demanding high-tech requirements, AIXTRON relies on a relatively small number of key suppliers, most of whom are located in the border triangle (Belgium/Netherlands/Germany). In the 2023 financial year, for example, more than 99% of the total purchasing volume came from suppliers in OECD countries, which are generally considered to be low-risk. A detailed risk analysis was carried out for the remaining suppliers from potentially higher risk countries. The minimum safeguards requirements are ensured using the existing compliance management structures (e.g. sustainability guidelines, global employment standards, code of ethics, conflict minerals management system, policy statement on human rights and environmental strategy as well as the code of conduct for suppliers, supplier handbooks, whistleblowing mechanism). The final assessment did not identify any material adverse effects.

Substantial Contribution

As part of this analysis, the following taxonomy-eligible and at the same time taxonomy-eligible and/or aligned economic activities were identified at AIXTRON, which make a significant contribution to environmental goal **1. Climate change mitigation**.

Production of other low-CO₂ technologies (3.6)

AIXTRON develops, produces and sells systems for the deposition of compound semiconductors. This separation is the essential step in the production of compound semiconductors, which contribute significantly to avoiding energy losses and thus to a significant saving of CO₂. The savings were determined through life cycle assessment (LCA) and confirmed by an independent third party.

Power semiconductors with a wide-band-gap (WBG) based on gallium nitride (GaN)

GaN power transistors make a significant contribution to energy savings compared to established silicon-based technology through significantly reduced energy losses in the conversion of current and voltage (e.g. when charging mobile devices or in power supplies and switches in the power grid or in data centers) a significant contribution to energy savings compared to established silicon-based technology.

AIXTRON enables research into more energy-efficient power transistor designs and enables industry to mass produce the new devices.

Power semiconductors with a wide-band-gap (WBG) based on silicon carbide (SiC)

SiC power transistors make a significant contribution to energy savings compared to established silicon-based technology by significantly reducing energy losses when converting current and voltage (e.g. when charging electric vehicles or switching drives in locomotives).

AIXTRON enables research into more energy-efficient power transistor designs and enables the mass production of the new devices by industry.

Micro LEDs for next-generation displays

Micro LEDs make a significant contribution to energy savings by reducing the energy consumption of displays by up to 90% compared to established LCD technology. The imaging is done selectively, i.e. H. Light is only generated in the pixels needed to display the image. Black areas of the image remain dark and do not consume any energy, whereas conventional technology requires the shading of a permanently bright backlight. AIXTRON enables the mass production of new displays based on Micro LEDs by the industry.

Laser diodes for data communication

The transition from wired to optical telecommunications, especially in the “last mile”, contributes significantly to reducing the energy consumption of telecommunications networks while increasing data throughput.

AIXTRON enables research into more energy-efficient and faster laser diode designs and enables the mass production of the new fiber-optic modules by industry.

Manufacturer data was used to calculate the LCA.

Manufacture of renewable energy technologies (3.1)

AIXTRON develops, produces and sells systems on which compound semiconductors are made that generate electricity from solar energy.

Solar cells

Compound semiconductors for concentrator photovoltaic (CPV) solar cells are much more efficient at generating electricity from solar energy than conventional crystalline silicon-based solar cells. Solar cells made from compound semiconductors are often used for high-tech applications such as B. used in space travel.



Compliance with the „Do no significant harm“ (DNSH) criteria

With regard to the EU environmental target [2. Climate change adaptation](#), there are no indications that the adverse effects of climate change will adversely affect AIXTRON's business operations. The AIXTRON production sites are not subject to any significant physical climate risks.

The criteria for the EU environmental target [3. Sustainable use and protection of water and marine resources](#) essentially relates to legal and official requirements that AIXTRON is obliged to comply with. Water is not used to any significant extent in the production process at AIXTRON. The systems are to be kept away from water.

With regard to environmental goal [4. Transition to a circular economy](#), there are general requirements such as long usability, easy maintenance or dismantling. Most of the components are designed for very long service life, can be recycled and still have a monetary value at the end of their useful life (e.g. steel, stainless steel, aluminium, copper, electronics).

Regarding to the EU environmental goal [5. Pollution prevention and control](#), there are no indications that AIXTRON is violating the corresponding specifications. AIXTRON does not manufacture, place on the market or use substances listed in Appendix C in terms of the taxonomy specifications.

With regard to the EU environmental goal [6. Protection and restoration of biodiversity and ecosystems](#), environmental impact assessments and assessments are carried out where there is a corresponding requirement.

Information on compliance with the minimum requirements with regard to occupational safety and human rights can be found in the "[Occupational health and safety](#)" chapter and in the "[Conflict minerals](#)" chapter in this report and on the [AIXTRON website](#) in the sustainability section.





Definition of revenue, CapEx and OpEx

To determine the key figures (KPIs) to be reported, the taxonomy-eligible and taxonomy-aligned net revenues, investments (CapEx) and operating expenses (OpEx) are set in relation to the total net revenues, the total investments or the total operating expenses to be taken into account according to the taxonomy specifications. The definition of the respective KPI is based on the appendices of the Delegated Act to Article 8 on the content and presentation of the information to be disclosed.

Double counting on single environmental goals is avoided by clearly assigning the taxonomy-eligible or taxonomy-aligned revenues, CapEx and OpEx to a taxonomy-eligible or taxonomy-aligned economic activity.

Revenue within the meaning of the EU Taxonomy Regulation is defined as net revenue in accordance with International Financial Reporting Standards (IFRS) as reported in the consolidated income statement and relates only to fully consolidated subsidiaries. Further information on sales revenue can be found in the “Sales development” section of the economic report in the combined management report of the AIXTRON Annual Report [2023](#).

The majority of taxonomy-aligned AIXTRON sales revenue can be assigned to taxonomy criteria set 3.6.

CapEx as defined by the EU Taxonomy Regulation is calculated on a gross basis in accordance with International Financial Reporting Standards (IFRS), i.e. without taking depreciation and amortization into account. CapEx comprises investments in non-current intangible or tangible assets as shown in the statement of changes in non-current assets in the notes to the consolidated financial statements in the annual report. The advance payment for the new innovation center was reported under CapEx B of the EU taxonomy in the current reporting year.

The CapEx plan for the innovation center serves to expand economic activity 3.6 and thus relates to the environmental objective "1 Climate protection", in which the capacities for research and development are expanded. The total investment volume amounts to around EUR 100 million (of which EUR 30.9 million in 2023) and is expected to be completed by the beginning of 2025. Further information on CapEx can be found in the "Financial position" and "Investments" sections of the economic report in the combined management report of the AIXTRON Annual Report [2023](#).

The numerator for taxonomy-aligned CapEx corresponds to the part of CapEx A and B contained in the denominator within the meaning of Article 1.1.2.2 of Delegated Regulation (EU) 2021/2178 that relates to assets associated with taxonomy-aligned economic activities.

The numerator for taxonomy eligibility corresponds to the part of CapEx A, B and C contained in the denominator within the meaning of the EU Taxonomy Regulation that relates to assets associated with taxonomy-eligible economic activities. CapEx C was verified on the basis of information provided by the supplier.

OpEx as defined by the EU Taxonomy Regulation includes non-capitalizable research and development costs that are recognized in the consolidated income statement as well as additional expenses for short-term leases and expenses for building renovation measures, maintenance and repair in accordance with International Financial Reporting Standards (IFRS). Expenditure on technologies not yet launched on the market was reported under OpEx B of the EU taxonomy in the current reporting year. The total project volume amounts to approximately EUR 28.9 million (of which EUR 8.4 million in 2023).

The numerator for taxonomy-aligned OpEx corresponds to the part of the operating expenses included in the denominator that relates to OpEx A and B within the meaning of the EU Taxonomy Regulation that are associated with taxonomy-aligned economic activities.

The numerator for taxonomy eligibility corresponds to the part of the operating expenses included in the denominator that relates to OpEx A and B within the meaning of the EU Taxonomy Regulation that are associated with taxonomy-eligible economic activities.

Other OpEx within the meaning of Article 1.1.3.2. c) of Commission Delegated Regulation (EU) 2021/2178 of July 6, 2021 is not given.

	in EUR Mio.	2023			2022		
		Revenue	CapEx	OpEx	Revenue	CapEx	OpEx
Total		629.9	63.0	91.6	463.2	35.4	61.2
	%	100%	100%	100%	100%	100%	100%
Taxonomy eligible		462.5	50.4	59.4	270.9	20.0	44.7
	%	73%	80%	65%	58%	56%	73%
Taxonomy aligned		462.5	49.6	59.4	270.9	13.6	44.7
	%	73%	79%	65%	58%	38%	73%
Taxonomy not eligible		167.4	12.6	32.2	192.3	15.4	16.5
	%	27%	20%	35%	42%	44%	27%

Taxonomy-eligible and taxonomy-aligned revenues, CapEx and OpEx shares

In the 2023 reporting year, the taxonomy-aligned share of sales increased by 15pp to 73%, which is mainly due to business development (2022: 58%). Further information on business development can be found in the AIXTRON Annual Report 2023. As in the previous year, taxonomy-aligned revenues of EUR 462.5 million in the 2023 reporting year include revenues from business activities in accordance with 3.1 and 3.6. As in the previous year, both taxonomy-eligible and taxonomy-aligned revenues relate exclusively to revenues from contracts with customers.

The taxonomy-aligned CapEx share increased by 41pp to 79% in the 2023 reporting year (2022: 38%) and amounted to EUR 49.6 million (2022: EUR 13.6 million). This increase is primarily due to the down payment for the new innovation center. Of the taxonomy-aligned shares, EUR 49.6 million (2022: EUR 13.3 million) is attributable to additions to property, plant and equipment and EUR 0.02 million (2022: EUR 0.3 million) to additions to intangible assets.

The taxonomy-aligned CapEx in the 2023 reporting year amounting to EUR 49.6 million includes investments from economic activities in accordance with 3.6 (2022: 3.1 and 3.6). They are made up of CapEx A in the amount of EUR 18.7 million and CapEx B in the amount of EUR 30.9 million. In 2022, the taxonomy-compliant additions in the amount of EUR 13.6 million are based exclusively on CapEx A.

The taxonomy-eligible CapEx in the 2023 reporting year of EUR 50.4 million (2022: EUR 20.0 million) includes additions to property, plant and equipment in the amount of EUR 50.4 million (2022: EUR 14.0 million) and additions to intangible assets in the amount of EUR 0.02 million (2022: EUR 0.3 million). In 2022, capitalized rights of use in the amount of EUR 7.0 million were reported as taxonomy-eligible. The taxonomy-eligible investments in the 2023 financial year relate to economic activities 7.3 and 7.6 (2022: 7.3, 7.6 and 7.7).

The taxonomy-aligned OpEx share fell by 8pp to 65% in the 2023 reporting year (2022: 73%). Compared to the previous year, less research and development expenditure was classified as taxonomy-aligned in the current reporting year. As in the previous year, the taxonomy-aligned OpEx of EUR 59.4 million in the 2023 reporting year exclusively includes research and development expenses and was allocated to economic activities in accordance with 3.1 and 3.6 (2022: 3.1 and 3.6).

🔍 Innovations as a competitive factor

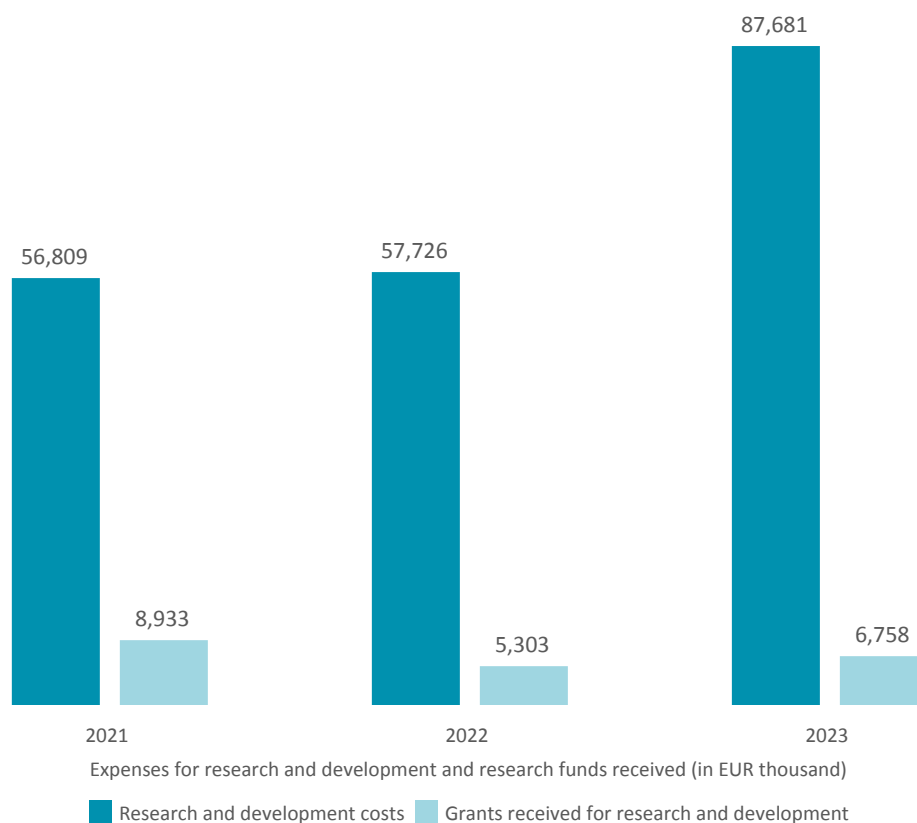
For us, new technologies are the result of targeted investments in our research and development. In this context, the groundbreaking ceremony for the new innovation center took place in November 2023 at the Herzogenrath location with an investment volume of around EUR 100 million. The R&D process starts with basic research on materials and then moves on to processes and procedures. A key result of our research work is our innovative product portfolio with technology solutions that enable our customers to manufacture products that save greenhouse gas emissions during their use.

We work together with predominantly renowned universities, research centers, and industrial partners around the world in order to implement demanding projects on a national and international level in partnership. We benefit from the fact that we can work together with qualified partners, but at the same time, we are also in demand as a partner for research projects.

When developing innovations for materials and processes, we work together with our partners in nationally or Europe-wide funded joint projects. In close cooperation, solutions are created that should lead to marketable products.

In the section "Research and Development" section of the AIXTRON [Annual Report 2023](#), you will find some examples of research projects in which AIXTRON is involved.

🔍 Expenditures and grants for R&D



Climate balance sheet

For the reporting year 2023, AIXTRON reports all emissions in the corresponding scopes in which the necessary information is available. Total emissions of 431,424t CO₂e were determined (gross = location based) (2022: 380,265t CO₂e). Scope 3.11 emissions were reported for the first time in the financial year. These were also determined for the previous year and the reported values were adjusted accordingly.

The total emissions figure for 2023 as a whole is therefore higher than the figures calculated for 2022. Reasons for this increase include the increased business volume and production capacity utilization. CO₂e intensity has fallen significantly compared to 2022 by -136 tons per EUR million in sales.

		2023	Δ	2022
Environment Climate balance sheet	Scope 1 emissions (CO ₂ e in t)	197	76	120
	Scope 2 emissions (CO ₂ e in t)	5,546	822	4,725
	Scope 3 emissions (CO ₂ e in t)	425,681	50,261	375,420
Total emissions volume (Scopes 1-3) (CO₂e in t)		431,424	51,159	380,265
CO₂e Intensity (Scope 1-3) (CO₂e in t/EUR Mio. Revenue)		685	-136	821

Overview of CO₂ emissions [in tons of CO₂e] / Emissions for electricity (gross = location based)

* To standardize the climate impact of the different greenhouse gases, we use the representation of the CO₂ equivalents (CO₂e) as the unit of measurement.



CO ₂ e in t			2023	2022
Scope 1	Scope 1.1	Fuel consumption in stationary plants	41	86
	Scope 1.2	Fuel consumption in mobile plants	40	34
	Scope 1.3	Other emissions	116	0.1
	Scope 1.4	Process emissions	0	0
Scope 1 total			197	120
Scope 2	Scope 2.1	Electricity	5,169	4,191
	Scope 2.3	District heating	377	534
Scope 2 total			5,546	4,725
Scope 3	Scope 3.1	Purchased goods and services	41,480	34,768
	Scope 3.3	Fuel and energy-related emissions	1,092	817
	Scope 3.4	Upstream logistics	21,775	14,013
	Scope 3.5	Waste generation	46	81
	Scope 3.6	Business travel	2,604	1,732
	Scope 3.7	Employee commuting	987	1,158
	Scope 3.11	Use of sold products	357,674	322,799
	Scope 3.12	Treatment of sold products at the end of their life cycle	23	52
Scope 3 total			425,681	375,420
Scope 1-3	<i>gross = before green electricity certificates and emissions reduction project</i>		431,424	380,265

For Scope 2.1 emissions "Electricity" (location-based), the gross value was used this year. The values from the previous year in this category were adjusted accordingly and also reported in gross. Scope 3.8-3.10 and 3.13-3.15 do not apply to AIXTRON. A separate disclosure of Scope 3.9 is not possible due to the data situation. In principle, the values were calculated on the basis of consumption or determined quantities. The value-based approach was chosen in Scope 3.1 for the areas of healthcare/social services, service/consulting and software, as it is not possible to express the data in kilograms for these categories. Instead, metrics based on euro values were used to present the relevant information. The quantities in Scope 3.11 in kWh refer to a life cycle of the machines of 10 years.

In addition to technical measures to reduce emissions, such as heat pumps and LED lighting, we are reducing our carbon footprint based on gross emissions by using green electricity from green electricity certificates at all locations for the first time in 2023. In order to minimize our ecological footprint, we offset unavoidable emissions by supporting a certified emissions reduction project.

AIXTRON CO ₂ e balance sheet		2023			2022				
		Gross - total CO ₂ e in t	Reduction by		Net - total CO ₂ e in t	Gross - total CO ₂ e in t	Reduction by		Net - total CO ₂ e in t
Green-electricity	Emissions reduction projects		Green-electricity	Emissions reduction projects					
Total		431,424	-5,169	-5,326	420,929	380,265	-4,116	-4,495	371,654
Scope 1	Direct Emissions	197	0	-197	0	120	0	-120	0
Scope 2	Indirect Emissions	5,546	-5,169	-377	0	4,725	-4,116	-534	75
	of which electricity	5,169	-5,169	0	0	4,191	-4,116	0	75
	of which district heating	377	0	-377	0	534	0	-534	0
Scope 3	Indirect emissions in the supply chain	425,681	0	-4,752	420,929	375,420	0	-3,841	371,579
	direct influence	4,752	0	-4,752	0	3,841	0	-3,841	0
	indirect influence	420,929	0	0	420,929	371,579	0	0	371,579

direct influence = can be influenced by AIXTRON without the involvement of third parties (3.3, 3.5, 3.6, 3.7, 3.12)

indirect influence = can only be influenced by AIXTRON with the help of third parties (3.1, 3.4, 3.11)

Emission reduction project solar park India

In the 2023 reporting year, we are supporting an emissions reduction project - a solar park in India. In doing so, we want to reduce the unavoidable CO₂e emissions of our business activities (Scopes 1 and 2 and parts of Scope 3). Project support currently extends until 2025 and is verified according to the highest available standards. The project in Andhra Pradesh is a 500 MW solar park that will avoid around 1 million tons of CO₂ annually.



Energy management and consumption indicators

Q Confirmation of the certification of our energy management

AIXTRON strives to sustainably reduce its own energy requirements at its locations while simultaneously growing. To support this project, an energy management system based on the ISO 50001 standard has been implemented at AIXTRON SE's German locations since 2014. The function of this system was determined by the external auditor during the last recertification in April 2023 and the certificate was extended for a further three years.

Q Further development of the energy management system

At the Dornkaulstrasse location, the newly installed heat pump was included in the cloud-based energy management software in 2023. This means that all data on performance, consumption and operation can now be tracked, evaluated and compared with historical data, regardless of location.

As a further project, our own metering systems were installed to monitor consumption in rental properties used by AIXTRON. These can provide real-time transparency about your own energy consumption and also enable direct control options in the future to further optimize energy management.

Q "Energy awareness begins in the mind!"

Since 2023, AIXTRON has been committed to increasing energy awareness, especially among new employees: On-boarding via AIXTRON's own training platform not only provides information about energy management at AIXTRON, but also contains practical energy-saving and environmental tips. The tips can be applied directly at work and some are also suitable for imitation at home. This is intended to promote energy- and environmentally conscious behavior in the long term.

Electricity from renewable energy sources and photovoltaics

Since the reporting year, we have only purchased gray electricity with green electricity certificates at all locations. In addition, we have already installed a photovoltaic system at our Kaiserstrasse location. 100% of the electricity generated in 2023, amounting to 3,408 kWh, will be fed into the electricity grid.

Practical examples

Derived from our systematic energy management, we have already initiated and implemented many projects and measures with the aim of sustainably reducing energy consumption. The most important projects of the past year are listed here as examples:

New 4-pipe air heat pump compensates for gas consumption

For a number of years, we have been successfully using waste heat from the cooling processes in our laboratories at our central location in Herzogenrath, and using it specifically for heating the building. It has already been possible to save 90 percent of gas and 10 percent of electricity consumption. A new 4-pipe air heat pump was installed at the end of 2022, which will avoid most of the remaining gas consumption. The device is the latest technology available on the market: the combination device can be used for both cold and hot water production. To do this, it uses independent and mutually closed circuits. This enables us to further reduce the footprint of CO₂ emissions that we directly cause.

State-of-the-art lighting technology creates even more energy efficiency

AIXTRON replaced the existing lighting systems at its worldwide locations with the latest LED lighting technology in 2023. This will enable us to further reduce energy consumption.



** When calculating the energy and CO₂ savings, we were advised by external companies who gave us technical advice with their engineering knowledge and specialist know-how. All calculations were based on a systematic and scientifically sound approach with specific assumptions for the calculations.*



Energy saving targets achieved for the sixth year in a row

In the past fiscal year, we were able to increase our revenues significantly, which was accompanied by a higher demand for electricity. However, thanks to the various energy-saving projects, we were able to mitigate the increase in overall consumption. Energy requirements rose by 9.4% in the past financial year, with energy consumption per EUR million in revenues falling by 19.5%.

Our successes are confirmation and incentive at the same time: Every year we review our status quo and set ourselves new, ambitious energy-saving targets. At the same time, this is also an economic consideration for us, because the lower consumption also reduces our costs.

We are constantly developing our measures to increase energy efficiency. Our targets relate primarily to our research and production sites in Germany and the UK.

The electricity requirement in 2023 was with 14,179,599 kWh higher than in 2022 (12,677,293 kWh). The reason for this was the continued strong growth in business volume and the continuing good order situation.

The demand for fossil fuels (218,789 kWh natural gas and 2,340 kWh fuel oil) and district heating (2,099,490 kWh) has fallen significantly to a total of 2,320,619 kWh compared to 2022 (2,400,303 kWh). This is proof of the effectiveness of our ambitious energy management and our strategy of using waste heat and state-of-the-art heat pumps.



Power consumption

(kWh)	Energy	2023	2022	Δ
Natural gas/oil	Scope 1	221,129	426,321	-48.1%
Electricity	Scope 2	14,179,599	12,677,293	11.9%
Long distance heating	Scope 2	2,099,490	1,973,982	6.4%
Total		16,500,218	15,077,596	9.4%
Energy intensity	(kWh/EUR Mio. Revenue)	26,196	32,551	-19.5%

Energy consumption in the AIXTRON Group for heating, district heating and electricity

Waste management

Even though AIXTRON strives to use resources sparingly, waste cannot yet be completely avoided in our processes. Sources include, in particular, delivery packaging, offcuts, leftover consumables, but also leftovers from repair, renovation or construction activities or experiments.

Separation and disposal of waste

In order to return as much of the waste generated by AIXTRON as possible back into the recycling cycle, the waste is separated according to type. To this end, a pictorial labeling system began to be rolled out in productive areas in 2023. This made the separation more transparent in practice.

When disposing of our waste, the focus is on bringing the waste materials into appropriate recycling processes. We work with waste disposal companies that are certified as specialist waste disposal companies. We prefer regional disposal methods here. We want to limit transport routes to a minimum and at the same time ensure a high level of reliability.

Hazardous waste that has to be removed from the recycling cycle due to its properties is eliminated. This is done using officially approved disposal methods so that they do not cause any harm to the environment or people. Using our physical-chemical expertise and working with external experts, we strive to keep the amount of hazardous waste that needs to be disposed of as low as possible. This happens, for example, through the use of suitable cleaning or treatment processes.

The increased amount of hazardous and non-hazardous waste in Herzogenrath (D) and Cambridge (UK) is due to the increase in production volume. In Germany, the amount of waste disposed of by municipalities was also recorded for the first time in 2023.

	Hazardous waste (kg)		Non-hazardous waste (kg)	
	2023	2022	2023	2022
Germany	36,471	1,834	573,038	76,708
UK	1,575	2	53,980	62,532
Asia/USA	0	0	13,065	34,849
Total	38,046	1,836	640,083	174,089

Hazardous and non-hazardous waste by region. Used more precise capture method in 2023. Municipal disposal quantities for 2022 were not available.

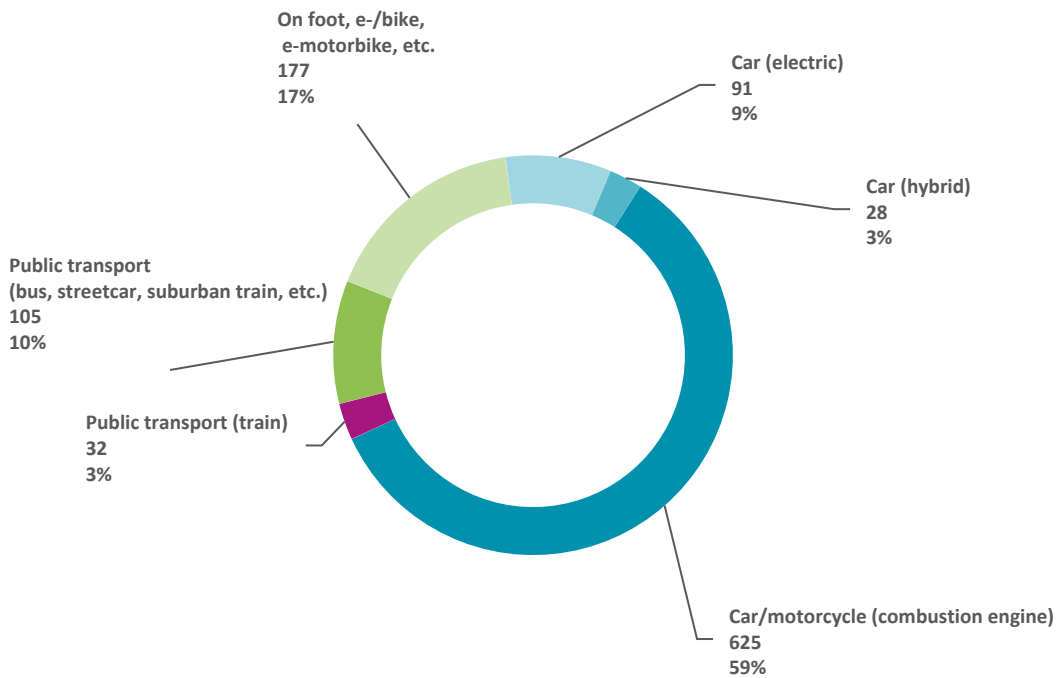
Mobility

Due to the complexity of our systems, it is necessary to provide customers with targeted advice on-site. Systems are developed and optimized jointly in some cases. We also support our customers in training employees. As a rule, this requires corresponding travel activity by our employees. Most of our customers are based outside of Germany, which affects the kilometers traveled and the choice of transport.

Commuter behavior

In the 2023 reporting year, we once again conducted a global survey on work commuting behavior among all employees. The extrapolation turned out that 41% of the Group's employees come to work sustainably: 17% walk or use a bicycle/e-bike, 13% use public transport and 11% rely on vehicles with alternative drives - be it hybrid - 3% or purely battery electric vehicles 8%. At 59%, however, the majority still uses vehicles with classic combustion engines.

We have a total of 15 e-car charging stations and 24 e-bike charging stations on our company premises in Herzogenrath.



Number of employees per means of transport and the shares in % (extrapolation from survey with the average headcount 2023)

Air travel

Traveling by plane cannot always be avoided as we sell our systems and technologies worldwide. However, we are trying to limit our air travel to what is necessary. For intercontinental travel, however, they are the only viable option in day-to-day business. In the reporting year 2023, there were 4,311 bookings (2022: 2,450).

A total of 11,096,320 kilometers were flown (2022: 5,801,299 km), an increase of 91% compared to 2022.

The reason for this increase compared to 2022 is the relaxed travel restrictions in connection with the corona pandemic.

Company vehicles

End of 2023, our company fleet consisted of 14 cars (2022: 14), two diesel-powered vehicle, four four gasoline-powered vehicles, five hybrid-powered vehicles, and three purely electric vehicle. Since 2020, in accordance with our internal guidelines, we have limited ourselves to hybrid and electric cars when purchasing new company vehicles. In 2023, compared to 2022, no vehicles with pure combustion engines were added. The number of vehicles with hybrid drives fell by two vehicles while two new electrically powered vehicles were added compared to 2022.

		2023	2022	Δ
Company vehicles	Gasoline	4	4	0
	Diesel	2	2	0
	Electric	3	1	2
	Hybrid	5	7	-2
	Total	14	14	0

A total of 245,765 km were driven last year (2022: 234,443 km).

Rental cars, taxi bookings, private car trips

In the 2023 reporting year, our employees traveled a total of 1,248,389 km with a rental car, taxi, or private car (2022: 1,107,798 km).

Train rides

We encourage our employees to travel by train whenever possible on business trips. While employees traveled 616,307 km by train in 2022, in the 2023 reporting year, the distance increased to 1,260,877 km, which corresponds to an increase of 105%.

Mobility metrics

		2023	2022	Δ
Flights	number	4,311	2,450	1,861
	Total kilometers traveled	11,096,320	5,801,299	5,295,021
Company vehicles	number	14	14	0
	Total kilometers traveled	245,765	234,443	11,322
Rental cars, taxi bookings, private cars	number	22,146	15,677	6,469
	Total kilometers traveled	1,248,389	1,107,798	140,591
Rail journey	number	4,953	1,618	3,335
	Total kilometers traveled	1,260,877	616,307	644,570





04

Social

Social

Our world-leading position is based on our highly innovative technologies. These are based on the know-how of our dedicated colleagues, who ensure the innovative strength of the company. Our position is strengthened by the many talented new employees that we are able to recruit: Structured HR work and safe, healthy and employee-friendly working conditions are essential prerequisites for this. Because only satisfied and committed employees enable long-term entrepreneurial best performance.

Occupational safety and health protection

Our principle of occupational safety is "zero tolerance for accidents". We are pursuing a preventive approach. Our top priority is always to avoid any injuries and to minimize possible risks. Every accident at work is therefore examined in order to identify and permanently eliminate potential risks in our technical and organizational processes. Occupational safety and health protection are the responsibility of our managers. Our goal is for every employee to understand and support our goals and measures in the area of occupational safety and health protection as part of their job. In spring 2023, this also included hygiene concepts based on the recommendations of the federal and state governments and the Robert Koch Institute for combating pandemics.

"Safety First!" - that's what the Occupational Health and Safety Committee ensures

The members of the Occupational Health and Safety Committee (OHSC), consisting of a management representative, two members of the works council, the company doctor, the safety experts and the safety officer, meet every quarter. This group of participants is supplemented in the OHSC meetings by members of the severely disabled representative, representatives of the human resources and compliance departments and facility management.

It is our aim to train our employees at least once a year in occupational health and safety issues. Current aspects from working areas are included in the instructions.

Two internal safety experts, together with the company doctor, are responsible for advising the company management, the executives, the works council and the employees.

The companies first aid service at the German locations is currently supported by a total of 108 first aiders.

Employee Health and Safety

The number of days lost from work was 29 in 2023 (2022: 41). There were 4 accidents on business trips in 2023 (2022: 5) and a total of 17 injuries with entries in the first aid manual (2022: 9). As in previous years, we, fortunately, had no deaths to report in 2023.

At AIXTRON, around 26% of our workforce works in production and around 34% in research & development. These are workplaces where the environment must meet the highest safety standards and every move — even unconscious ones — must be made safely and smoothly. For this reason, we attach great importance to regular training and optimal occupational safety equipment.

A company integration management system after prolonged illness and reintegration assistance after accidents are not just legal obligation for us. They are part of our corporate culture and are crucial for maintaining the ability to work and employability of our employees at all locations. In the reporting period, no penalties or fines were imposed on AIXTRON due to violations of occupational health and safety regulations.

	2023	2022
LTIFR = Lost Time Injury Frequency Rate *	0.44	0.19
IR = Injury Rate **	0.88	1.48
Accidents at work	4	9
Working days lost (work-related sickness and accidents) ***	29	41
Accidents on way to/from work	4	5
Work-related sickness	0	0

* LTIFR = Lost Time Injury Frequency Rate; Number of accidents at work (excluding accidents on way to/from work) resulting in lost time of more than one working day in relation to the number of hours actually worked in the reporting period, normalized to two hundred thousand working hours.

** Number of reportable accidents / hours worked, normalized to two hundred thousand hours worked.

*** Days lost from work as a result of occupational diseases and accidents at work (excluding accidents on the way to and from work).

Health protection is a management issue

The health and well-being of our employees are our top priority. As preventive measures as part of health management, we offer our employees e.g. regular and ongoing occupational medical examinations as well as flu vaccinations.

We are aware that good working conditions, a collegial and constructive environment, and a cooperative management style have an important influence on the well-being and health of our employees. For this reason, we attach great importance to a cooperative and constructive feedback culture.

Our employees are encouraged by our managers to take responsibility for themselves and their colleagues. In addition, we allow our employees the greatest possible flexibility in work planning to reconcile private life and work - as far as operational requirements allow.

With our technology and continuous innovation, we are constantly pushing the boundaries of what is technically feasible. The basis for this is our strong AIXTRON team. Its diversity, creativity and the desire to work together to make an important contribution to a sustainable, networked world are deeply rooted in the AIXTRON DNA. As an employer in an industry of the future, with a modern working environment and exciting activities, we have succeeded in 2023 in increasing AIXTRON's attractiveness as an employer and further expanding our workforce.



Dr. Christian Danninger · Executive Board (CFO)

Diversity and equal opportunities

We see diversity as a real opportunity: Because only through equal opportunities can we develop our full innovative power and strengthen our competitiveness. In the future, we aim to continuously increase the proportion of female employees in our company, e.g. through targeted recruitment in the area of apprenticeships, the expansion of our collaboration with local universities, trade fair visits and communication on our social media channels. In addition, we plan to increase diversity at our senior management level in a targeted manner.

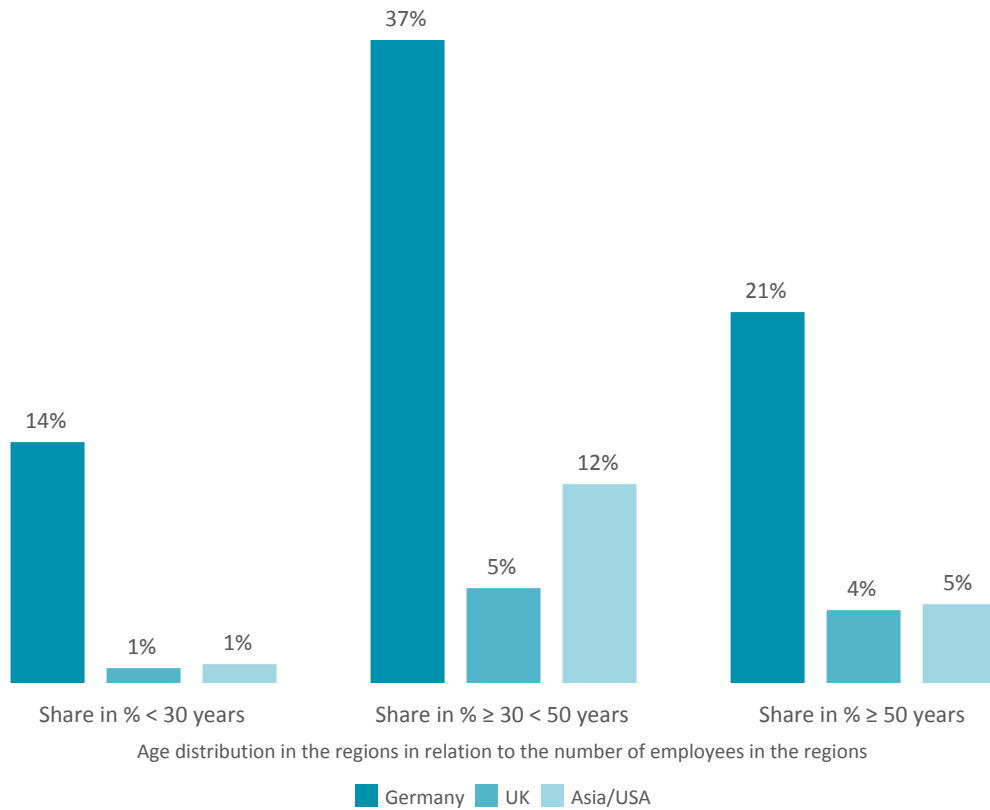
As of December 31, 2023, 81% of male and 19% of female employees were employed. Our diversity in terms of cooperation between employees from different cultures is already very strong: In 2023, 1,147 employees (2022: 940) from around 61 (2022: 50) nations were working for AIXTRON worldwide.



Flexible working day, employee recruitment & retention

Age structure at AIXTRON by region 2023

The age structure of our employees at AIXTRON by region for fiscal year 2023 is as follows:



Transparent communication

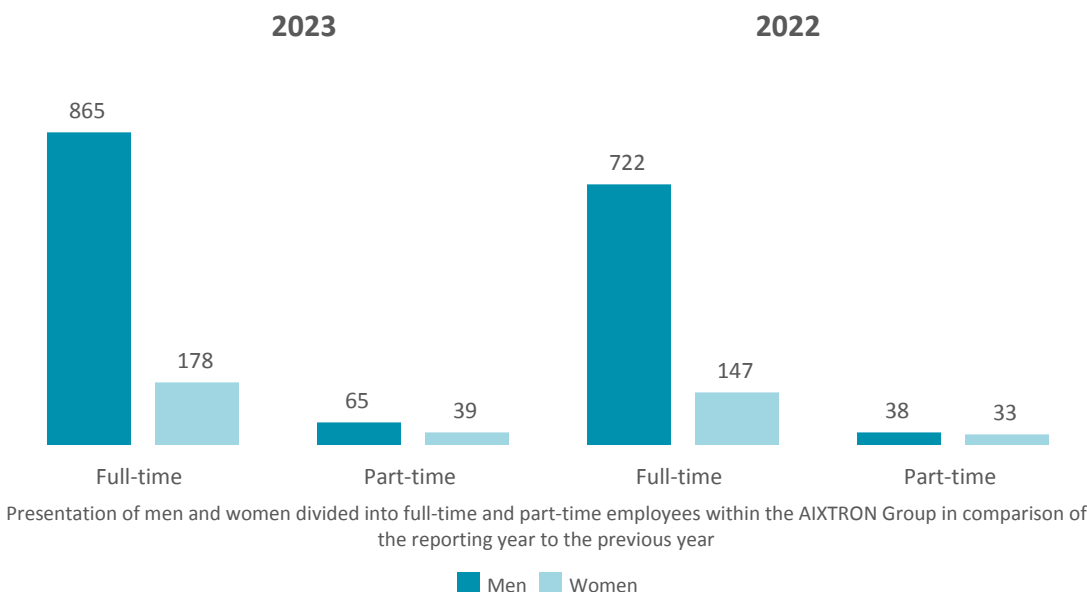
In order to ensure good cooperation, we attach great importance to open and cooperative communication. This also includes regular and transparent information for the entire workforce. Quarterly, the Management Board informs all colleagues worldwide in digital employee meetings about business development, customer requests, market developments or new company agreements. In addition, all relevant information is published promptly in the appropriate media. We regularly provide information about current topics and developments in the company via our new intranet.

		2023		2022	
		Full-time	Part-time	Full-time	Part-time
GER	Men	602	62	497	36
	Women	126	36	98	30
UK	Men	104	3	87	2
	Women	13	3	11	3
Asia/ USA	Men	159	0	138	0
	Women	39	0	38	0
Total	Men	865	65	722	38
	Women	178	39	147	33
Total (headcount)		1,147		940	
Total (FTE)		1,086		895	

Total number of employees broken down by employment type (full-time and part-time) at the end of the year.

Flexible working models and time off

Today's working world places a variety of demands on employees and their families. Therefore, we strive, whenever possible, to reconcile the private and family needs of our employees with economic interests.



Our employees have been taking advantage of the flexible working hours for many years. With the help of individual time accounts, every employee can arrange their working hours individually in coordination with operational and personal needs and largely determine them themselves. We also offer our employees individually tailored part-time jobs. In 2023, there were a total of 104 part-time employees (2022: 71), of whom 39 were women (2022: 33) and 65 were men (2022: 38).

Flexible working models for the time after the pandemic

With a view to the time after the pandemic, a company agreement was passed in 2022 that generally allows employees to work mobile to an extent of up to 80% of the standard working time. The respective framework depends individually on the type of activity as well as the area and department. For this reason, individual maximum quotas were agreed in order to take account of the respective operational needs.

At our global locations, we also encourage people to take advantage of the regulations that apply there in the same way as they do for parental leave: In Europe, for example, a total of 22 employees took parental leave (2022: 25). In the Asia/USA regions, the offer was not used in 2023 (2022: 1). We are pleased that 19 of the 22 employees returned to work after their parental leave during the reporting year (2022: 19).

	Parental leave taken		Employees returning to work after parental leave	
	2023	2022	2023	2022
Europe	22	25	19	19
Asia / USA	0	1	0	1

Since 2012 we have been supporting a local daycare center (TP Hasen) to support AIXTRON employees and parents at the Herzogenrath site in their search for a daycare center close to the workplace.

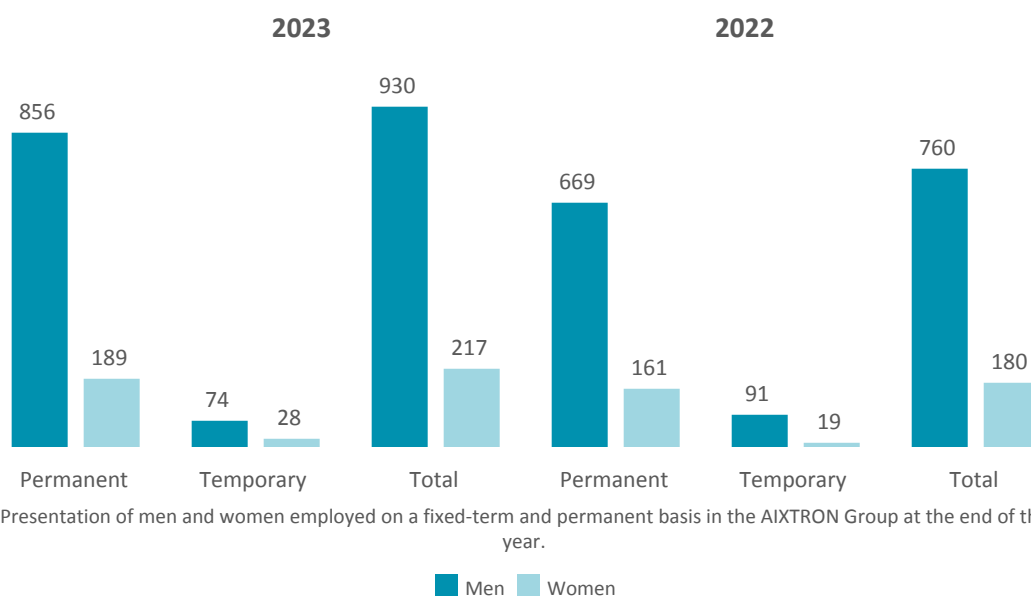
📌 Temporary work and fixed-term contracts

Due to the great importance of special knowledge and expertise, AIXTRON has a strong interest in retaining its employees in the company in the long term. At the same time, AIXTRON products are sometimes subject to strong fluctuations in demand. In order to be able to react flexibly to these fluctuations, we also use fixed-term contracts or work together with established engineering service providers and temporary employment agencies.

		2023		2022	
		Permanent	Temporary	Permanent	Temporary
GER	Men	592	72	475	58
	Women	134	28	109	19
UK	Men	105	2	84	5
	Women	16	0	14	0
Asia/ USA	Men	159	0	110	28
	Women	39	0	38	0
Total	Men	856	74	669	91
	Women	189	28	161	19
Total (headcount)		1,147		940	
Total (FTE)		1,086		895	

At the German locations, we have concluded a works agreement for such cases. In addition, we are committed worldwide to the principle of “equal pay” and compliance with the principle of equal treatment for temporary workers and permanent staff after 15 months of employment.

For example, likewise with our employees, temporary workers receive meal allowances for using our cafeteria and can also take advantage of training programs offered by our AIXTRON Academy. Temporary workers are equally welcome at company events such as employee and workers meetings as well as summer or Christmas parties.



Presentation of men and women employed on a fixed-term and permanent basis in the AIXTRON Group at the end of the year.

In 2023, AIXTRON employed an annual average of 103 temporary workers (2022: 82). Of these, 94 (2022: 73) temporary workers worked for us in Germany, 7 in England (2022: 8) and 2 in Asia (2022: 1). Of the 1,147 employees, 1,045 (2022: 830) had a permanent contract. The number of fixed-term contracts in the reporting year totaled 102 employees (2022: 110), which corresponds to a share of almost 9% (2022: 12%) of the total workforce. Of these, 28 were women (2022: 19) and 74 were men (2022: 91).

Inflation premium and salary level

In view of the inflation trend and rising energy costs, AIXTRON has decided to fully utilize the legal framework of EUR 3,000 of the German government's relief package for its employees. In December 2023, all (full-time) employees therefore received the second part of inflation compensation bonus of EUR 1,500 — tax- and duty-free (The first bonus was paid in December 2022 in the amount of EUR 1,500, part-time employees received the amount on a pro rata basis). This is intended to help our employees cope better with the rising cost of living.

In 2023, the average salary level of AIXTRON employees across the Group was examined for the first time in comparison with the applicable minimum wages in the individual countries. This shows that, on average, 3.6 times the minimum wage was paid across the Group in 2023.

	2023
Ø AIXTRON salary / Ø minimum wage	3.6
Ø FTE (fix & variable paid in year) in EUR	83,051
Ø Minimum Wage/FTE in EUR	22,925

🔗 Attracting and retaining highly qualified employees

AIXTRON operates in a rapidly changing economic environment and relies on highly qualified and committed specialists and managers. Being an attractive employer is important to us in order to attract and retain the best talent and employees.

In the reporting year 2023, the number of employees was strongly increased — a consistent consequence of AIXTRON's continuing good order situation. We were able to add a total of 207 employees (2022: 238) (balance: additions minus departures) — 37 of them women and 170 men. In the same period, the overall fluctuation rate was very low at 10.2% (2022: 7.3%).

		2023	2022	Δ
GER	Men	664	533	131
	Women	162	128	34
	Total	826	661	165
UK	Men	107	89	18
	Women	16	14	2
	Total	123	103	20
Asia/ USA	Men	159	138	21
	Women	39	38	1
	Total	198	176	22
Total	Men	930	760	170
	Women	217	180	37
	Total (headcount)	1,147	940	207

We attach great importance to transparency and equality in our selection and hiring process. As a rule, we offer new colleagues permanent employment contracts. We claim to comply at all times with national legal requirements for the protection of employee rights, internal company agreements and prescribed statutory notification periods.

Important elements of our employer presence include both our presence on career-relevant social media channels and our careers page. Employees are selected on the basis of a concrete requirements profile according to professional and personal qualifications as well as the respective experience.

		< 30 years	Share in %	≥ 30 < 50 years	Share in %	≥ 50 years	Share in %	Men Total	Women Total
2023	GER	101	31%	120	37%	28	9%	197	52
	UK	12	4%	19	6%	10	3%	33	8
	Asia/USA	1	0%	24	7%	10	3%	33	2
2022	GER	59	28%	4	2%	10	5%	97	31
	UK	64	30%	15	7%	39	18%	27	6
	Asia/USA	5	2%	14	7%	4	2%	45	8

Age structure of newly hired AIXTRON employees

It is very important to us that new employees are familiarized quickly and well with our processes and integrated into the circle of colleagues. To this end, we use a structured on-boarding process that is individually designed for the new employee and his or her role.

	< 30 years		≥ 30 < 50 years		≥ 50 years		Turnover rate	
	2023	2022	2023	2022	2023	2022	2023	2022
GER	43	10	21	13	19	10	10.0%	5.0%
UK	9	8	6	7	6	8	17.1%	22.3%
Asia/USA	0	1	12	7	1	5	6.6%	7.4%
Group	52	19	39	27	26	23	10.2%	7.3%

Departures by age group and turnover rate in relation to the total number of employees per region. In the reporting year 2023, the total fluctuation for the AIXTRON Group was 10.2% (2022: 7.3%).

AIXTRON supports young scientists

As a partner of the European doctoral network program QUANTIMONY, we support the training of young academics and at the same time research into the future field of quantum technologies with the use of the chemical element antimony (Sb). The EU funding program QUANTIMONY ("Innovative Training Network in Quantum Semiconductor Technologies Exploiting Antimony") is an innovative network for doctoral training and offers 14 young researchers high-level training.

The network consists of eleven international research teams and is supported by 13 partner organizations from Europe as well as the USA, Taiwan and Brazil.

With the help of QUANTIMONY, antimony (Sb) compounds are expected to make their way into mass production — using MOCVD technology and for use in computers, memories, telecommunications, automobiles, robotics and many other applications. These go beyond existing applications in aerospace. Quantum technologies based on antimony are an important future field and the potential applications are very promising.

Furthermore, we regularly support the training of students for bachelor's and master's theses in the laboratories of AIXTRON SE in cooperation with universities - as we did in 2023.

Project not part of the auditor's review



For more information on personnel selection, please refer to the section "Employees" in the chapter "Business model" in the Group management report.

Q Personnel development, training and continuing education

Lifelong learning, the further training of our employees and their expertise in specialist areas provide us with the prerequisites for maintaining our leading position in the long term. That is why we attach great importance to supporting our employees competently and in a spirit of partnership, promoting them individually and challenging them with future-oriented projects. Continuous alignment with the company's needs plays just as important a role as the employees' responsibility for shaping the company.

Year	Total hours	Number of employees	Ø cost per employee	Ø hours per employee	Number of hours for men	Ø hours for men	Number of hours for women	Ø hours for women
2023	37,137	1,147	583€	32.0	29,838	32.1	7,299	33.6
2022	30,842	940	568€	32.8	26,138	34.4	4,704	26.1

Overview of average further training within the AIXTRON Group and broken down by men and women

We offer our employees (AIXTRON SE) a wide range of continuous training measures as part of our personnel development program. This also includes individual training measures. The core component of this is the company's own AIXTRON Academy, which offers general training courses on topics such as project management, negotiation skills and time and self-management, as well as specialized content. Specialist training courses are also organized in cooperation with external providers.

We also promote the development of managers and employees through coaching programs and management training. We also increasingly support dialogue between employees, e.g. through our "Change Swarm". This is an employee initiative that organizes network meetings, develops current measures for the organization and actively obtains feedback from employees.

In our annual employee appraisals, development and training needs as well as the personal interests and needs of employees are recorded.

In 2023, AIXTRON invested an average of over EUR 583 (2022: EUR 568) per employee in personnel development and training. On average, each employee received over 32.0 hours of training per year in 2023 (2022: 32.8).

Securing our young talent with training

We see it not only as our social obligation but also as the basis for the continued success of our company to train young people in technical and commercial professions as well as in dual study programs. In this way, we give young people the chance to prove themselves, develop their strengths with us, and make a contribution. We are proud that AIXTRON trainees are repeatedly recognized for outstanding performance by the Aachen Chamber of Industry and Commerce.

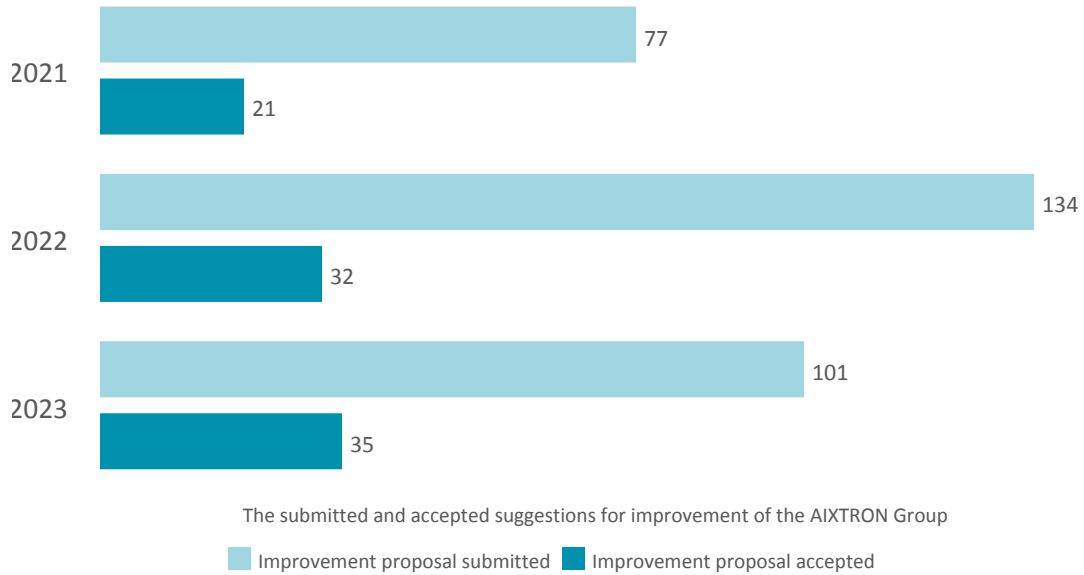
In fiscal 2023, we employed a total of 81 trainees and students (2022: 53). It is important to us to offer young people prospects after they have completed their training.

For this reason, all trainees and dual students who wished to remain with the company were taken on in recent years. To this end, a corresponding agreement was reached with the works council at the Herzogenrath site.



Company suggestion scheme

New ideas and wishes often arise in the thoroughly structured and planned everyday processes, some of which are not implemented or shared throughout the company. However, as we want to make these usable and valuable for everyone, we established a globally standardized company suggestion scheme as part of the innovation management process in 2015.



We encourage our employees to submit their ideas for process improvements, cost savings, product enhancements, or the like. This year, a total of 101 suggestions were submitted and 35 of these were accepted. Although these figures are below the 2022 level, the latter include ideas within a specific, topic-related call. Since its introduction, the number of improvement suggestions submitted has been at a gratifyingly high level. Since 2015, the submitted and accepted suggestions have been remunerated.

Q Regional and social engagement

We see our company as part of society and in this sense, we also want to fulfill our social responsibility. For this reason, we have been sponsoring social projects for many years and supporting the voluntary work of our employees at the annual company run. In addition, we give schoolchildren and students the opportunity to gain professional orientation by gaining an insight into our company.

Promotion of science, education and professional development

Supporting young people in science, education and career development is important to us. Since 2017, we have therefore maintained long-term school cooperation with Aachen's Einhard Gymnasium. We also offer schoolchildren and students the opportunity to gain insight into the various professional fields of our technology company through lectures, company tours, or internships. As a sponsoring member of the Industry and Economy Working Group of the German Physical Society, we have thus been offering the "Day on Site" for many years, for example.

Cooperation with the Aachen Einhard High School

Since 2017, AIXTRON and Einhard-Gymnasium in Aachen have been involved in a learning partnership as part of the KURS initiative (Cooperation Network for Companies in the Region and Schools). As part of this "learning partnership", schools have the opportunity to give their students a tangible demonstration of business using the concrete example of a partner company. At the same time, companies have the opportunity to present themselves as employers and "good neighbors".

For example, as part of "career exploration days" and "Girls' and Boys' Day", the students were given the opportunity to have a personal exchange with our trainees during a company visit. Reports on their experiences with career guidance were exchanged and the topic of training and related career opportunities at AIXTRON were discussed. In addition, dual training and study programs were presented as an alternative to university studies, and a selection process was simulated as part of an assessment center. At the regular "Berufsstraße" event, we also explain in detail the various apprenticeships at AIXTRON to school students and are available to answer their individual questions.

Cooperation with the German Physical Society in the "Day on Site" programme

Since 2007, AIXTRON has participated in the German Physical Society's (DPG) "Day on Site" laboratory visit programme. As part of this programme, students and doctoral candidates from all over Germany have the opportunity to obtain first-hand information about the professional field of physicists. Lectures on the various "disciplines" of the physicist's activities in an industrial environment, as well as a company tour through the laboratories of AIXTRON SE are part of the programme. This year's edition of the "Day on Site" took place at AIXTRON on 31 May 2023 with 12 registrations.

Forth „AIXTRON Global Virtual Run“

In the past reporting year 2023, our “AIXTRON Global Virtual Run” (AGVR) took place for the fourth time. Once again, more than 250 colleagues from Germany, the UK, the USA, Malaysia, Japan, Taiwan, Korea and China took part. Participants could choose between jogging, walking and cycling. In 2023, AIXTRON employees covered round about 1,665 kilometers walking and running (2022: more than 1,500 kilometer) and 2,480 kilometer by bike (2022: 2,190 kilometers) as a team.

The annual "Global Virtual Run" was first launched in 2020 - partly in response to the Corona pandemic. This was because it allowed employees to do something sporty together. This was regardless of where they happened to be in the world, without having to come together in one place. The focus of the "Virtual Run" is on the "we feeling": A kind of competition does develop. But it's less about which individuals achieve the best times, and more about how much the AIXTRON team can achieve together.



We have been taking part in the annual Aachen company run since 2011 and have once again taken part in the Chariots of Fire relay race in Cambridge. We support our employees' motivation to do something for their health and pay the entry fees, which are then donated to charitable organisations in the region.

05

Corporate Governance

Corporate Governance

AIXTRON is committed to the principles of transparent, responsible corporate governance focused on sustainable value creation. By managing and monitoring the Company accordingly, we — the Executive Board and the Supervisory Board — aim to live up to the trust placed in us by our shareholders, the financial markets, our customers, business partners, employees, and the general public. We are convinced that this type of sustainable corporate governance, as well as the responsible actions of our employees, form an essential basis for the success of our company.

The corporate governance declaration pursuant to sections 289f, 315d of the German Commercial Code (HGB) and the current declaration of conformity pursuant to section 161 of the German Stock Corporation Act (AktG), which was adopted by the Executive Board and Supervisory Board in February 2024, are permanently available on our website under [Investoren/Corporate Governance](#).

Compliance, ethics and information security

The Executive Board is committed to conducting all business in an ethical and legally sound manner. In addition to compliance with legal and regulatory requirements, our internal guidelines and the requirements of internal stakeholders are taken into account.

AIXTRON does not tolerate any corrupt or criminal behavior and expressly distances itself from human rights violations. In addition to the legal and regulatory requirements, our internal company codes, guidelines, and management systems provide the framework for action.

Since 2006, the AIXTRON Code of Ethics has applied in particular to members of the Executive Board and throughout the company to finance managers and persons in key finance positions. This is intended to ensure that honest and ethical behavior is practiced.

Finance managers and persons in key finance functions confirm annually for their area of responsibility that the Code of Ethics issued by the Executive Board is known and complied with in daily activities.

In addition, a Compliance code of conduct applies to the Executive Board, Senior management team and all employees group-wide, which obliges them to behave responsibly and in accordance with the law. This is specified by the regularly updated Compliance manual and additional compliance rules and regulations with detailed guidelines and is taught provided in training sessions.

Training for the updated compliance guidelines, in particular for the compliance manual, started in the fourth quarter of the 2023 financial year. Participation in compliance training is mandatory for our new employees and remains part of their onboarding program. In addition, further compliance training is addressed and carried out as required - in the course of risk assessment and/or possible compliance violations. The compliance training process is managed and its implementation monitored by our Compliance department.

Our company-wide Anti-Corruption Policy defines formal and concrete rules and principles of conduct to combat corruption and bribery and is binding for our employees. An elementary component of our company-wide compliance training program is to sensitize our employees to identify potential corruption and bribery risks in their daily activities at an early stage. This also includes preventive anti-corruption measures.

As in the previous year, no incidents of bribery and corruption were reported to us throughout the AIXTRON Group in the 2023 reporting year. In addition, adherence to our compliance requirements is confirmed in writing on a quarterly basis by the senior management team and by employees in key positions.

Reports of possible violations of international and national laws as well as our company-wide compliance guidelines and rules of conduct can be reported directly to AIXTRON's Compliance Department and via AIXTRON's Whistleblowing System.

🔗 Responsibility within the supply chain

AIXTRON places the same expectations and conditions on its suppliers as it does on itself. These are defined in a mandatory supplier manual.

This defines the ethical and legal framework for social and ecological standards, e.g. with regard to corruption, or conflict minerals such as raw materials and mineral resources that are mined or extracted in conflict areas.

In addition to the price and quality of the purchased goods, compliance with these standards is a fundamental prerequisite for long-term cooperation (see chapter “[Conflict minerals](#)”).

AIXTRON does not currently fall within the scope of the German Supply Chain Compliance Act (LkSG). Nevertheless, AIXTRON endeavors to maintain a compliance program based on the LkSG for the protection of human rights and the environment in AIXTRON's business and supply chain in order to promote compliance with human rights and environmental standards as a basis for sustainable development and to meet AIXTRON's claim to be a reliable and responsible business partner (see also chapter Key figures on supplier relationships).



Conflict Minerals

Competition for natural resources such as minerals, oil, and charcoal promotes the systematic violation of human rights and environmental pollution worldwide. Proceeds from the extraction of raw materials help fuel armed conflicts and finance civil wars. Production or mining of these materials often takes place illegally and outside state control, controlled by groups of rebels or militias, and at the expense of the miners.

AIXTRON is committed to conducting its business fairly and with decency and respect in all countries where the company is present. Therefore, AIXTRON supports the objectives of both the US Dodd-Frank Act and the EU Conflict Minerals Regulations to disclose the origin of risky minerals used in our products. As part of its due diligence, the AIXTRON Group has implemented a management system for this purpose, based on the OECD Guidelines for responsible supply chains of minerals from conflict-affected and high-risk regions.

All direct suppliers who may be supplying materials with potential conflict minerals are contacted and asked to identify the countries of origin of the minerals and report them to AIXTRON. Should this reveal the use of a raw material supplier that is linked to human rights violations and environmental pollution, we react consistently and work to ensure that this supplier critically examines the raw material supplier in question and removes it from the joint supply chain. In order to enable internal and external persons and stakeholders to raise indications, concerns, and complaints in connection with conflict minerals - anonymously if desired - AIXTRON has established a complaints mechanism, which can be viewed on the AIXTRON website, among others.



AIXTRON's ability to work towards completely conflict-free smelters worldwide as part of its supply chain is limited. In order to maximize the influence and impact of conflict-free sourcing, we decided to join the Responsible Minerals Initiative (RMI) many years ago.

Privacy compliance

Handling the personal data of our customers, employees and other important stakeholders in a legally compliant and trustworthy manner is our top priority. For many years, data protection has been anchored in our company through forms of guidelines, standards, and processes. The requirements of the European Union's General Data Protection Regulation (EU GDPR), which has applied in all member states since May 2018, are taken into account in our data protection guidelines. These data protection guidelines are subject to regular review and further development, such as our overarching data protection guideline.

In implementing the legal requirements, we are supported and advised by an external, independent data protection officer. We did not report any incidents to our data protection officer or the relevant authorities for the reporting year 2023.

Information Security

The protection of our business and trade secrets as well as the protection of sensitive data is of very high importance to us as a global technology company with high innovative strength. In times of advancing digitization and networking in our society, the threat of cyber espionage and sabotage is also growing. Information security has played an essential role for years and enjoys a very high priority because attacks on our IT infrastructure can lead to the loss or violation of the integrity of this sensitive and confidential data. Our "Information Security" department is part of the independent corporate governance organization and is tasked with continuously identifying, analyzing, and evaluating potential vulnerabilities in our organization and infrastructure together with our IT department and other specialist departments. Based on these results, suitable protection mechanisms are integrated into our existing information security environment and their effectiveness is monitored.

In addition to technical and organizational measures, our employees and their awareness in dealing with sensitive and confidential data play a very important role. Our company-wide training program and the mandatory participation of our employees in regular Information security training sessions are key components in promoting awareness. Our existing information security environment is subject to continuous further development in order to protect our business and trade secrets as well as sensitive data in the best possible way. In fiscal year 2023, we were not aware of any incidents relating to breaches of our information security.

Quality management and product safety

German Sustainability Award 2023 - Pioneer of transformation

AIXTRON was a finalist in the Mechanical Engineering category in 2023. The certificate stated that AIXTRON is one of the companies "that demonstrate particularly effective, successful and exemplary contributions to transformation in their fields [...]"



We enjoy a leading position in the market, resulting from a great deal of trust placed in us by our customers. For us, it is both an obligation and an incentive to ensure our technical excellence, first-class service and high-quality standards at all times.

We consistently pursue a zero-defect strategy in our promise of quality and the safety of our equipment. This is the claim we make on ourselves, as well as on our suppliers. It is not only our self-image to comply with all legal product requirements, standards and norms as well as safety aspects and proper labelling.

It is also part of our self-image to implement all local requirements in our customer markets. For this reason, product safety begins with our product development and accompanies the entire procurement and production process.

Formal, overarching responsibility for product safety and quality lies with the Executive Board, which has assigned the goals and tasks to the Head of Quality Management. Our Quality Department is responsible for the further development of our quality management system, issues company-wide regulations and regularly checks compliance with them. The quality manual and the quality policy describe the core of our actions and are publicly available.

Guidelines and processes ensure both our product safety and product development and regulate the handling of possible defects at appropriate escalation levels. Our Head of Quality Management regularly informs the Executive Board about significant developments and possible quality incidents that could be classified as critical.

In fiscal 2023, no significant quality defects were identified that had a material impact on the health and safety of our customers.

Key figures of supplier relations

Due to the high value added contribution in the supply chain, the procurement process is of high importance for AIXTRON's long-term success. We do not manufacture mechanical and electrical systems and components ourselves, but focus on development, configuration and final assembly.

We place a high value on working in partnership with our suppliers. This is expressed, for example, through development partnerships in which we jointly develop components and assemblies with suppliers. Decisive factors for the selection of suppliers are primarily quality, manufacturing competence, delivery reliability, and price.

Furthermore, we require compliance with applicable laws, regulations, and the provisions of our supplier manual. In addition, we demand that international minimum standards in the area of sustainability, such as the core labor standards of the International Labor Organization (ILO), are met. We do not tolerate the use of conflict minerals within the supply chain.

We currently work with 1,385 suppliers from 28 countries (2022: 1,202 suppliers from 28 countries).

The risk analysis process as part of the compliance program for the protection of human rights and the environment in the supply chain, which is based on the German Supply Chain Due Diligence Act (LkSG), is carried out at AIXTRON in a multi-stage process and uses the methodology of the LkSG, in which a large number of quantitative and qualitative data sources are used to assess human rights and environmental risks.

The aim of the multi-stage process is to identify and prioritise risks in the company's own business area, at direct suppliers and, in the event of substantiated knowledge, at indirect suppliers at an early stage. The structured prioritisation enables a structured filtering out of risk-free business areas and suppliers as well as a focus on a more in-depth examination of critical business areas and suppliers. The process enables AIXTRON to derive effective and appropriate preventive and remedial measures for prioritised risks or risk areas.

17 supplier audits had been conducted in the current reporting year 2023 (2022: 32 audits)

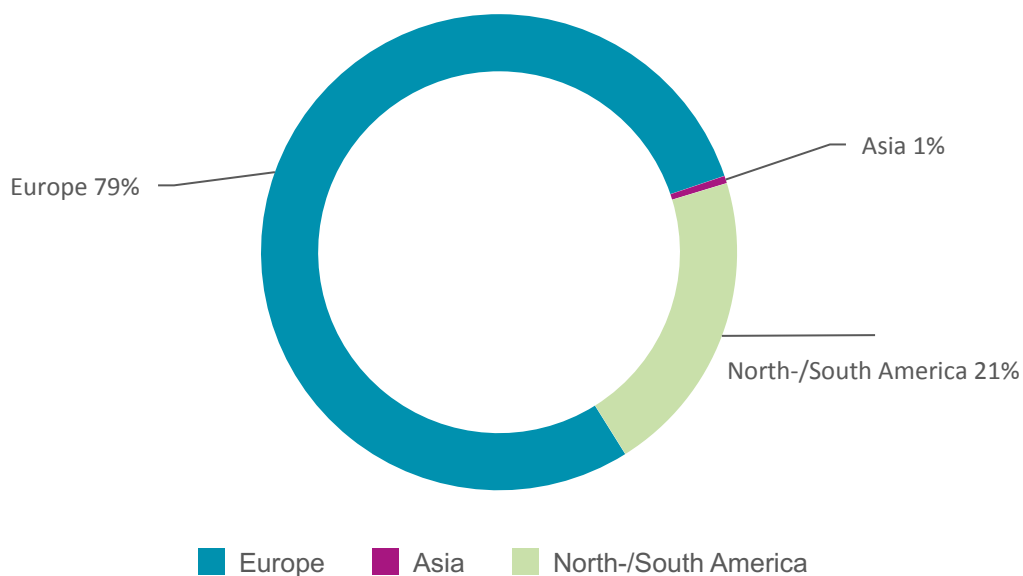
We encourage our suppliers to establish management systems in the areas of quality, energy and environment, risk management, data security, sustainability and social and labour law standards.

The cooperation extends to suppliers, e.g. from the mechanical and plant engineering sector, and the electrical engineering sector, but also engineering service providers as well as suppliers of technical gases or even energy suppliers. AIXTRON is an international company but still has local roots.

Key data supplier	2023	2022	Δ
Order-Volume in EUR Mio.	490	313	177
Number of Supplier	1,385	1,202	183
Number of Countries	28	28	0
Number of Supplier Audits	17	32	-15

Prior-year figures adjusted

2023
- Distribution of purchasing volume per region



Despite global purchasing, local value creation plays a very important role for us. The reason for this is, among other things, the high technical demands on our suppliers and the short communication channels. In Germany, for example, 53% (2022: 59%) of the purchasing volume is procured. The decisive factor for the selection is always that the supplier meets our high-quality requirements, has the necessary manufacturing expertise, and offers competitive prices.

Associations and initiatives

We are involved in a variety of organizations and associations to further promote ecologically sustainable development and resource efficiency in photonics and semiconductor technology. We are a founding member of Photonics21, now a Private Public Partnership (PPP) with the European Commission and the International Solid State Lighting Alliance (ISA) in China, and actively promote their further development.

Carbon Disclosure Project (CDP) / MSCI

Since 2010, as part of our participation in the Carbon Disclosure Project (CDP), we have reported once a year on the environmental impact of our business activities and our corporate strategy to reduce CO₂ emissions. In this way, AIXTRON promotes transparency for investors, companies, political decision-makers, and the media. AIXTRON achieved a D rating in the current reporting year 2023. In the MSCI rating, we were able to keep the score on high level AA.



Part of the national initiative „Energy-Efficiency-Network“

Since 2016, we have been involved in the "Energy Efficiency Network" as a founding member together with five other companies in the Aachen region. The aim of the network is to identify and realize economic energy-saving potential in companies. In recent years, more than 60,000 megawatt hours of energy have already been saved, avoiding more than 18,000 tons of CO₂ emissions. AIXTRON has also been able to leverage the benefits of the network, with its quarterly meetings, for its energy and climate footprint. In 2022, we renewed our membership in the Energy Efficiency Network and plan to continue our participation in the coming years. The network is part of the nationwide "Energy Efficiency Networks" initiative launched by the German government and leading German industry associations and organizations. The goal of the initiative was to save up to 75 PJ of primary energy or 5 million tons of GHG emissions by 2020 through the initiation and implementation of around 500 new energy efficiency company networks. In September 2020, the German Federal Ministry for Economic Affairs and Energy (BMWi) commissioned the continuation of the project until 2025, now under the title "Initiative Energy Efficiency and Climate Protection Networks". By the end of 2025, the initiative aims to establish 350 new networks, saving nine to eleven terawatt hours of final energy and five to six million tons of GHG emissions.

Memberships in organizations and associations

Organizations/associations	Function/committee	Thematic focus	organization/ association
ISA, International Solid State Lighting Alliance	Founding member	Promoting sustainable development and application of LED solid state lighting.	Shanghai, China
Responsible Minerals Initiative	Active member of the "Smelter Engagement Team" for Europe and Africa	Identification of all worldwide melts aimed at ensuring responsible mineral procurement by the companies.	Alexandria, USA
DGKK, Deutsche Gesellschaft für Kristallwachstum und Kristallzüchtung e.V.	Member	Promoting research, teaching and technology in crystal growth, crystal breeding, and epitaxy.	Erlangen, Germany
DPG, Deutsche Physikalische Gesellschaft	Supporting member in Industry and Business Workgroup (AIW)	Promoting contacts and dialog in physics and industry with a focus on training physicists during their studies. Participation in the DPG's "Tag vor Ort" (Day on Site) visit and lecture program for young physics students.	Bad Honnef, Germany
IVAM e.V.; Internationaler Fachverband für Mikrotechnik	Member	Technology marketing for innovative technologies and products of high-tech industries.	Dortmund, Germany
EPIC, European Photonics Industry Consortium	Member	Promoting the sustainable development of photonics in Europe.	Paris, France
OE-A – Organic and Printed Electronics Association (VDMA)	Member	Promoting the development of a competitive production infrastructure for organic and printed electronics.	Frankfurt/Main, Germany
Photonics-21 (European Private Public Partnership)	Founding member and member of Board of Stakeholders	PPP aimed at securing Europe's leading role in the development and introduction of photonics technologies in various fields of application.	Düsseldorf, Germany
SEMI/FlexTech, Semiconductor Equipment and Materials International	Member	Promoting access to regional markets and opening up diversified business opportunities, as well as promoting the growth and progress of emerging economies and adjacent technology markets.	Milpitas (Kalifornien), USA
NanoMikroWerkstoffePhotonik e.V. NMWP e.V.	Member of Board	Promoting the development of new ideas, projects and partnerships in the fields of nanotechnology, microsystems technology, tools, materials, and photonics.	Düsseldorf, Germany

List of key memberships in business or other associations

06

Key figures

Key figures

📌 Non-financial key figures at a glance

In the following, we have compiled the most important non-financial key figures in tabular form, as well as the content index of the Global Reporting Initiative GRI, which shows where in this report information that meets the requirements of the GRI can be found. In addition, we have included the report of the auditor who performed an independent limited assurance engagement on this report.

Performance aspect		2023	2022	Δ
EU taxonomy	Total revenues (EUR 000s)	629.880	463,167	166,713
	of which taxonomy-eligible	462.477	270,916	191,560
	of which taxonomy-aligned	462.477	270,916	191,560
	Total CapEx* (EUR 000s)	63.001	35,430	27,571
	of which taxonomy-eligible	50.377	20,005	30,372
	of which taxonomy-aligned	49.630	13,570	36,060
	Total OpEx* (EUR 000s)	91.603	61,195	30,407
	of which taxonomy-eligible	59.408	44,710	14,697
	of which taxonomy-aligned	59.408	44,710	14,697

* as defined in the EU Taxonomy Regulation

Performance aspect		2023	2022	Δ
EU taxonomy	Total revenues	100.0%	100.0%	0.0 pp
	of which taxonomy-eligible	73.4%	58.5%	14.9 pp
	of which taxonomy-aligned	73.4%	58.5%	14.9 pp
	Total CapEx*	100.0%	100.0%	0.0 pp
	of which taxonomy-eligible	80.0%	56.4%	23.6 pp
	of which taxonomy-aligned	78.8%	38.2%	40.6 pp
	Total OpEx*	100.0%	100.0%	0.0 pp
	of which taxonomy-eligible	64.9%	73.1%	-8.2 pp
	of which taxonomy-aligned	64.9%	73.1%	-8.2 pp

* as defined in the EU Taxonomy Regulation

Key figures

Environment / CO ₂ e in t			2022	2021	Δ	
Scope 1	Scope 1.1	Fuel consumption in stationary plants	41	86	-46	
	Scope 1.2	Fuel consumption in mobile plants	40	34	6	
	Scope 1.3	Other emissions	116	0	116	
	Scope 1.4	Process emissions	0.01	0	0	
	Scope 1 total			197	120	76
Scope 2	Scope 2.1	Electricity	5,169	4,191	978	
	Scope 2.3	Long distance heating	377	534	-157	
	Scope 2 total			5,546	4,725	822
Scope 3	Scope 3.1	Purchased goods and services	41,480	34,768	6,712	
	Scope 3.3	Fuel and energy-related emissions	1,092	817	275	
	Scope 3.4	Upstream logistics	21,775	14,013	7,762	
	Scope 3.5	Waste generation	46	81	-35	
	Scope 3.6	Business travel	2,604	1,732	873	
	Scope 3.7	Employee commuting	987	1,158	-171	
	Scope 3.11	Use of sold products	357,674	322,799	34,875	
	Scope 3.12	Treatment of sold products at end of life	23	52	-29	
	Scope 3 total			425,681	375,420	50,261
	Scope 1-3 total			431,424	380,265	51,159

Environment / Quantities in recorded units			2023	2021	Δ
Scope 1	Scope 1.1	Fuel consumption in stationary plants (kWh)	221,129	426,321	-205,192
	Scope 1.2	Fuel consumption in mobile plants (km)	245,765	234,443	11,323
	Scope 1.3	Other emissions (kg)	87	104	-17
	Scope 1.4	Process emissions (kg)	8	0	8
Scope 2	Scope 2.1	Purchased energy (kWh)	14,179,599	14,651,275	-471,676
Scope 3	Scope 3.1	Purchased goods and services (kg)	5,407,745	1,605,059	3,802,686
	Scope 3.4	Upstream logistics (tkm)	13,231,775	10,328,726	2,903,049
	Scope 3.5	Waste generation (kg)	678,129	175,925	502,205
	Scope 3.6	Business travel (pkm)	13,608,419	7,534,605	6,073,814
	Scope 3.7	Employee commuting (pkm)	9,120,775	6,848,070	2,272,705
	Scope 3.11	Use of sold products (kWh)	776,743,690	628,997,728	147,745,962
	Scope 3.12	Treatment of sold products at end of life (kg)	1,607,323	1,605,059	2,264

The gross value was used this year for Scope 2.1 emissions "electricity" (location-based). The values from the previous year in this category were adjusted accordingly and also shown in gross terms. Scope 3.8-3.10 and 3.13-3.15 do not apply to AIXTRON. A separate statement of Scope 3.9 is not possible due to the data situation. Basically, the values were calculated based on consumption or determined quantities. The value-based approach was chosen in Scope 3.1 for the areas of health/social services, service/consulting and software, as it is not possible to express the data in kilograms for these categories. Instead, metrics based on euro values were used to represent the relevant information. The quantities in Scope 3.11 in kWh refer to a life cycle of the machines of 10 years.

Key figures

Environment Innovation		2023	2022	Δ
Funds received for research and development (EUR 000s)		6,758	5,303	1,455
Proprietary expenses for R&D (EUR 000s)		87,681	57,726	29,955

Performance aspect Social			2023	2022	Δ
Employee health & safety	Lost Time Injury Frequency Rate – LTIFR		0.44	0.19	0.25
	Injury Rate – IR		0.88	1.48	-0.61
	Accidents at work		4	14	-10
	No. of workdays lost (work-related sickness + accidents)	Men	29	41	-12
		Women	0	0	0
	Number of injuries	Men	3	9	-6
		Women	1	0	1
	Accidents on way to/from work	Men	2	5	-3
		Women	2	0	2
	Work-related fatalities		0	0	0
Training & personnel development	Hours of further training	Men	29,838	26,138	3,700
		Women	7,299	4,704	2,595
	Average hours of training per employee		32	33	-1
	Average hours of training	Men	32	34	-2
		Women	34	26	8
	Hours of further training (total)		37,137	30,842	6,295
Apprenticeship	Total	Trainees	13	10	3
		Students	14	43	-29
Company suggestion scheme	Total	Submitted	101	134	-33
		accepted	35	21	14

Key figures

Governance / Supplier		2023	2022	Δ
Number of suppliers		1,385	1,202	183
Regional distribution of suppliers				
	Europe	1,189	1,047	142
	- NRW(regional)	399	337	62
	- other Germany	381	339	42
	- Europe w/o Germany	409	371	38
	Asia	130	105	25
	America (N/S)	66	50	16
Purchase-Volume in EUR million		490	313	177
Regional distribution of purchasing volumes				
	Europe	385	258	127
	- NRW(regional)	95	74	21
	- other Germany	166	109	57
	- Europe w/o Germany	124	75	49
	Asia	3	5	-3
	America (N/S)	102	49	53
Number of Countries		28	28	0
Regional distribution of countries				
	Europe	20	20	0
	- NRW(regional)	0	0	0
	- other Germany	1	1	0
	- Europe w/o Germany	19	19	0
	Asia	6	7	-1
	America (N/S)	2	1	1
Number of Supplier Audits		17	32	-15
Regional distribution of supplier audits				
	Europe	12	26	-14
	- NRW(regional)	3	0	3
	- other Germany	8	18	-10
	- Europe w/o Germany	1	8	-7
	Asia	3	2	1
	America (N/S)	2	4	-2

GRI Content Index

GRI disclosures	Disclosures/topic	Page in 2023 Sustainability Report	Page in 2023 Annual Report	Note
GRI 100	General disclosures			
GRI 101:	FOUNDATION 2016	General		
GRI 102:	GENERAL DISCLOSURES 2016			
1.	Organizational profile & strategy			
GRI 102-1	Name of the organization	Cover page imprint	1, 192	
GRI 102-2	Activities, brands, products and services	4	5	
GRI 102-3	Location of headquarters	7	5	
GRI 102-4	Location of operations	7-8	66	
GRI 102-5	Ownership and legal form	8	118	Further explanations in "Investors" section of our website
GRI 102-6	Markets served	13	69, 82-84	
GRI 102-7	Scale of the organization	13	66- 69, 78-81, 83, 116, 139	
GRI 102-8	Information on employees and other workers	46-58	74	
GRI 102-9	Supply chain	68-69, 76	68	
GRI 102-10	Significant changes to the organization and its supply chain	68-69	68	There were no significant changes to the supply chain in the 2023 year under report.
GRI 102-11	Precautionary principle or approach	46, 63-68	103-109	More detailed information in Annual Report
GRI 102-12	External initiatives	70		Responsible Minerals Initiative (RMI) GRI Energy Efficiency Network Aachen
GRI 102-13	Membership of associations	71		
2.	Strategy			
GRI 102-14	Statement from senior decision-maker	21-22, 48	6-8	
3.	Ethics and integrity			
GRI 102-16	Values, principles, standards, and norms of behavior	4-5, 14		
4.	Governance			
GRI 102-18	Governance structure	13-14	27-37	
5.	Stakeholder engagement			
GRI 102-40	List of stakeholder groups	10-11		
GRI 102-41	Collective bargaining agreements	No hint		AIXTRON is not subject to any collective bargaining agreements
GRI 102-42	Identifying and selecting stakeholders	10-11		
GRI 102-43	Approach to stakeholder engagement	9-11		
GRI 102-44	Key topics and concerns raised	17-18		None
6.	Reporting practice			
GRI 102-45	Entities included in the consolidated financial statements	7-8	69, 146, 186	
GRI 102-46	Defining reporting content and topic boundaries	17	122-138	The reporting contents are significantly influenced by the materiality analysis, Sustainability strategy and legal requirements.
GRI 102-47	List of material topics	17-18		
GRI 102-48	Restatements of information	9		
GRI 102-49	Changes in reporting	35		Scope 3.11 Use of sold products and 3.12 Treatment of sold products at the end of their life cycle
GRI 102-50	Reporting period	7, 92		

Key figures

GRI 102-51	Date of most recent report	91		
GRI 102-52	Reporting cycle	7		
GRI 102-53	Contact point for questions regarding the report	92		Contact partner on website
GRI 102-54	Claims of reporting in accordance with the GRI Standards	9		
GRI 102-55	GRI content index	77-78		
GRI 102-56	External assurance	88-91	183-191	Audit opinion in notes to financial statements
GRI 200: Economic				
GRI 103	Management approach	62		
GRI 103-1	Explanation of the material topic and its boundary	17-18		
GRI 202-2	Proportion of senior management hired from the local community	53		
GRI 202-4	Proportion of spending on local suppliers	68-69, 76		
GRI 205-2	Communication and training about anti-corruption policies	63	107-108	
GRI 205-3	Confirmed incidents of corruption and actions taken	64		No incidents requiring report here occurred in 2023
GRI 300: Environmental				
GRI 302-1	Energy consumption within the organization	39-40, 74		
GRI 302-2	Energy consumption outside of the organization	74		
GRI 302-4	Reduction of energy consumption	39-40		
GRI 305: Emissions				
GRI 305-1	Direct (Scope 1) GHG emissions	35-36, 74		
GRI 305-2	Energy indirect (Scope 2) GHG emissions	35-36, 74		
GRI 305-3	Other indirect (Scope 3) GHG emissions	35-36, 74		
GRI 306: Effluents and waste				
GRI 306-2	Waste by type and disposal method	41, 74		See climate balance sheet (Page 73) for information about waste-related emissions
GRI 400 Social topics				
GRI 401 Employment				
GRI 401-1	New employee hires and employee turnover	52-55	69	
GRI 401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	48	161-164	No distinction is made between full-time and part-time employees. We comply with national legal requirements for the protection of employers' rights. The company is bound, also in terms of the contract structures for employment relationships, by national legal requirements, company-internal agreements, and mandatory statutory notification periods.
GRI 401-3	Parental leave	51		
GRI 403 Health and safety				
GRI 403-1	Workers representation in formal joint management-worker health and safety committees	46		
GRI 403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	47, 75		
GRI 404 Training				
GRI 404-1	Average hours of training per year per employee	56	51	
GRI 404-3	Percentage of total employees by gender and by employee category who received a regular performance and career development review during the reporting period	11, 57		
GRI 405 Diversity and Equal Opportunity				
GRI 405-1	Diversity of governance bodies and employees	48	38-41	

Within this document, references are made to the pages to which the respective GRI content refers. References with the suffix "GB" refer to our Annual Report 2023.

Template: Proportion of turnover from products or services associated with Taxonomy-aligned economic activities – disclosure covering year 2023

Financial year 2023	Year	Sustainable contribution criteria	MS	DSNH ("Does Not Significantly Harm")		Category	
				Proportion of Taxonomy aligned (A.1.) or eligible (A.2.) turnover, year N-1 (18)	Proportion of Taxonomy aligned (A.1.) or eligible (A.2.) turnover, year N-1 (18)	Category (enabling activity) (19)	Category (transitional activity) (20)
Economic activities (1)	Code (2)						
	Absolute Turnover (3)	EUR					
	Proportion of Turnover (4)	%					
	Climate change mitigation (5)	Y; N; N/EL	Y/N				
	Climate change adaption (6)	Y; N; N/EL	Y/N				
	Water and marine resources (7)	Y; N; N/EL	Y/N				
	Circular economy (8)	Y; N; N/EL	Y/N				
	Pollution (9)	Y; N; N/EL	Y/N				
	Biodiversity and ecosystems (10)	Y; N; N/EL	Y/N				
	minimum safeguards (17)			Y/N			
A. TAXONOMY-ELIGIBLE ACTIVITIES							
A.1. Environmentally sustainable activities (Taxonomy-aligned)							
Manufacturing renewable energy technologies	CCM 3.1	12,813,967€	2.0%	Y	Y	Y	2.0%
Manufacturing other low-carbon technologies	CCM 3.6	449,662,824€	71.4%	Y	Y	Y	56.5%
Turnover of environmentally sustainable activities (Taxonomy-aligned)		462,476,791€	73.4%	73.4%	Y	Y	58.5%
Of which Enabling			73.4%				58.5%
Of which Transitional							
A.2. Taxonomy-Eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)							
Turnover of Taxonomy eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)		0€	—%				
A. Turnover of Taxonomy eligible activities (A.1+A.2)		462,476,791€	73.4%	73.4%			
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES							
Turnover of Taxonomy-non-eligible activities (B)		167,403,135€	26.6%				
TOTAL (A + B)		629,879,926€	100.0%				

Yes, taxonomy-eligible and taxonomy-aligned activity with the relevant environmental objective / N - No, taxonomy-eligible but not taxonomy-aligned activity with the relevant environmental objective / N/EL - not eligible, taxonomy-ineligible activity for the relevant environmental objective

	Proportion of turnover/Total turnover	
	Taxonomy-aligned per objective	Taxonomy-eligible per objective
CCM	73.4%	73.4%
CCA	—%	—%
WTR	—%	—%
CE	—%	—%
PPC	—%	—%
BIO	—%	—%

Template: Proportion of CapEx from products or services associated with Taxonomy-aligned economic activities – disclosure covering year 2023

Financial year 2023	Year			Sustainable contribution criteria						MS	Proportion of Taxonomy aligned (A.1.) or eligible (A.2.) turnover, year N-1 (18)								
	Code (2)	Absolute CAPEX (3)	EUR	Proportion of CAPEX (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 safeguards (17)	Category (enabling activity) (19)
CAPEX Economic activities (1)																			
A. TAXONOMY-ELIGIBLE ACTIVITIES																			
A.1. Environmentally sustainable activities (Taxonomy-aligned)																			
Manufacturing renewable energy technologies	CCM 3.1																		
Manufacturing other low-carbon technologies	CCM 3.6		49,629,738€	78.8%	Y	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	Y	E	
CAPEX of environmentally sustainable activities (Taxonomy-aligned) (A.1.)			€49,629,738.2	78.8%	78.8%	—%	—%	—%	—%	—%	Y	Y	Y	Y	Y	Y	Y	38.3%	
Of which Enabling				78.8%														38.3%	E
Of which Transitional				—%														—%	T
A.2. Taxonomy-Eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)																			
Installation, maintenance and repair of energy-efficient appliances	CCM 7.3		115,807€	0.2%	N	N/EL	N/EL	N/EL	N/EL									0.3%	
Installation, maintenance and repair of renewable energy technologies	CCM 7.6		631,023€	1.0%	N	N/EL	N/EL	N/EL	N/EL									1.8%	
Purchase and ownership of buildings (incl. IFRS 16)	CCM 7.7		0€	—%														16.1%	
CapEx of Taxonomy eligible but not environmentally sustainable			746,830€	1.2%	1.2%	—%	—%	—%	—%									18.2%	
A. CapEx of Taxonomy eligible activities (A.1+A.2)			50,376,558€	80.0%	80.0%	—%	—%	—%	—%									56.5%	
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES																			
CAPEX of Taxonomy-non-eligible activities (B)			12,624,799€	20.0%															
TOTAL (A + B)			63,001,357€	100.0%															

Yes, taxonomy-eligible and taxonomy-aligned activity with the relevant environmental objective / N - No, taxonomy-eligible but not taxonomy-aligned activity with the relevant environmental objective / N/EL - not eligible, taxonomy-ineligible activity for the relevant environmental objective

	Proportion of CapEx/Total CapEx	
	Taxonomy-aligned per objective	Taxonomy-eligible per objective
CCM	78.8%	80.0%
CCA	—%	—%
WTR	—%	—%
CE	—%	—%
PPC	—%	—%
BIO	—%	—%

***Template: Proportion of OpEx from products or services associated with
Taxonomy-aligned economic activities – disclosure covering year 2023***

Financial year 2023	Year		Sustainable contribution criteria						MS	Proportion of Taxonomy aligned (A.1.) or eligible (A.2.) turnover, year N-1 (18)								
	Code (2)	Absolute OPEX (3) EUR	Proportion of OPEX (4) %	Climate change mitigation (5) Y; N; N/EL	Climate change adaptation (6) Y; N; N/EL	Water and marine resources (7) Y; N; N/EL	Circular economy (8) Y; N; N/EL	Pollution (9) Y; N; N/EL		Biodiversity and ecosystems (10) Y; N; N/EL	Climate change mitigation (11) Y/N	Climate change adaptation (12) Y/N	Water and marine resources (13) Y/N	Circular economy (14) Y/N	Pollution (15) Y/N	Biodiversity and ecosystems (16) Y/N	minimum safeguards (17) Y/N	Category (enabling activity) (19) E
A. TAXONOMY-ELIGIBLE ACTIVITIES																		
A.1. Environmentally sustainable activities (Taxonomy-aligned)																		
	CCM 3.1	77,373€	0.1%	Y	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	Y	Y	0.7%
	CCM 3.6	59,330,159€	64.8%	Y	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	Y	Y	72.4%
		59,407,532€	64.9%	65%	N/EL	N/EL	N/EL	N/EL	65%	Y	Y	Y	Y	Y	Y	Y	Y	73.1%
			64.9%															73.1%
			—%															—%
A.2. Taxonomy-Eligible but not environmentally sustainable activities (not Taxonomy-aligned activities)																		
				Y; N; N/EL (b) (c)	Y; N; N/EL (b) (c)	Y; N; N/EL (b) (c)	Y; N; N/EL (b) (c)	Y; N; N/EL (b) (c)	Y; N; N/EL (b) (c)	Y; N; N/EL (b) (c)	Y; N; N/EL (b) (c)	Y; N; N/EL (b) (c)	Y; N; N/EL (b) (c)	Y; N; N/EL (b) (c)	Y; N; N/EL (b) (c)	Y; N; N/EL (b) (c)	Y; N; N/EL (b) (c)	
			—%															
		—€	—%															—%
		59,407,532€	64.9%	—%														73.1%
B. TAXONOMY-NON-ELIGIBLE ACTIVITIES																		
		32,195,027€	35.1%															
		91,602,559€	100.0%															

Yes, taxonomy-eligible and taxonomy-aligned activity with the relevant environmental objective / N - No, taxonomy-eligible but not taxonomy-aligned activity with the relevant environmental objective / N/EL - not eligible, taxonomy-ineligible activity for the relevant environmental objective

	Proportion of OpEx/Total OpEx	
	Taxonomy-aligned per objective	Taxonomy-eligible per objective
CCM	64.9%	64.9%
CCA	—%	—%
WTR	—%	—%
CE	—%	—%
PPC	—%	—%
BIO	—%	—%

Reporting form 1: Activities in the fields of nuclear energy and fossil gas

Template 1 Nuclear and fossil gas related activities

Line	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

Independent assurance practitioner's report¹

To AIXTRON SE, Herzogenrath

We have performed a limited assurance engagement on the combined consolidated non-financial statement of AIXTRON SE, Herzogenrath (hereinafter, "AIXTRON"), for the period from January 1, 2023 to December 31, 2023 (hereinafter, the "consolidated non-financial statement" or "NFS"). The consolidated non-financial statement is included in the separate AIXTRON sustainability report 2023 and consists of the disclosures marked therein with an omega sign ("Ω").

Responsibilities of Management

Management of AIXTRON is responsible for the preparation of the consolidated non-financial statement in accordance with Sections 315c in conjunction with 289c to 289e HGB ["Handelsgesetzbuch": German Commercial Code] and Article 8 of REGULATION (EU) 2020/852 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18. June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (hereinafter the "EU Taxonomy Regulation") and the Delegated Acts adopted thereunder, as well as for making their own interpretation of the wording and terms contained in the EU Taxonomy Regulation and the delegated acts adopted thereunder as set out in section „EU Taxonomy“ of the consolidated non-financial statement.

This responsibility includes the selection and application of appropriate non-financial reporting methods and making assumptions and estimates about individual non-financial disclosures of the group that are reasonable in the circumstances. Furthermore, management is responsible for such internal control as they consider necessary to enable the preparation of a consolidated non-financial statement that is free from material misstatement, whether due to fraud or error.

The EU Taxonomy Regulation and the Delegated Acts issued thereunder contain wording and terms that are still subject to considerable interpretation uncertainties and for which clarifications have not yet been published in every case. Therefore, management has disclosed their interpretation of the EU Taxonomy Regulation and the Delegated Acts adopted thereunder in section „EU Taxonomy“ of the consolidated non-financial statement. They are responsible for the defensibility of this interpretation. Due to the immanent risk that indeterminate legal terms may be interpreted differently, the legal conformity of the interpretation is subject to uncertainties.

¹ The English language text below is a translation provided for information purposes only. The original German text shall prevail in the event of any discrepancies between the English translation and the German original. We do not accept any liability for the use of, or reliance on, the English translation or for any errors or misunderstandings that may arise from the translation.

Independence and Quality Assurance of the Assurance Practitioner's firm

We have complied with the independence and quality assurance requirements set out in the national legal provisions and professional pronouncements, in particular the Professional Code for German Public Auditors and Chartered Accountants (in Germany) and the IDW Standard on Quality Management 1: Requirements for Quality Management in Audit Firms (IDW QMS 1 (09.2022)).

Responsibility of the Assurance Practitioner

Our responsibility is to express a conclusion with limited assurance on the consolidated non-financial statement based on our assurance engagement.

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 IAASB. This standard requires that we plan and perform the assurance engagement to obtain limited assurance about whether any matters have come to our attention that cause us to believe that the company's consolidated non-financial statement as marked with "Ω" in the sustainability report, are not prepared, in all material respects, in accordance with Sections 315c in conjunction with 289c to 289e HGB and the EU Taxonomy Regulation and the Delegated Acts issued thereunder as well as the interpretation by management disclosed in section "EU Taxonomy" of the consolidated non-financial statement.

In a limited assurance engagement, the procedures performed are less extensive than in a reasonable assurance engagement, and accordingly, a substantially lower level of assurance is obtained. The selection of the assurance procedures is subject to the professional judgment of the assurance practitioner.

In the course of our assurance engagement we have, among other things, performed the following assurance procedures and other activities

- Inquiries of employees responsible for the materiality analysis at Group level to gain an understanding of the approach used to identify material topics and corresponding reporting boundaries of AIXTRON. A risk assessment, including a media analysis, of relevant information about AIXTRON's sustainability performance in the reporting period.
- An evaluation of the design and implementation of systems and processes for the collection, processing and monitoring of disclosures on environmental, employee and social matters, human rights and anti-corruption and bribery, including the consolidation of data.
- Inquiries of personnel at Group level who are responsible for the determination of disclosures on concepts, due diligence processes, results and risks, the implementation of internal control procedures and the consolidation of disclosures.
- Inspection of selected internal and external documents. Analytical assessment of the data and trends of the quantitative disclosures reported for consolidation at Group level by all locations.

- Evaluation of local data collection, validation and reporting processes as well as the reliability of the reported data through a sample survey at selected sites.
- Interviews with responsible employees at Group level to gain an understanding of the process for identifying relevant economic activities according to the EU taxonomy.
- Evaluation of the design and implementation of systems and processes to assess taxonomy compliance (eligibility and alignment), particularly in the areas of Do Not Significantly Harm (DNSH) criteria and Minimum Social Safeguards (MSS).
- Evaluation of the design and implementation of systems and processes for the determination, processing and monitoring of disclosures on revenue, capital expenditures and operating expenses for the taxonomy-relevant economic activities.
- Assessment of the overall presentation of the disclosures.

In determining the disclosures in accordance with Article 8 of the EU Taxonomy Regulation, management is required to interpret undefined legal terms. Due to the immanent risk that undefined legal terms may be interpreted differently, the legal conformity of their interpretation and, accordingly, our assurance engagement thereon are subject to uncertainties.

Assurance Opinion

Based on the assurance procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the consolidated non-financial statement of AIXTRON SE, Herzogenrath, for the period from January 1, 2023 to December 31, 2023, included in the sustainability report 2023 and marked with an "Ω", has not been prepared, in all material respects, in accordance with Sections 315c in conjunction with 289c to 289e HGB and the EU Taxonomy Regulation and the Delegated Acts issued thereunder as well as the interpretation by management as disclosed in section "EU Taxonomy" of the consolidated non-financial statement.

Restriction of Use

This assurance report is solely addressed to AIXTRON SE, Herzogenrath.

Our assignment for AIXTRON SE, Herzogenrath, and professional liability is governed by the General Engagement Terms for Wirtschaftsprüfer (German Public Auditors) and Wirtschaftsprüfungsgesellschaften (German Public Audit Firms) (Allgemeine Auftragsbedingungen für Wirtschaftsprüfer und Wirtschaftsprüfungsgesellschaften) in the version dated January 1, 2017 (https://www.kpmg.de/bescheinigungen/lib/aab_english.pdf). By reading and using the information contained in this assurance report, each recipient confirms having taken note of provisions of the General Engagement Terms (including the limitation of our liability for negligence to EUR 4 million as stipulated in No. 9) and accepts the validity of the attached General Engagement Terms with respect to us.

Düsseldorf, February 26, 2024

KPMG AG

Wirtschaftsprüfungsgesellschaft

[Original German version signed by:]

Brandt

Fielenbach

Wirtschaftsprüferin

Wirtschaftsprüferin

Imprint

AIXTRON SE · Dornkaulstraße 2 · 52134 Herzogenrath · Germany · E-Mail: communications@aixtron.com

Reporting period: The reporting period is the calendar year 2023. It corresponds to the reporting period of the Annual Report. The previous report was published in February 2023.

Reporting cycle: The Sustainability Report is prepared and published annually with the company's Annual Report.

Accessibility: The text of this sustainability report is currently not barrier-free.

Auditor: KPMG AG Wirtschaftsprüfungsgesellschaft

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