

Sustainability Report

supplementing the 2021 Annual Report



AIXTRON
Our technology. Your future.

2021 at a glance

56.7 %

EU taxonomy-aligned revenues

39.2 %

EU taxonomy-aligned capital expenditure (CapEx)*

75.6 %

EU taxonomy-aligned operating expenses (OpEx)*

B

CDP score
Previous year: D

A

MSCI score
Previous year: BBB

2021: voluntary report on EU taxonomy alignment

2021: first complete climate balance sheet

1,021

suppliers worldwide
Previous year: 1,102

90

newly hired employees
Previous year: 95

23 %

women's share of new employees
Previous year: 24 %

13.3

hours of training per employee
Previous year: 8.4

9,822

hours of training total
Previous year: 6,273

42

nationalities
Previous year: 35

83 % Europe · 16 % America · 1 % Asia

regional distribution of purchasing volumes
Previous year: 83 % · 16 % · 1 %

* As defined in the EU Taxonomy Regulation

Content

Content	1
Foreword	3
About this Report	5
Sustainability Management and Strategy	11
Environment	18
Technology and climate protection.....	19
EU Taxonomy.....	21
Innovations as key competitive factor.....	28
Climate balance sheet.....	29
Energy management and consumption key figures.....	31
Waste management.....	35
Mobility.....	36
Social	38
Occupational health and safety.....	40
Diversity and equal opportunities.....	43
Flexible work routine, employee recruitment & retention.....	44
Personnel development, training and education.....	50
Innovation management.....	52
Regional and social commitment.....	53
Governance	56
Legal conformity, compliance and information security.....	58
Quality management and product safety.....	62
Key figures on supplier relationships.....	63
Associations and initiatives.....	65
Overview of Non-Financial Key Figures	68
GRI Content Index	73
Independent Auditor’s Report	76



“Our technologies facilitate the manufacture of energy-efficient products, such as LEDs, lasers, and power semiconductors. These make a key contribution to cutting global CO₂ emissions.”

Foreword

Ladies and Gentlemen,

2021 was a great year for AIXTRON, and by no means just in financial terms. We also made further major advances in our Sustainability & ESG (Environmental, Social, Governance) activities.

We report, for example, on the taxonomy alignment of our business activities in line with the EU's new Taxonomy Regulation already for 2021 on a voluntary basis. With taxonomy-aligned revenues of EUR 243 million (56.7%), most of our business is today already environmentally sustainable according to the definition of the Taxonomy Regulation.

In our core business of equipment technologies for compound semiconductors we are continuing to invest considerable sums in research and development. This way, we intend to completely renew our equipment portfolio and, by significantly differentiating our products, maintain our strong market position in future as well, and extend this even further in some segments. At AIXTRON, operating expenses (OpEx)* as defined in the EU Taxonomy Regulation correspond to the company's R&D expenses. It is particularly pleasing to note the very high level of taxonomy-aligned operating expenses (OpEx)*, which stood at EUR 43 million (75.6%). We were also able to report a high share of taxonomy-aligned capital expenditures (CapEx)*, in this case EUR 8 million (39.2%). These high figures for the two key figures of OpEx* and CapEx*, which are especially relevant for the future development of the company, provide very impressive evidence for the sustainability of our investment strategy, particularly in the field of research and development. They give us grounds to expect a further rise in our environmentally sustainable revenues in the years ahead once the new technologies reach broad application.

These technologies relate in particular to wide band gap (WBG) power semiconductors based on gallium nitride (GaN) and silicon carbide (SiC), which are a key to energy-efficient power electronics of the future, as well as to Micro LEDs for next generation displays, laser diodes for data communications as a key technology to digitalize our world, and further exciting technologies in renewable energies (e.g. solar cells) and the promising field of quantum technology.

All these technologies have one thing in common: Compared with the technologies currently available on the market, they are far more energy efficient and thus make a substantial contribution to reducing greenhouse gas emissions. Alongside numerous further benefits resulting from their specific applications, these technologies play a considerable role in helping to mitigate climate change.

We have also become ever more successful in communicating the advances we have made in our ESG performance to the outside world. In fiscal year 2021, we managed to significantly improve our ESG ratings. Our CDP rating rose from D to B, while MSCI raised our rating from BBB to A.

We are also making continuous efforts to further reduce those CO₂ emissions we can directly influence. We achieved climate neutrality in fiscal year 2019. In fiscal year 2021, we were able to compile a complete climate balance sheet for the first time. This means we are even better able to identify further potential for reducing CO₂ emissions throughout the value chain.

Foreword

By implementing various energy-saving projects, we managed to reduce our electricity consumption by 6.7% to 10,883,534 kWh in 2021 (2020: 11,672,526 kWh), while our revenues over the same period rose by 59%. Our overall energy requirements showed a slight increase of 2.9% in 2021. That was mainly due to a greater need for natural gas and heating which, at 3,452,892 kWh in total, rose significantly compared with 2020 (2,258,854 kWh).

The main reason for this increase was that, due to coronavirus protection measures, the fresh-air share of overall ventilation systems had to be raised from 10% to 50%. Not only that: Due to the high level of humidity resulting from weather conditions in the past year, the heat registers used to dehumidify the air had to be operated far more often than usual.

Our employees are the key to our company's success. Their creativity and problem-solving capabilities, their commitment and the outstanding dedication shown by our teams form the foundation of AIXTRON as a company. And AIXTRON's team is growing rapidly. In 2021, 90 new employees joined us (2020: 95), of which 23% women (2020: 24%), and we expect continued strong growth in the years ahead. One particular hope is that we will be able to inspire and recruit even more women in future, especially for the more technical departments at our company. Our growing diversity and international focus are also reflected in the number of nationalities represented in our workforce, which has now risen to 42 (2020: 35).

One enormously important factor for us is to ensure a high level of further training for our employees. We therefore set ourselves the target of significantly increasing the number of training hours. We clearly succeeded here, with 13.3 hours of training per employee in 2021 compared with 8.4 hours in 2020.

Given our company's strong growth, we also attach great priority to carefully and responsibly cultivating our strong and AIXTRON-specific corporate culture. Another important aspect is our commitment to society in the regions in which we operate. With our welfare and social activities, we support initiatives and organization that improve people's lives. In summer 2021, for example, we made a donation of EUR 50,000 to provide speedy and uncomplicated assistance to victims of the flood disaster in AIXTRON's direct vicinity.

Effective and efficient corporate governance forms the basis and provides the framework for our financial and non-financial success. Our highly developed corporate governance systems have been in place for many years now and act as the foundation for high-quality governance. Details can be found in the further comments in this report and in our Annual Report.

In this Sustainability Report, we offer you an overview of our sustainability strategy and its specific implementation. We would like to show you what we have achieved and the areas we will be working on today and in future.

The Executive Board of AIXTRON SE



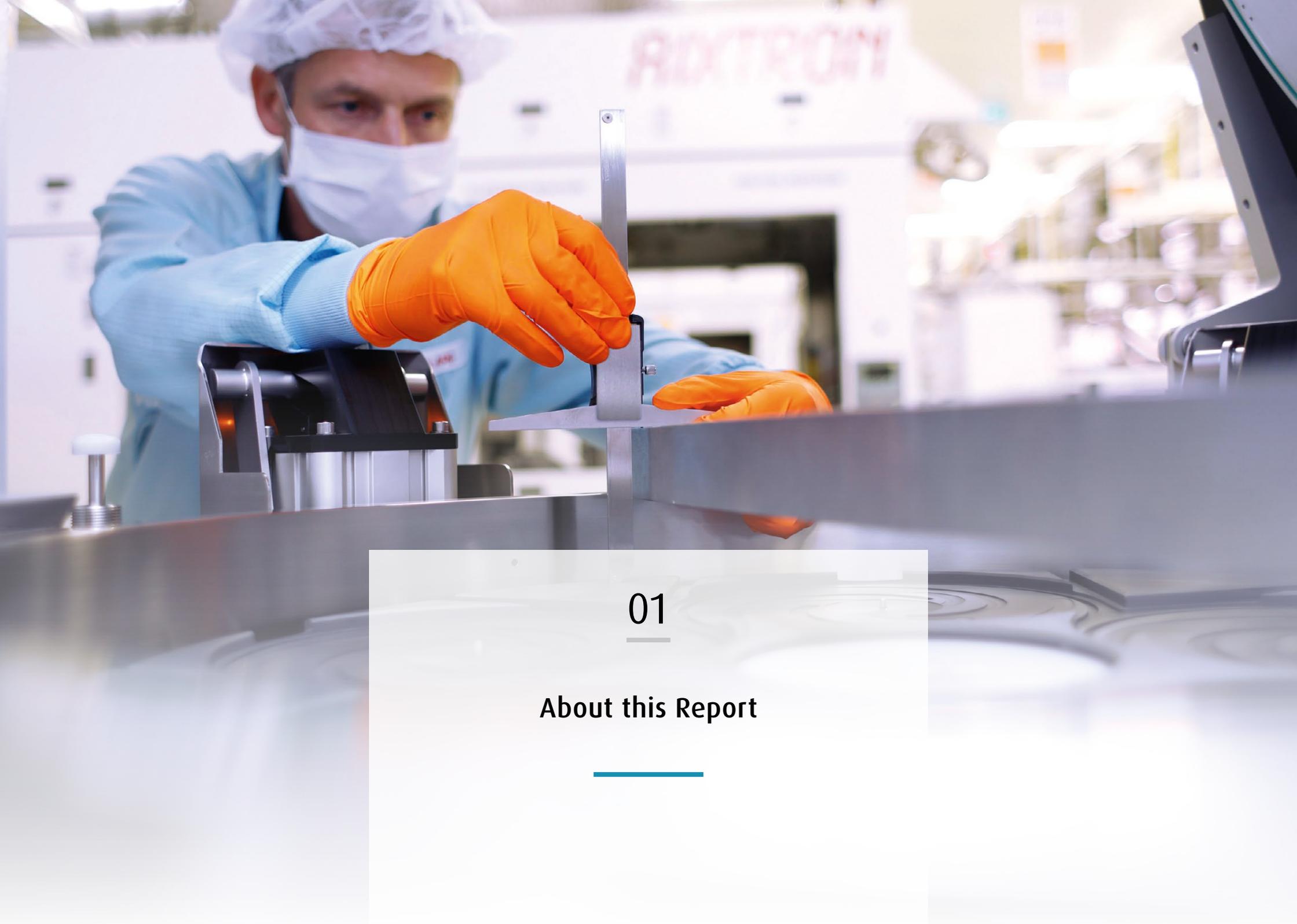
Dr. Felix J. Grawert
Chief Executive Officer



Dr. Christian Danninger
Executive Board member



Dr. Jochen Linck
Executive Board member



01

About this Report

Ω About this report

In this Sustainability Report, AIXTRON documents its ecological and social performance and the progress it made in implementing its sustainability targets in the 2021 year under report. The report is intended to illustrate to our stakeholders how these ecological and social targets and measures have contributed to our company's performance.

AIXTRON's economic disclosures and performance for fiscal year 2021 can be found in our Annual Report.

The reporting period corresponds to fiscal year 2021, i.e. to the period from January 1, 2021 to December 31, 2021.

The report covers the following AIXTRON Group sites and subsidiaries. These mainly include:

- ▶ AIXTRON SE, Germany
- ▶ APEVA SE, Germany
- ▶ AIXTRON Ltd., UK
- ▶ AIXTRON, Inc., USA
- ▶ AIXTRON Korea Co. Ltd., Korea
- ▶ AIXTRON China Ltd., China
- ▶ AIXTRON Taiwan Co. Ltd., Taiwan
- ▶ AIXTRON K.K., Japan

As of December 31, 2021, AIXTRON had one manufacturing facility and R&D site in Herzogenrath and one in Cambridge (UK), as well as sales and service offices in Asia and the USA. The overwhelming majority of our employees work at our manufacturing site in Germany, while a significantly smaller number works in the UK. Our reporting therefore focuses on these two locations.



We refer above all to the more detailed disclosures on aspects such as the structure and management of the company provided in the Chapters One and Two of the current Annual Report of the AIXTRON Group. ■

Main sites	Country	Utilization in 2021	Size (approx.)	Share of employees
Herzogenrath	Germany	Company headquarters, R&D, production	16,000 m ²	Europe 81.3 %
Herzogenrath		Construction, production	12,457 m ²	
Cambridge	UK	R&D, production, construction, customer service	2,876 m ²	
Santa Clara	USA	Sales, customer service	491 m ²	USA 4.3 %
Hwasung	South Korea	Sales, customer service	1,151 m ²	Asia 14.4 %
Shanghai	China	Sales, customer service	594 m ²	
Hsinchu	Taiwan	Sales, customer service	677 m ²	
Tokio	Japan	Sales, customer service	364 m ²	

Overview of sites by country, including utilization, size and regional distribution of employees

Editorial note

We refer throughout this report to employees. This naturally refers to employees of all genders. The same applies to similar concepts, such as staff, participants, representatives, etc. ■

Ω Framework and reporting

This Sustainability Report has been prepared in accordance with “Core” option of the Sustainability Reporting Standards of the Global Reporting Initiative (GRI). The table at the end of the report provides information on the allocation of contents to the GRI framework requirements. You can find explanations accompanying the information and projects presented in this report on AIXTRON’s website (under “Sustainability”).

We are continuing in our endeavors to provide our stakeholders with as comprehensive a picture as possible of the non-financial aspects and key figures relating to our business activities. Individual key figures were recorded for the first time in the 2021 year under report and have been included in this report. If, in individual cases, no data for previous years is available to us, then it is not possible to compare these key figures with previous years. Where applicable, this circumstance is indicated accordingly.

The requirements of the German CSR Directive Implementing Act (CSR-RUG) oblige AIXTRON to publish a Non-Financial Declaration. With our separate Non-Financial Declaration, we meet the requirements incumbent on us pursuant to § 315b (1) to (3) of the German Commercial Code (HGB).

All text passages, tables, and charts in the Sustainability Report that are allocated to the Non-Financial Declaration are indicated by the letter omega Ω. For this purpose, GRI-based materiality was “mapped” onto HGB-based materiality. As a result, not all of the disclosures made in this report are necessarily part of the separate Non-Financial Declaration. References to disclosures made in the Management Report form part of the Non-Financial Declaration.

We are obliged pursuant to § 289c (3) HGB to review topics in respect of “double materiality”. This requires disclosures to be made on non-financial aspects if two criteria are met:

1. The disclosures are needed to understand the company’s business performance, results, and position.
2. The disclosures facilitate understanding of how the company’s business activities impact on non-financial aspects.

We reviewed the topics identified in respect of their “double materiality”. The topics meeting this definition are indicated within the report by the letter omega Ω. These topics are linked to the respective chapters in this report. We have not identified any “material risks” which have or will have “very probable severe negative implications” – consistent with the definitions provided in § 289c (2) and (3) and § 315c HGB – in connection with our own business activities or our business relationships, products and services.

The non-financial disclosures and key figures on our sustainability activities presented in this report were subject to an independent limited assurance audit by Deloitte GmbH Wirtschaftsprüfungsgesellschaft, Düsseldorf (Germany) with due application of the audit standard applicable to sustainability reporting (ISAE 3000 Revised). ■

Ω Dialog with our stakeholders

We cultivate trust-based, long-term partnerships with our stakeholders. Like in our dealings with each other within the company, in these relationships we accord priority to treating each other as partners, with respect, and on a constructive basis. We see ourselves as part of the society we live in. In view of this, we are committed to social and welfare projects, particularly in the region surrounding our headquarters.

We act prudently, responsibly and with due consideration of the interests of all our stakeholders in all our business transactions. Our aim is to help build a long-term, permanent and sustainable future for our company, our customers, and society as whole. We can only achieve this goal by pooling our forces, working in a wide variety of partnerships and cooperations, and maintaining an ongoing dialog with our stakeholders.



Rainer Goeckel · Sustainability Manager

By maintaining a dialog, we endeavor to understand the perspectives of our stakeholders, build trust, and intensify existing partnerships. This helps us to recognize which steps are possible and necessary and which steps are expected

of us. At the same time, this dialog allows the company to present the scope it sees for acting on social and environmental concerns, as well as to show which requirements and conditions are important for us.

AIXTRON's material stakeholder groups are:

- ▶ Customers
- ▶ Employees
- ▶ Capital market participants
- ▶ Suppliers
- ▶ Government and politicians
- ▶ Media
- ▶ Science and research

Identifying the most important stakeholders and their interests is crucial for any successful stakeholder dialog (cf. [Sustainable corporate management and sustainability strategy / determination of material topics](#)). Stakeholders are categorized and prioritized by reference to the following criteria:

- ▶ Stakeholder interests
- ▶ Stakeholder influence
- ▶ Stakeholder expectations in AIXTRON
- ▶ Stakeholder dependence on AIXTRON
- ▶ Value for AIXTRON of entering into contact with this stakeholder

We regularly review and make any necessary adjustments to the process of identifying key stakeholders and relevant topics. ■

Ω Dialog with our stakeholders

Stakeholder	Topics of dialog	Forms of dialog
Capital market	<ul style="list-style-type: none"> ▶ Business performance ▶ Product innovations ▶ Application possibilities 	<ul style="list-style-type: none"> ▶ Sustainability ▶ Strategy
Customers	<ul style="list-style-type: none"> ▶ Product quality and safety ▶ Sustainable technologies ▶ Product energy efficiency 	<ul style="list-style-type: none"> ▶ Human rights ▶ Compliance
Suppliers and business partners	<ul style="list-style-type: none"> ▶ Product quality and safety ▶ Environmental protection 	<ul style="list-style-type: none"> ▶ Responsible purchasing ▶ Compliance with AIXTRON's standards
Employees	<ul style="list-style-type: none"> ▶ Health and safety ▶ Career advancement ▶ Co-determination ▶ Training opportunities 	<ul style="list-style-type: none"> ▶ Compensation and benefits ▶ Work-life balance / parental leave ▶ Diversity & equal opportunities
Science and university	<ul style="list-style-type: none"> ▶ Development of new technologies ▶ Promotion of research and teaching 	<ul style="list-style-type: none"> ▶ Networking of industry and research ▶ Recruitment / PhD students
Media representatives	<ul style="list-style-type: none"> ▶ Innovation and technologies ▶ Semiconductor technology 	<ul style="list-style-type: none"> ▶ AIXTRON as employer ▶ Finance
Government and politicians	<ul style="list-style-type: none"> ▶ Eco-efficiency ▶ Innovation and technology promotion 	<ul style="list-style-type: none"> ▶ Economic and labor policy

Most important stakeholder, topics, and forms of dialog



02

Sustainability Management and Strategy

Ω Who we are and what we do

The AIXTRON Group (“AIXTRON” or “the company”) is a leading provider of deposition equipment to the semiconductor industry. The company was founded in 1983, is headquartered in Herzogenrath (Aachen City Region), Germany, and has subsidiaries and representative offices in Asia, the USA, and Europe. In 2021, we had a total of 739 employees (headcount; all figures in this report are headcounts). As well as being listed in the TecDAX, since 2020 AIXTRON has also been listed in the MDAX.

AIXTRON’s business activities involve the development, production, and installation of equipment for use in the deposition of complex semiconductor materials, the development of process technologies, consulting and training, and customer support.

Our products are used worldwide by a wide range of customers to manufacture high-performance devices for electronic and optoelectronic applications based on compound or organic semiconductor materials. These devices are used in numerous innovative applications, technologies, and industries. These include, for example, LED and display technologies, data transmission, sensor technology, energy management and conversion, communications, SiC and GaN power management and conversion, signal and lighting technology, and many other sophisticated high-tech applications.

In the 2021 year under report we generated revenues of EUR 429 million (2020: EUR 269 million) and invested EUR 57 million in research and development (2020: EUR 58 million). This corresponds to around 13 % of our revenues. Our

equity ratio stood at 80 % (2020: 84 %). Asia accounted for the major share of our revenues, at just under 70 % (2020: 73%), and was followed by Europe with 20 % (2020: 16 %) and America with 10 % (2020: 11 %). ■



Our self-image and our values

Alongside our economic performance, we are also committed to taking responsibility for ecological and social challenges. We are convinced that sustainability is a prerequisite for long-term economic success.

As a company which equips an important forward-looking industry, we execute our business transactions prudently, responsibly, and with due consideration of the interests of material stakeholders with the aim of ensuring sustainable development on all stages of the value chain.

For this reason, responsible action is one of our four corporate values. It forms a core component of our corporate culture and underpins everything we do at AIXTRON. The Executive Board and our managers bear a particular responsibility in this respect and act as role models.

Efficient and resource-optimized operations have always formed part of our core business as a forward-looking technology company. Our products enhance the performance of semiconductors and make them more resource-efficient.

This in turn boosts the efficiency of large numbers of products, including applications in areas such as the energy supply, e-mobility, entertainment electronics, and communications. This means that our products are helping to shrink not only our own ecological footprint, but also that of our customers and in particular those of end consumers in these areas (cf. [Innovations as key competitive factor](#)). ■



Ω Our sustainability strategy

Sustainability has become ever more firmly anchored as an important principle of corporate management at our company in recent years, a process which result in the formulation of our sustainability strategy in 2018. This led to the definition of sustainability criteria on top management level between the Supervisory and Executive Boards in 2020, with target achievement now incentivized. Thanks to this measure, non-financial targets now enjoy greater weighting alongside our financial targets.

One major objective within our sustainability strategy was to become climate neutral. We achieved this in 2019. To this end, we procure our electricity from renewable energies and offset all unavoidable CO₂ emissions with climate protection projects. One major strategic step in the current year under report was to compile a complete climate balance sheet that also portrays upstream and downstream production processes (Scope 3).

For us, sustainability means acting on the basis of an opportunity and risk analysis in order to bring long-term economic success in line with environmental protection and our social responsibility.

We are endeavoring to continuously improve our sustainability activities, as well as the associated guidelines, standards, and programs in order to meet the needs and satisfy the expectations of our stakeholders.



The five core topics of AIXTRON's sustainability strategy

Against this backdrop, we have identified five priority topics. These five topics cover the following areas: **Environment and Ecology; Society and Social Welfare; Employees and Occupational Health and Safety; Combating Corruption and Bribery,** and **Respect for Human Rights.**

These topics have been defined in our “Sustainability Policy” and are also guided by the Sustainable Development Goals (“SDGs”) of the United Nations.

The SDGs we support address 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 provide orientation for our day-to-day work and strategic planning. ■



The SDGs we support relate to the above goals

Ω Determination of material topics

In an extensive process conducted in 2020, we evaluated the main economic, ecological, and social aspects that have a material influence on our company. To this end, we questioned those internal specialists and employees who exchange information on an ongoing basis with our material stakeholders (cf. [External Stakeholders](#)). The findings were compared with the results of dialogs with external stakeholders and structured by reference to the GRI standards. This process ended with an iterative discussion process with internal experts and the Executive Board, which resulted in the definition of the five topic clusters presented in the chart below. We reviewed this allocation in the 2021 year under report and did not identify any need to make changes. ■



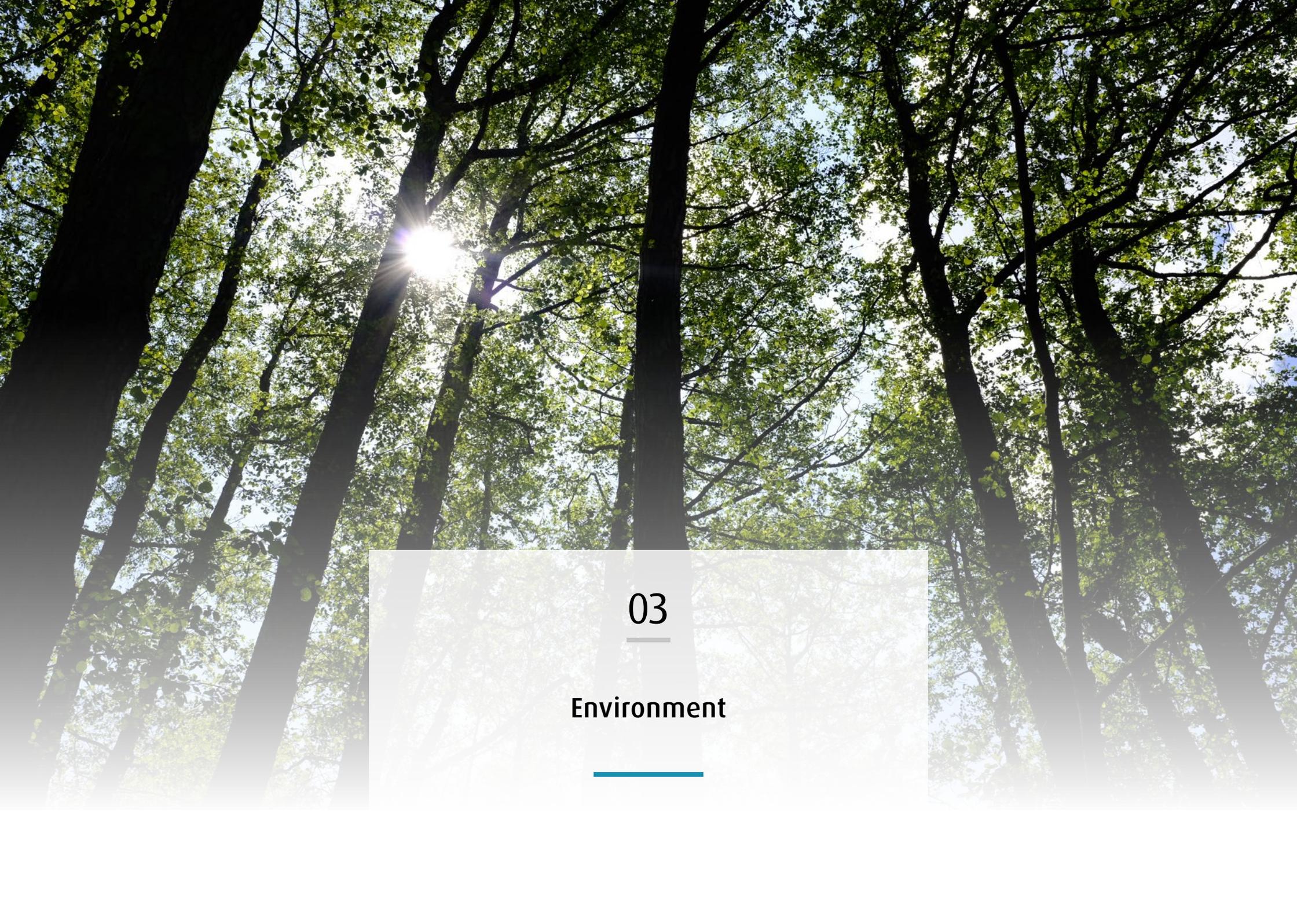
Ω Organizational implementation

The Executive Board of AIXTRON SE bears overall responsibility for the topic of sustainability. It is advised by the Sustainability Manager and the Sustainability Workgroup and reaches decisions on key sustainability-related matters. Responsibility for implementing the targets and projects resolved by the Executive Board lies with the relevant specialist departments and subsidiaries of AIXTRON SE.

The Sustainability Workgroup meets several times a year and consists of members of staff who are responsible for the respective topic, such as innovation, technology, human resources, Works Council, compliance, quality assurance, or purchasing. The aim is to develop relevant sustainability topics based on the corporate strategy, to raise awareness for sustainable business operations, and to anchor sustainability in all company departments. Within the Workgroup, the employees with relevant responsibilities inform the other members at regular intervals on the progress made with individual projects at the company and actively promote these projects.

Our CSR Policy provides a formal and mandatory definition of the key principles underlying our sustainability management for all units at AIXTRON SE. ■





03

Environment

Environment

We see environmental protection as a key factor underpinning the sustainability of our business model. That applies both to our own activities and to those at our suppliers. Our innovative technologies and products, which drive our success and whose technology performance capacity has convinced our customers worldwide, make a decisive contribution in this respect. ■

Technology and climate protection

AIXTRON's products make it possible to save significant volumes of CO₂: Efficient semiconductor components based on gallium nitride and silicon carbide massively increase energy conversion efficiency and thus help to protect natural resources. We are also actively working to enhance the resource-efficient production and development of our equipment.

Dr. Felix Grawert · Chief Executive Officer (CEO)



energies (network switching), IT infrastructure (electricity supply), entertainment electronics (3D sensor technology, fast-charging devices), data transmission (fiber optic networks), and telecommunications (5G networks).

We are also making a substantial contribution to advances in the digital transformation of the display technology (Mini and Micro LEDs), lighting, and hygiene segments. AIXTRON equipment is used to produce devices for numerous innovative applications, technologies, and industries.

Examples include laser, LED, and display technologies, energy management and conversion, communications, signal and light technology, and numerous other sophisticated high-tech applications that facilitate pioneering, high-performing, and energy-efficient use and thus serve a whole series of megatrends. ■

Our customers benefit from groundbreaking solutions that also save costs, protect resources, and are energy efficient. These customers include companies operating in sectors such as e-mobility (powertrains, charging infrastructure), renewable

The utmost precision in manufacturing power electronics

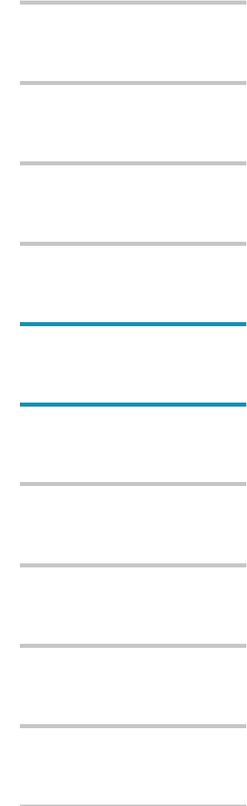
As a technology leader, we have played a key role in the further development of power electronics and the production process for more than 30 years now.

Specialists estimate that power electronics based on gallium nitride and silicon carbide have the potential to save up to 35 % of current energy needs. These materials make more efficient use of energy and avoid losses resulting from conversion into waste heat. As the market leader in these fields, AIXTRON is making a substantial contribution to climate protection.



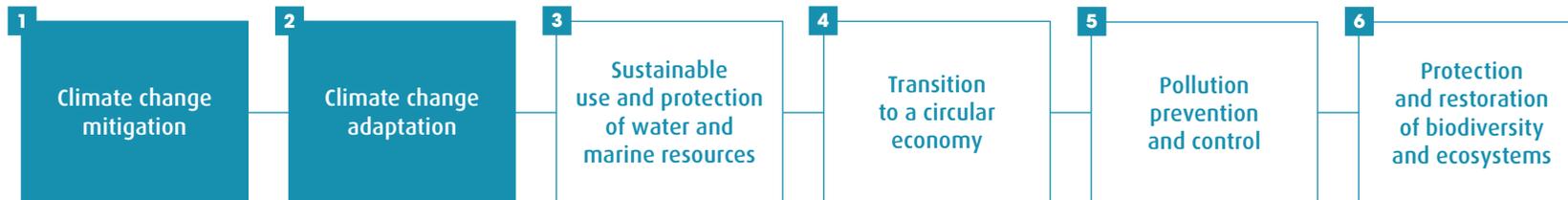
Prof. Dr. Michael Heuken
Vice President Advanced Technologies

Our technologies are the centerpiece of next-generation power electronics and can make an important contribution towards combating global climate change. ■





With its “Action Plan on Financing Sustainable Growth”, the EU Commission mainly aims to provide the economic and financial system in the EU with a more sustainable structure and to achieve climate neutrality by 2050, i.e. by then the volume of CO₂ emissions avoided or removed should equal the volume emitted. The centerpiece of this Action Plan is the EU Taxonomy Regulation, a standardized system for classifying environmentally sustainable economic activities. This Regulation defines six environmental objectives:



Under the EU Taxonomy Regulation, economic activities are “environmentally sustainable” if they

- ▶ Make a substantial contribution to at least one environmental objective
- ▶ Do no significant harm (DNSH) to achievement of the five other EU environmental objectives, and
- ▶ Comply with minimum social safeguards.

The assessment as to whether an economic activity makes a substantial contribution to one of the objectives and does no significant harm to the five other objectives is based on technical screening criteria.

At present, these criteria are only available for the first two of the EU’s environmental objectives (Climate Change Mitigation and Climate Change Adaptation). In view of this, disclosures can only be made for these two objectives for fiscal year 2021.

- ▶ Economic activities are “taxonomy-eligible” if they can be allocated to the taxonomy criteria.
- ▶ Economic activities are “taxonomy-aligned” if the taxonomy-eligible economic activities also fulfill the criteria.

In view of the EU Taxonomy Regulation, in fiscal year 2021 we have reported for the first time on the taxonomy-eligible and, voluntarily, also on the taxonomy-aligned share of revenues, capital expenditure (CapEx)* and operating expenditure (OpEx)* for our economic activities. ■

Approach

In fiscal year 2021, a project was launched to implement the taxonomy requirements applicable to EU environmental objectives **1 Climate Change Mitigation** and **2 Climate Change Adaption**. The project team, which comprised experts from various departments, began by allocating our economic activities to the relevant taxonomy criteria. On this basis, interviews and workshops were then held with the respective contact partners and experts from the relevant specialist departments.

The purpose of these talks was to review whether the economic activities actually fulfill the relevant technical taxonomy criteria (alignment review). The assessments provided by the experts were documented and the relevant evidence and records inspected.

Large parts of our economic activities are not directly allocable under the taxonomy requirements. For the supplier industry, the set of criteria "Manufacture of other low carbon technologies" is particularly relevant. This set of criteria comprises economic activities in which technologies are manufactured that are aimed at and demonstrate substantial life-cycle GHG emission savings compared to the best-performing alternative technology available on the market.

To identify taxonomy-eligible economic activities, the project team identified those technologies in AIXTRON's technology portfolio that can demonstrate low CO₂ emissions in their application. In the next step, only those technologies



leading to substantial GHG emission savings were classified as taxonomy-eligible and also as taxonomy-aligned. Against this backdrop, our taxonomy-eligible revenues are equivalent to our taxonomy-aligned revenues, as is also the case for CapEx* and OpEx*. The reduction in GHG emissions has to be substantial. However, the Regulation does not stipulate a minimum value.

It can be assumed that the purpose and objective of the “EU Action Plan on Financing Sustainable Growth” is to build on technological advances rather than on efficiency enhancements within the existing system. Emission savings of 20% may regularly be deemed significant and thus make a substantial contribution towards protecting the climate. AIXTRON has taken this figure as its minimum threshold for substantial CO₂ emission savings. A reference technology is the dominant technology on the market rather than a niche technologies with very small market share, however efficient such technologies may be. In respect of the reference standard, we have therefore referred solely to this reference technology.

The following approach was taken when analyzing taxonomy alignment:

- ▶ **Substantial Contribution:** Compliance with the technical screening criteria was individually assessed for each economic activity.
- ▶ **Do no significant harm (DNSH):** The DNSH criteria predominantly refer to compliance with legal requirements and, in the case of the **4 Circular Economy** objective, to fundamental aspects of the economic activity. This being so, it was regularly appropriate to assess DNSH conformity on the level of the economic activity. DNSH conformity in respect of EU environmental objective **2 Climate Change Adaption** is assessed on group level.
- ▶ **Minimum Safeguards:** In this case, a group-wide approach to ensure compliance with the minimum safeguard requirements was adopted. This allows the relevant requirements to be assessed appropriately and without omission. ■



Criteria for climate change mitigation and adaptation

This analysis resulted in the identification of the following taxonomy-eligible and simultaneously taxonomy-aligned economic activities at AIXTRON which make a substantial contribution to the **1 Climate Change Mitigation** environmental objective:

Manufacture of other low carbon technologies

AIXTRON develops, manufactures, and markets equipment used in the deposition of compound semiconductors. Deposition is the key step in manufacturing compound semiconductors, which make a substantial contribution to avoiding energy losses and thus enable significant CO₂ emission savings.

Power conductor with wide band gap (WBG) based on gallium nitride (GaN) or silicon carbide (SiC)

Thanks to their significantly reduced energy losses when converting electricity and voltage (e. g. when charging and discharging batteries and electric vehicles or in adapters and switches in the electricity grid), WBG power transistors make a substantial contribution to saving energy compared with established silicon-based technology. AIXTRON enables research to be performed on more energy-efficient power transistor designs and enables mass production of the new components by industry.

Micro LEDs

Micro LEDs make a substantial contribution to saving energy by reducing the energy used by displays by up to 90 % compared with established LCD technology. The imaging is executed selectively, i.e. light is only generated in those pixels needed to display the image. Black sections of the image remain dark and do not use any energy, whereas conventional technology requires active darkening of permanently bright background lighting. AIXTRON enables the mass production of new displays based on Micro LEDs by industry.

Laser diodes for data communications

The transition from cable-bound to optic communications, particularly for the "last mile", significantly reduces the energy used by telecommunications networks while simultaneously increasing their data throughput. AIXTRON enables research to be performed on more energy-efficient and faster laser diode designs and enables mass production of the new fiber-optic components by industry.

Quantum technology

AIXTRON researches the technology used for the deposition of complex nanostructures. These nanomaterials are used, for example, in neuronal computers or quantum sensors that have capabilities including machine vision, language recognition and data classification at 500 to 1,000 times lower energy consumption.

Manufacture of technologies for renewable energy

AIXTRON develops, manufactures, and markets equipment on which compound semiconductors generating electricity from solar energy are manufactured.

Solar cells

Compound semiconductors for concentrator photovoltaics (CPV) solar cells are significantly more efficient in generating electricity from solar energy than are conventional solar cells based on crystalline silicon. Solar cells made of compound semiconductors are often used in high-tech applications (e.g., satellites).

The analysis performed did not result in the identification of any economic activities making a substantial contribution to environmental objective

2 Climate Change Adaption. ■



Compliance with “do no significant harm” (DNSH) criteria

As a general rule, both the equipment used by customers and the equipment we ourselves use for research and development purposes is operated in a clean room environment. Clean rooms are equipped with extensive filtering systems to prevent any pollution of the surrounding environment.

In respect of the EU’s environmental objective **2 Climate Change Adaptation** there are no indications that AIXTRON’s activities intensify the adverse impact of the current and expected future climate on AIXTRON itself or on people, the natural world or assets.

The criteria for the EU environmental objective for **3 water quality** chiefly refer to legal and official requirements which AIXTRON is obliged to comply with. The same basically applies for the requirements of the EU Environmental Objective **5 Pollution Prevention and Control**. There are no indications that AIXTRON has infringed any of the relevant requirements.

The Environmental Objective **4 Transition to a Circular Economy** involves general requirements, such as long durability, easy maintenance and dismantling. The predominant share of our components are designed for very long lifetimes, are capable of being recycled, and still have monetary value at the end of their useful life (e.g. steel, stainless, aluminum, copper, electronics).

In respect of the EU’s environmental objective **6 Protection and Restoration of Biodiversity and Ecosystems** AIXTRON performs environmental impact and

comparable assessments within its own business activities in cases where there is a requirement to do so.

Information concerning compliance with the minimum standards in respect of occupational safety and human rights can be found in the chapter [“Occupational health and safety”](#) and the chapter [“Conflict Minerals”](#) of this report and in the “Sustainability” section of [AIXTRON’s website](#). ■



Definition of revenues, CapEx and OpEx

Revenues as referred to in the EU Taxonomy Regulation are defined as net revenues pursuant to IFRS as stated in the consolidated income statement and only referring to fully consolidated subsidiaries. Further information about revenues can be found under “Development of Revenues” from Page 86 of the Annual Report.

CapEx as referred to in the EU Taxonomy Regulation is calculated on a gross basis, i.e. without accounting for remeasurements, depreciation and amortization, or impairment losses. CapEx comprises investments in non-current intangible assets and in property, plant and equipment as presented in the consolidated statement of financial position. Further information about CapEx can be found under “Investments” from Page 93 of the Annual Report.

EU Taxonomy	Revenues	CapEx*	OpEx*
Total in Mio. EUR	429.0	19.4	56.8
taxonomy-aligned in EUR m	243.2	7.6	43.0
%	56.7 %	39.2 %	75.6 %
Taxonomy-eligible EUR m	243.2	7.6	43.0
%	56.7 %	39.2 %	75.6 %
not taxonomy-eligible in EUR m	185.8	11.8	13.8
%	43.3 %	60.8 %	24.4 %

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



OpEx as referred to in the EU Taxonomy Regulation includes expenses not eligible for capitalization that are presented in the consolidated income statement, such as expenses for research and development, building refurbishment measures, short-term leases, maintenance and repairs, and all other direct expenses resulting from the maintenance of property, plant and equipment in order to safeguard the operating capability of taxonomy-eligible assets. At AIXTRON, in the 2021 year under report this corresponded to research and development expenses (see “Operating Expenses” from Page 88 of the Annual Report). ■

Ω Innovations as key competitive factor

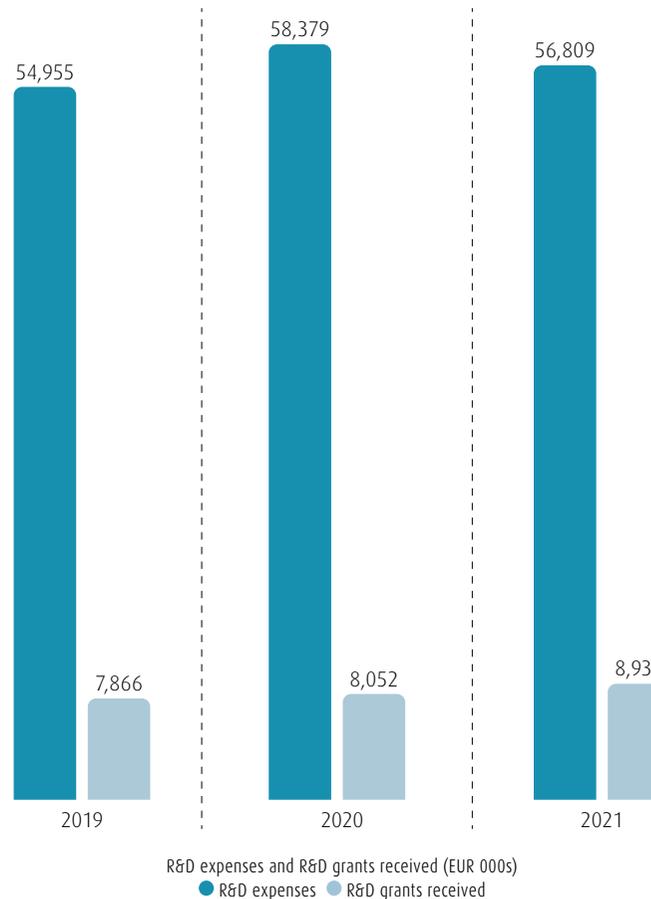
At our company, new technologies result from the targeted investments we make in our research and development. The R&D process begins in basic research with materials and then moves to processes and procedures. One decisive outcome of our research activities is our highly innovative product portfolio of technology solutions that have the potential to make the world faster, more sustainable, efficient and better. These enable us to offer better and more efficient products and solutions to our customers, while at the same time securing and extending our leading international position.

We cooperate with excellent universities, research centers, and industrial partners worldwide in order to implement sophisticated projects on national and international levels. These projects are developed on a basis of cooperation between equals. This way, we benefit from working with highly qualified partners while also being in demand ourselves as a partner for sophisticated projects.

In developing innovations for materials and processes, we work together very closely with our partners in joint projects that receive funding on national or European level. These close cooperations give rise to solutions that ultimately lead to marketable products.

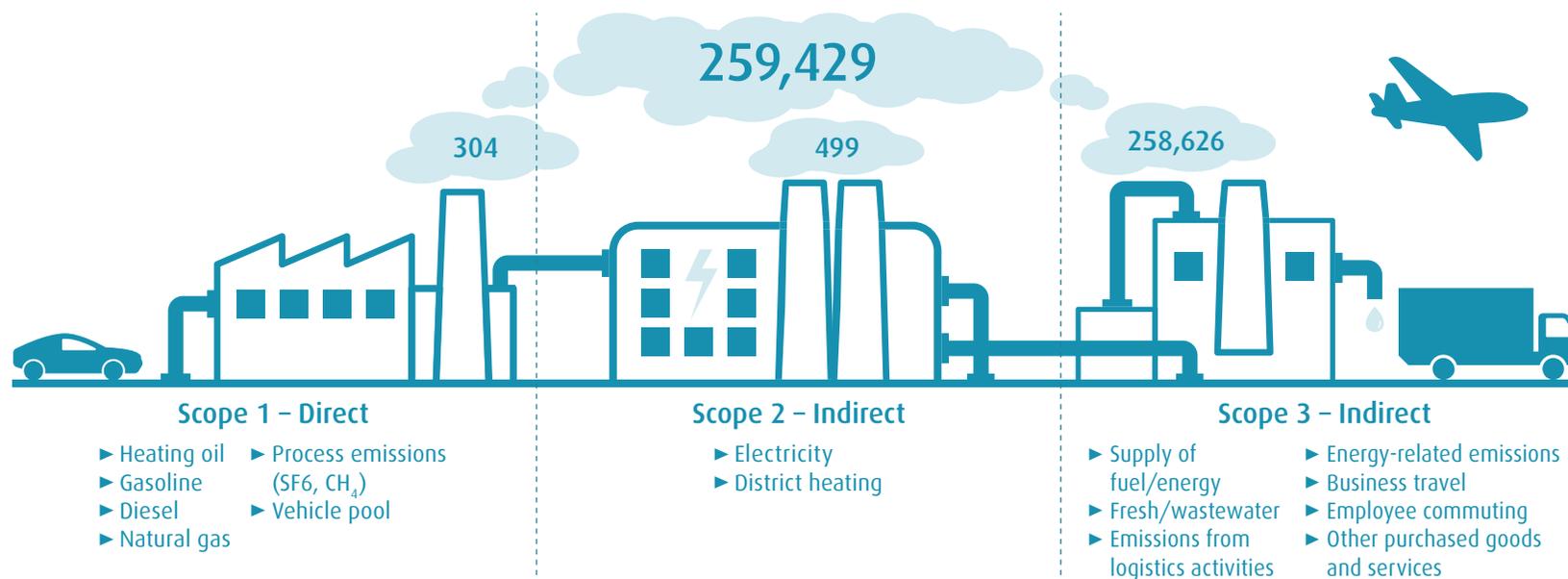
The “Research and Development” section of AIXTRON’s 2021 Annual Report provides several examples of research projects in which AIXTRON is involved. ■

Ω Research and development expenses and R&D grants received



Climate balance sheet

Having compiled a comprehensive climate balance sheet for the past year under report, we are for the first time able to report the total CO₂ emissions incurred in connection with our business activities. In 2021, we emitted a total of 259,429 tonnes of CO₂e*. Alongside the Scope 1 and 2 emissions already reported each year, this figure for the first time also includes all Scope 3 emissions relevant to our business activities. The Scope 3 emissions are not fully comparable with the 2020 figure as it is not possible to retrospectively calculate the emissions for logistics activities and waste. The main driver of the growth in Scope 3 emissions is the increase in other purchased goods and services, which rose from 119,364 tonnes of CO₂e in 2020 to 227,738 tonnes of CO₂e in 2021. This was due to the strong revenue growth in 2021 and additionally to the increase in inventories in preparation for further growth in 2022. A detailed overview of CO₂e emissions per category can be found at the end of this report. ■



Overview of CO₂ emissions (in tonnes of CO₂e) for the 2021 year under report
 * To standardize the climate impact of different greenhouse gases, we refer to CO₂ equivalents (CO₂e) as the unit of measurement.

Offsetting projects in Peru and Uganda

Since 2019, we have offset the unavoidable CO₂ emissions resulting from our business activities (Scope 2 and part of Scope 3 emissions) by supporting two climate protection projects which bear the highest standard of certification. We selected the projects due to their positive impact on the environment, climate, and local populations. The emissions saved are regularly reviewed and confirmed by independent experts. In the interests of sustainable development, we decided last year to extend the period for which we are supporting the two projects by a further three years to 2023. Further details about the projects we support can be found on our [website](#). ■

We support certified climate project projects

Protecting rainforests

The sustainable forestry project in the “Madre de Dios” region of Peru works with local residents to implement measures and initiatives to use the Amazon forest on a sustainable basis and to access alternative sources of income for the local population. ■



Energy-efficient and healthier stoves

In Uganda, we are supporting the distribution of energy-efficient stoves in private households. These enhanced stoves help families to save up to 50% of the fuel they use and thus to reduce the concentration of harmful substances in the air in their kitchens and living rooms. ■



Energy management and consumption key figures

Confirmation of our energy management certification

To provide a basis for our efforts to further reduce our own energy needs, we implemented an energy management standard meeting the requirements of ISO 50001:2011 at the German locations of AIXTRON SE many years ago already. Our successful conversion to the requirements of ISO 50001:2018 was confirmed in the recertification audit performed in 2020, which is valid until 2023. ■



Further development of award-winning energy management concept

At our German locations, we are continually working to improve our energy management systems. To this end, we are drawing on extensive evaluations that facilitate the targeted control and optimization of our systems and processes. To enhance these evaluations, we continued with the cloud-based dashboard concept in the 2021 year under report, in which we installed new meters in order to optimize the control technology at the energy management center.

These electricity meters, which now number more than 160 in total, are read and evaluated at 15-minute intervals. As well as recording the data, the system offers an extensive calculation, evaluation, and documentation tool. Moreover, it enables targeted measures to be taken to reduce CO₂ emissions and the success of these measures to be directly assessed. For this, we automatically generated a detailed report for the first time in the past year. ■



Electricity from renewable energy sources and photovoltaics

Since 2019, we have procured the electricity used at our European sites and in the USA exclusively from renewable energies. Furthermore, we installed a photovoltaics system at our Kaiserstrasse site many years ago already. All electricity generated by the system, which in 2021 amounted to 3,659 kWh (2020: 3,476 kWh), is fed into the electricity grid. ■

Practical examples

Building on our systematic approach to energy management, we have already initiated and implemented numerous projects and measures to sustainably reduce our energy consumption. The three most important projects implemented in the past year are provided as examples below. ■



Optimization of control technology at the energy management center at the Dornkaulstrasse site*

In cooperation with a nationwide company, we introduced monitoring in our energy management center in 2017 and began continually adjusting and optimizing our measurement and control technology. This project, which ran to the end of 2021, generated savings totaling around 42,000 kWh in its final year. ■



Optimization of control technology at the energy management center at the Kaiserstrasse site*

Here too, we cooperated with a nationwide company to continually adjust and optimize our measurement and control technology by working with permanent monitoring. The project generated savings of around 54,000 kWh in total last year. ■



Exchange of filters for our ventilation systems at the Dornkaulstrasse site

In the past year under report we replaced the filters in our ventilation systems with more efficient versions and thus saved 60,000 kWh in total (calculated over one year). ■



* In calculating our energy and CO₂ savings, we were assisted by external companies who provided us with technical advice based on their engineering skills and specialist expertise. All calculations have been based on a systematic and scientifically substantiated approach with specific assumptions for the individual calculations.

Energy saving target met for fourth consecutive year

We significantly increased our revenues in the past fiscal year, a development which was accompanied by higher energy requirements. Thanks to our various energy saving projects, however, we were able to prevent our energy consumption from increasing to the same extent as our business volumes. Energy consumption showed a slight increase of 2.9% in the past fiscal year.

Our success here confirms us in our course and motivates to go even further. Each year, we review our status quo and set ourselves ambitious new energy saving targets. It goes without saying that this is also an economic factor for us, as lower consumption also reduces our costs.

We are continually developing our energy efficiency enhancement measures further. Our targets refer above all to our R&D and production sites in Germany and the UK.

Despite the significant growth in business volumes, our electricity needs of 10,883,534 kWh in 2021 were significantly lower than in 2020 (11,672,526 kWh). The energy saving projects already referred to were the main driver of this positive development.

At 3,452,892 kWh in total, our consumption of natural gas and district heating rose significantly compared with 2020 (2,258,854 kWh). The main reason for this increase was that, due to coronavirus protection measures, the fresh-air share of overall ventilation systems had to be raised from 10% to 50%. Not only that:

Due to the high level of humidity in the past year (caused by frequent heavy rain), the heat registers used to dehumidify the air had to be operated far more often than usual. ■



Energy consumption & process emissions ^{Scope 1+2}

	Germany	UK	USA	China	Japan	South Korea	Taiwan	Total	
2021	Electricity (kWh)	9,850,302	838,739	30,869	24,977	30,755	85,179	22,713	10,883,534
	Natural gas (kWh)	1,326,842	---	---	---	---	---	---	1,326,842
	District heating (kWh)	2,126,050	---	---	---	---	---	---	2,126,050
	Sulfur hexafluoride (SF6) in kg	0.2	---	---	---	---	---	---	0.2
	Methane (CH4) in kg	0.7	---	---	---	---	---	---	0.7
	Total (kWh)/CO ₂ e in t	1,303,195 680.3	838,739 0	30,869 0	24,997 15.6	30,755 16.2	85,179 46.0	22,713 14.2	14,336,427 77.3*
2020	Electricity (kWh)	10,444,472	972,946	25,607	22,883	38,531	102,497	65,590	11,672,526
	Natural gas (kWh)	858,594	---	---	---	---	---	---	858,594
	District heating (kWh)	1,400,260	---	---	---	---	---	---	1,400,260
	Sulfur hexafluoride (SF6) in kg	4.8	---	---	---	---	---	---	4.8
	Total (kWh)/CO ₂ e in t	12,703,281 557.0	972,946 0	25,607 0	22,883 14.3	38,531 19.2	102,497 55.3	65,590 41.1	13,931,335 687.0*

Energy consumption and process emissions (per- and polyfluoride chemicals sulfur hexafluoride (SF6) and methane (CH4)) at the AIXTRON Group. The reduction in South Korea is due to the discontinuation of APEVA's activities in the year under report. The sharp reduction in Taiwan is due to political measures in connection with the coronavirus pandemic: on two occasions, colleagues worked from home over longer periods.

* The figure stated includes heating, process emissions and electricity and district heating (Scopes 1+2) but does not include the vehicle pool.

Waste management

In producing its equipment, AIXTRON uses numerous materials whose purchase, transport, use, and disposal have an impact on people and the environment. This should be reduced to a minimum. Our top priority is to avoid waste arising in the first place, i.e. to minimize the materials consumed and resultant waste volumes. In our waste management, one factor that is therefore important to us – depending on the type of waste and recycling method involved – is to ensure separation and safe disposal of waste. The waste volumes incurred and then sent for recycling or disposal are recorded and classified on a local basis, with a distinction made between hazardous and non-hazardous waste. Wherever possible, residual materials are reused. Waste is reused in terms of its materials or incinerated. Where this is not possible, the waste is correctly disposed.

Disposal of hazardous waste

Hazardous substances and materials are used in the processing chambers of our equipment, and in some cases in the pipes as well. These substances and materials have to be disposed of separately. During disposal, the individual components and modules are collected in special containers that are secured in such a way that the hazardous materials cannot escape. At our European sites, we work with specialist local companies that dispose of the waste appropriately at regular intervals. The materials, some of which highly valuable (e.g. stainless steel), are recycled wherever possible and subsequently reused in the interests of a recycling-based economy. For exhaust gas cleaning, we rely wherever possible on catalytic cleaning processes which largely avoid the incurrence of

hazardous waste. Our exhaust gas cleaning system avoids all wet-chemical processes, which means that no contaminated wastewater is incurred anywhere in our operations.

The slight increase in **hazardous waste** was due to a rise in the necessary number of test runs, as well as to the use of an improved and more precise calculation methodology at our location in Cambridge (UK).

The higher volume of **non-hazardous waste** in Herzogenrath (D) and Cambridge (UK) was due to increased production volumes. This increase was partly offset by the reduction in waste volumes in the Asia and USA regions.

	Hazardous waste (kg)		Non-hazardous waste (kg)	
	2021	2020	2021	2020
Germany	1,972	2,183	62,380	47,530
UK	362	50	42,852	26,573
Asia/USA	0	0	21,504	32,468
Total	2,334	2,233	126,736	106,571

Hazardous and non-hazardous waste by region.

Mobility

Given the complexity of our equipment, we have to provide our customers with targeted advice on location. Our presence is in some cases also required to develop analyzer systems together and to support customers in optimizing their use of the equipment or in training their staff. This generally requires our employees to travel. Our customers are mostly located outside Germany, a factor which influences the number of kilometers traveled and the means of transport selected. ■

E-mobility

We have a total of 15 electric car charging points and 24 e-bike battery chargers on our company premises. In the year 2021 year under report, further colleagues decided to use our battery charging infrastructure, as a result of which the number of participants (including the three Executive Board members) rose to 35 (2020: 16).

It is pleasing to note that many colleagues also come to work by bike and use the covered bicycle stands specially built for this purpose. ■



Flights Scope 3

Given that we sell our equipment and technologies on a worldwide basis, it is not always possible to avoid air travel. We nevertheless always try to select other options wherever possible. For intercontinental journeys, however, flying is the only realistic option in day-to-day business.

A total of 1,750 bookings were made in the 2021 year under report (2020: 1,832), with a total of 3,646,072 kilometers flown (2020: 4,683,159 km). This corresponds to a further year-on-year reduction of more than 22% (2020: 68%) and corresponded to emissions of 1,237 tonnes of CO₂e (2020: 1,589 tonnes of CO₂e).

This further reduction was once again due to the political regulations and measures taken in connection with the coronavirus pandemic and the resultant restrictions on travel. Video conferences were substituted for many on-site meetings once again in the 2021 year under report. ■

Company vehicles Scope 1

In 2021, our company car pool comprised 12 cars (2020: 15), of which three powered by gasoline, three by diesel, five with hybrid drives and one purely electric vehicle. Consistent with our internal policy, since 2020 all new purchases of vehicles for the company pool have involved hybrid or electric cars. We are also endeavoring to expand the small to medium-sized vehicle classes in order to reduce the fuel consumed by the car pool thanks to the lower weight involved. A total of 216,412 km was traveled in 2021 (2020: 179,702 km), corresponding to an increase of 20%. ■

Rental cars, taxi bookings, private car journeys Scope 3

In the 2021 year under report, our employees used rental cars, taxis, or their own private cars to drive a total of 1,378,715 km. As the journeys made by employees in their private cars and taxis have been included in the calculation for the first time in the year under report, the figure stated is not comparable with the previous year. ■

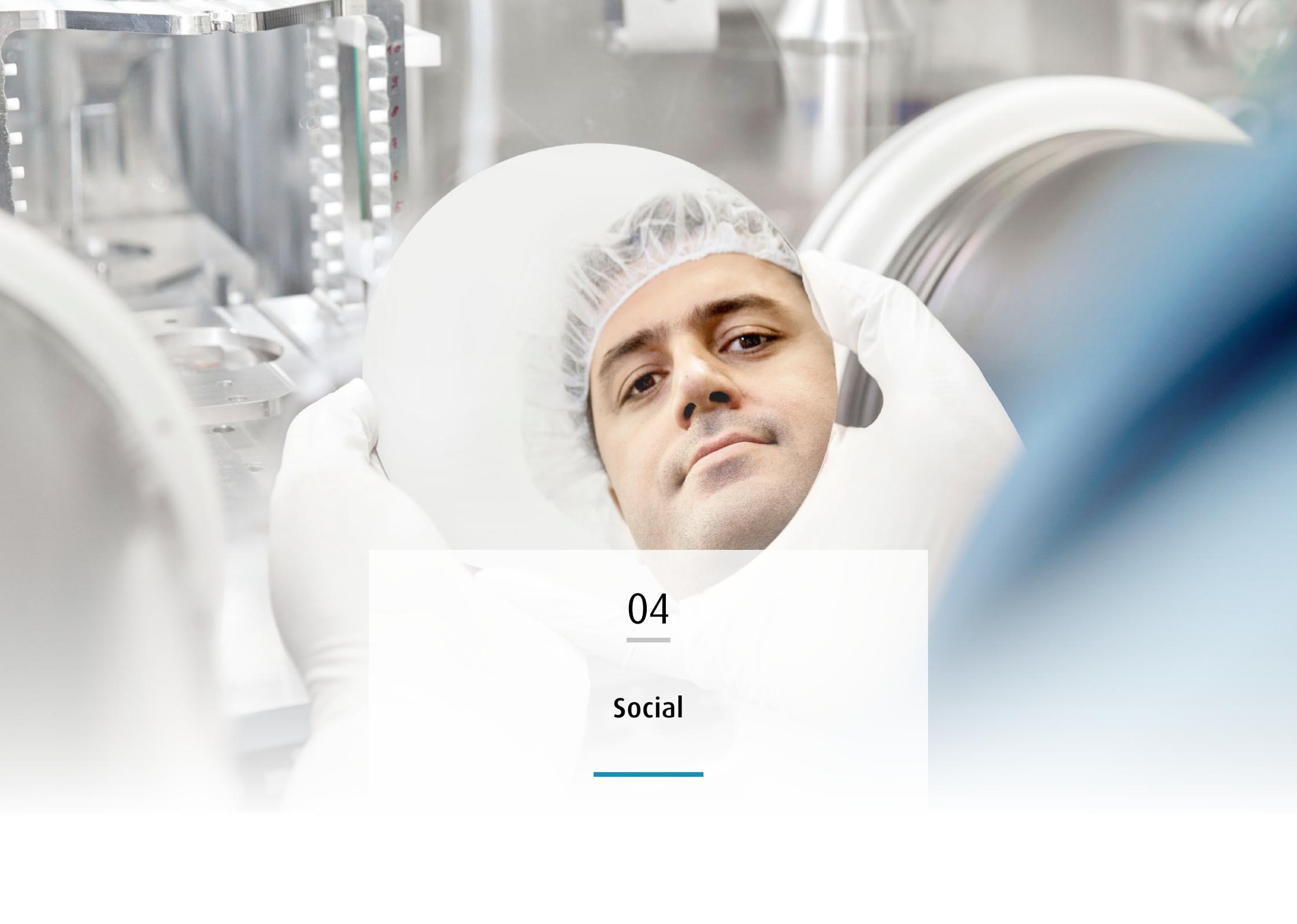
Rail travel Scope 3

We encourage our staff to undertake as many business trips as possible by train. This is reflected in a threefold increase in the distance traveled by train. In 2020, our employees traveled a total of 199,714 km by train. In the 2021 year under report, this already surged to 643,259 km, corresponding to an increase of 18%. ■

Mobility key figures

		2021	2020
Flights	number	1,750	1,832
	Total kilometers traveled	3,646,072	4,683,159
Company vehicles	number	12	15
	Total kilometers traveled	216,412	179,702
Rental cars, taxi bookings, private cars	number	8,339*	502
	Total kilometers traveled	1,378,715*	359,079
Rail journey	number	1,547	867
	Total kilometers traveled	643,259	199,714

* Private car journeys made by employees and journeys by taxi have been included in the calculation for the first time. The figures stated are therefore not directly comparable with the previous year's figures.

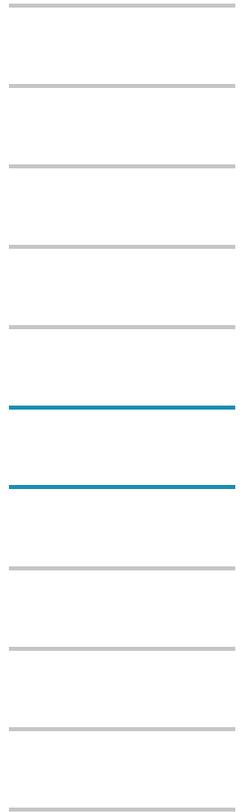


04

Social

Our position as a global leader is based on our highly innovative technologies. We owe these mostly to the skills and expertise of our employees, as well as to their great commitment and willingness to perform.

Attracting suitably talented employees enables us to secure our power of innovation. Well-structured HR activities and working conditions that are safe, healthy, and employee-friendly – these are essential factors. After all, to achieve peak performance in the long term the company needs satisfied and dedicated employees. ■



Occupational health and safety

“Zero tolerance for accidents” – that is the principle underlying our approach to work safety. We therefore apply a prevention-based approach. When it comes to occupational health and safety, our top priority is always to avoid all potential risks of injury. For this reason, we investigate all work accidents in order to detect and permanently remove any potential risks in our technical and organizational processes. Occupational health and safety are a particular responsibility of our managers. We endeavor to ensure that all employees see our targets and measures for occupational health and safety as part of their own responsibilities and support these accordingly.

Our understanding of occupational health and safety is reflected in the consistent and targeted manner in which we implemented suitable measures within the company to avoid infections on the part of our employees during the pandemic. We based these measures on the recommendations made by the Federal and State Governments and on those issued by the Robert Koch Institute. ■



“Safety First!” – thanks to our Health and Safety Committee

The members of the Health and Safety Committee (ASA), which comprises a representative of the management, two members of the Works Council, the company physician, safety specialists, and the safety officers, hold meetings each quarter. These meetings are also attended by members of the severely disabled representation group, as well as by representatives of the Human Resources and Compliance department and from Facility Management.

We instruct all our employees on topics relating to occupational health and safety protection on a regular basis, and at least once a year, and also include factors of current relevance, such as the protective measures required during the coronavirus pandemic.

In the ASA group, three employees have been appointed as internal safety specialists. Together with the company physician, they are responsible for advising managers, the Works Council and employees, as well as for training safety officers.

The ASA is assisted in its activities by a total of 137 company first-aiders at our sites in Germany (2020: 111). ■

Employee health and safety

A total of 43 working days were lost due to accidents in 2021 (2020: 18). There was one accident on the way to or from work in 2021 (2020: 2) and a total of 14 injuries were entered in the first-aid log (2020: 18). Thankfully, as in previous years none of the accidents that took place in 2021 had fatal consequences.

Around 28% of AIXTRON's employees work in production and around 32% in research, both areas in which the highest safety standards apply and all actions, even unconscious moves, have to be safe and correct. This being so, we attach great importance to providing regular instructions and optimal protective equipment.

Maintaining a company integration management system to enable employees to return to work after extended periods of sickness or reintegrate them after accidents is for us not just a legal obligation – it is also a self-evident part of our efforts to uphold the working capacity and employability of our staff. No penalties or fines were imposed on AIXTRON due to breaches of occupational safety requirements in the period under report. ■

	2021	2020	2019
LTIFR = Lost Time Injury Frequency Rate *	0.146	-	-
IR = Injury Rate **	2.049	-	-
Accidents at work ***	2	5	5
Working days lost (work-related sickness and accidents) ***	43	18	230
Number of injuries ***	14	18	29
Accidents on way to/from work	1	2	3
Work-related sickness	0	0	0

* LTIFR = Lost Time Injury Frequency Rate; number of accidents at work with more than one working day lost as a proportion of the number of hours of work actually performed in the period under report, normed at two hundred thousand hours of work. This key figure was calculated for the first time for the 2021 year under report. It is therefore not possible to provide comparative figures for previous years.

** IR = Injury Rate; number of injuries / hours of work, normed at two hundred thousand hours of work. This key figure was calculated for the first time for the 2021 year under report. It is therefore not possible to provide comparative figures for previous years.

*** Working days lost due to work-related sickness and accidents (excluding accidents on way to/from work) and number of work-related injuries, accidents on way to/from work, and work-related sickness.

Health protection is a matter for the management

We accord the utmost priority to the health and wellbeing of our employees. In our health program we provide employees with access to various preventative measures, such as regular and ongoing occupational medical examinations, or flu and coronavirus vaccinations.

We are aware that working conditions, a trusting and constructive environment, and a cooperative management style have a major impact on employees' wellbeing and health. To account for this, we attach great importance to a culture of constructive feedback based on partnership.

Our employees receive encouragement from their managers to take responsibility for themselves and their colleagues. Moreover, when planning work duties we provide employees with the greatest possible flexibility in combining their private and working lives wherever operating requirements permit. ■



Response to coronavirus pandemic continues to require flexibility and consistent hygiene

The measures taken by the government in connection with the coronavirus pandemic required further adjustments to be made to work routines, or existing adjustments to be maintained, once again in 2021. In close cooperation with employee representatives and the company's health and safety officers, all prescribed and necessary measures to protect our workforce were implemented swiftly and with due care.

Where activities could be performed from home, all employees were encouraged to work from home in the period from March and June and then once again from November. The introduction of shift-based work in production departments proved to be effective in reducing the numbers of employees required to be present at the same time in these areas.

Thanks to the responsible conduct of our employees at work and in their leisure time, we largely escaped infections and were able to uphold normal business operations. ■

Ω Diversity and equal opportunities

For us, diversity does not just mean ensuring equality of opportunity, but is a way of boosting our innovative strength and competitiveness. For the AIXTRON Group, a workforce made up of people from different cultures, an appropriate gender balance, and a balanced age structure are an active part of our corporate culture.

AIXTRON is explicitly committed to equality of opportunity and promotes cooperation in mixed teams. This way, we are able to understand the needs of our international customers more closely and can assess potential solutions from a variety of perspectives.

Worldwide, AIXTRON employed 739 people from 42 nations in 2021 (2020: 745 people from 35 nations). Overall, our male employees came from a total of 34 nations, while our female employees came from 23 nations (2020: men: 26, women: 20 nations).

Despite various efforts to increase the share of female employees, the ratio is not balanced. As of December 31, 2021, men made up 80% of our workforce, while women accounted for 20%. ■



Flexible work routine, employee recruitment & retention

Efficient and digital processes

We have digitalized an ever greater share of our processes in recent years. The measures taken by the government in connection with the coronavirus pandemic have further accelerated this trend in the past two years.

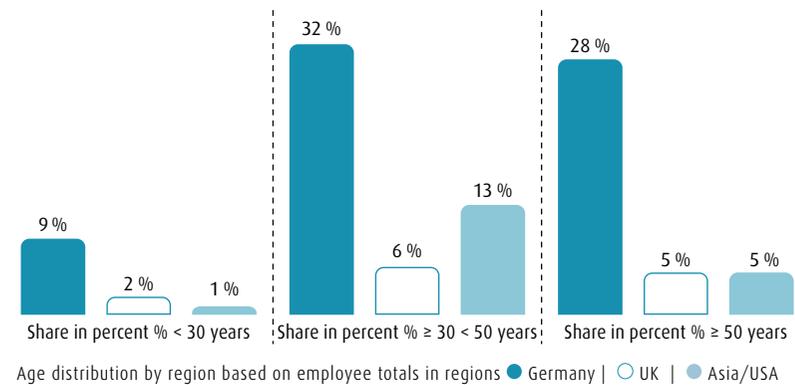
Mobile workplaces have been offered wherever operating requirements permit and employees have been enabled to work from home.

Due to travel restrictions, we converted part of our customer support to digital solutions based in some cases on augmented reality. A further current development focus involves digitalizing our processes with the assistance of efficient SAP tools.

Moreover, within the shortest of timeframes we also installed a digital infrastructure to ensure compliance with the legal requirements introduced to combat the pandemic. These relate to the so-called “3G rule”, which only permits employees who are vaccinated, officially recovered, or newly tested to come to work.

Not only that, we also pressed further ahead with introducing Microsoft 365. MS Teams has become ever more firmly established in the company’s internal and external communications. This was particularly important at times when staff were required to work on a mobile basis, as it helped to maintain and promote exchange between colleagues. ■

Age distribution by region based on employee totals in regions



Transparent communications

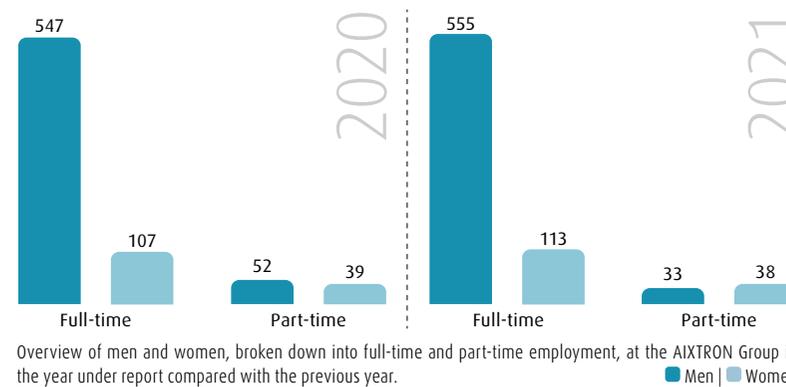
To promote effective cooperation, we accord great importance to communicating openly and on a basis of partnership. This also involves providing regular and transparent information to the whole workforce. In digital staff meetings held each quarter, the Executive Board informs all colleagues worldwide about the company’s business performance, customer wishes, market developments, and new company agreements. Recordings of these events mean that colleagues who are unable to watch them live can also keep track of developments. Furthermore, all relevant information is promptly published in suitable media channels. Via the intranet, we regularly provide information about current topics and the latest developments at the company. A project involving targeted staff surveys on a wide variety of relevant topics was also initiated in 2020. Work then began in the 2021 year under report on processing the results of the staff survey, not least in connection with the Leadership Development Program. ■

		2021		2020	
		Full-time	Part-time	Full-time	Part-time
Germany	Men	375	29	382	31
	Women	74	33	67	33
UK	Men	76	2	74	2
	Women	7	5	6	5
Asia/ USA	Men	104	2	91	19
	Women	32	0	34	1
Total	Men	555	33	547	52
	Women	113	38	107	39
Total (headcount)		739		745	
Total (FTE)		718		728	

Employee totals, broken down by type of employment relationship (full and part time) at the end of the year.

Flexible work models and leave

Today’s world of work places many demands in employees and their families. We therefore make every effort to ensure, where possible, that the company’s business interests are compatible with the private and family needs of our employees. The coronavirus pandemic in particular has promoted mobile work and video calls.



Overview of men and women, broken down into full-time and part-time employment, at the AIXTRON Group in the year under report compared with the previous year. ■ Men | ■ Women

Since 2020, we have offered mobile workplaces and flexible working hours to our employees. Since 2020, employees have been allowed to perform up to 20% of their weekly working hours from home, with no application being made of this restriction during the coronavirus pandemic. Using individual time accounts, each employee can individually design and largely determine their working hours in accordance with operating requirements and their personal needs. We also enable our employees to opt for individually tailored part-time employment. In 2021, a total of 71 employees were employed on a part-time basis (2020: 91), of which 38 women (2020: 39) and 33 men (2020: 52).

At our sites around the world, we also support the desire on the part of parents to take parental leave after the birth of their children. A total of 734 employees were entitled to parental leave (2020: 745). In Germany and the UK a total of 19 employees drew on this option (2020: 15). We are pleased to report that in the 2021 year under report, 16 of the 19 employees returned to work after their parental leave.

	Employees		Employees returning to work after parental leave	
	2021	2020	2021	2020
Europe	19	15	16	15
Asia / USA	0	0	0	0

Since 2012, we have supported a nearby childcare facility (TP Hasen) with an annual donation of EUR 1,800. This is intended to help staff and parents at the Herzogenrath site in their efforts to find a childcare facility close to their workplace. ■

Temporary employment and contracts

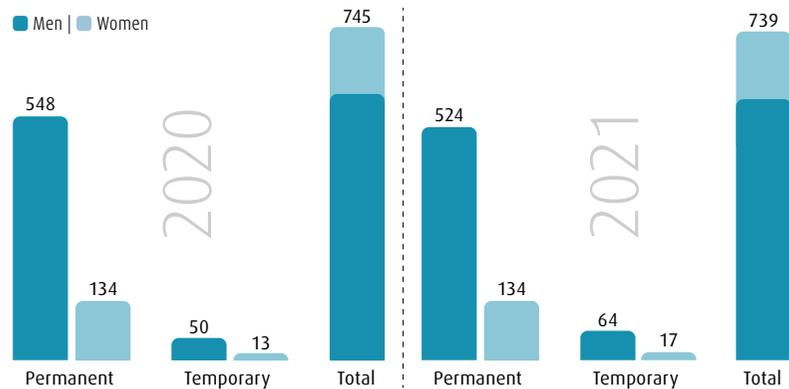
Given the great importance of specialist skills and expertise in its activities, AIXTRON has a strong interest in retaining its employees at the company on a long-term basis. At the same time, AIXTRON's products are subject to fluctuations in demand, some of which substantial. To have sufficient flexibility in responding to these fluctuations, we also draw on temporary contracts or work with established engineering service providers and temporary employment agencies.

		2021		2020	
		Permanent	Temporary	Permanent	Temporary
Germany	Men	372	32	381	31
	Women	93	14	89	12
UK	Men	76	2	76	0
	Women	12	0	11	0
Asia/USA	Men	76	30	91	19
	Women	29	3	34	1
Total	Men	524	64	548	50
	Women	134	17	134	13
Total (headcount)		739		745	
Total (FTE)		718		728	

Breakdown by gender and region of permanent and temporary employees at the AIXTRON Group at the end of the year

At our German locations, we have determined the relevant procedures in a company agreement and additionally committed ourselves on a global basis to the "equal pay" principle and compliance with the "equal treatment" principle for temporary and permanent employees.

All employees therefore benefit from the grants provided to use our canteen. It also goes without saying that all our employees are equally welcome to attend company events such as employee and Works Council meetings and summer and Christmas parties.



Overview of men and women in temporary and permanent employment at the AIXTRON Group at the end of the year.

In 2021, AIXTRON had an annual average total of just under 74 temporary employees (2020: 38). This figure thus almost doubled compared with the previous year. Of these, 64 temporary employees worked for us in Germany (2020: 30), 9 in the UK (2020: 5), and 1 in Asia (2020: 3). Of 739 employees, 658 had permanent contracts (2020: 682). A total of 81 employees had temporary contracts in the year under report (2020: 63), corresponding to a share of just under 11% of the overall workforce (2020: 8.5%). Of these, 17 were women (2020: 13) and 64 men (2020: 50). ■

Ω Attracting and retaining highly qualified staff

AIXTRON operates in a rapidly changing business climate and is dependent on highly qualified and motivated specialist and management staff. Being an attractive employer is an important factor for us if we are to attract and retain the best talents and employees.

The development in employee totals in 2021 was shaped by the reduction in the number of employees due to the restructuring of the APEVA Group, which was in turn countered by a significant increase in the number of employees at AIXTRON SE. In the 2021 year under report, we thus attracted a total of 90 employees (2020: 102), particularly in Germany, Asia, and the USA. These included 21 women (2020: 25) and 69 men (2020: 77). The overall personnel turnover rate over the same period amounted to 13.3% (2020: 6.6%). One key reason for the increase in this rate in the year under report was the aforementioned reduction in the number of positions at APEVA in Germany and Korea.

In our selection and hiring process, we attach great importance to transparency and equal opportunities. As a general rule, we offer permanent employment contracts to new colleagues. We naturally comply at all times with national legal requirements concerning the protection of employees' rights, company-internal agreements, and statutory notification deadlines.

One core element of our external presence as an employer is our careers website, where we provide interested parties with extensive information and motivate them to apply. Based on a specific requirements profile, AIXTRON selects

its employees in accordance with their specialist and personal qualifications and their previous experience. Due to the restrictions resulting from the coronavirus pandemic, we once again held numerous online interviews in 2021 and only invited applicants to meetings on site once the application process had reached an advanced stage.

	< 30 years	Share in %	≥ 30 < 50 years	Share in %	≥ 50 years	Share in %	Men Total	Women Total	
2021	Germany	26	29 %	26	29 %	5	6 %	40	17
	United Kingdom	5	5 %	4	4 %	3	3 %	10	2
	Asia / USA	6	7 %	15	17 %	0	0 %	19	2
2020	Germany	20	27 %	44	59 %	10	14 %	58	16
	United Kingdom	3	27 %	5	45 %	3	27 %	10	1
	Asia / USA	2	20 %	7	70 %	1	10 %	9	1

Age structure of newly hired employees at the AIXTRON Group. A total of 90 employees were newly hired at the AIXTRON Group in 2021, of which 21 women and 69 men (2020: 102; 25 women and 77 men).

	2021		2020	
	non-local	local	non-local	local
Germany	100 %	0 %	80 %	20 %
United Kingdom	0 %	0 %	0 %	100 %
Asia / USA	0 %	100 %	6 %	94 %

Share of management staff hired locally and non-locally at the AIXTRON Group.

One important aspect for us is to integrate new employees quickly and well into our processes and their new group of colleagues. The newly structured on-boarding process, which was implemented in 2019, is now actively lived at the company.

	< 30 years		≥ 30 < 50 years		≥ 50 years		Turnover rate	
	2021	2020	2021	2020	2021	2020	2021	2020
Germany	3	2	34	21	18	2	10.8 %	4.9 %
United Kingdom	3	2	5	4	6	4	15.6 %	11.5 %
Asia / USA	6	0	20	14	3	0	21.0 %	9.7 %

Breakdown of employees leaving the company by age group and personnel turnover rate as a proportion of employee totals for each region. The overall personnel turnover rate for the AIXTRON Group amounted to 13.3% in the 2021 year under report (2020: 6.6%). The increase is attributable to the restructuring implemented at APEVA due to the economic expectations placed in this subsidiary not being met.

Here, the relevant specialist departments act in advance to provide a fixed structure with topics for individual discussion and personal meetings and formulate these plans in writing. This is intended to ensure that our new colleagues very quickly feel at home at our company and are swiftly able to find their way round and become integrated in their new environment.

Further information about employee selection can be found in the Group Management Report in the "Employees" section of the "Business Processes" chapter. ■



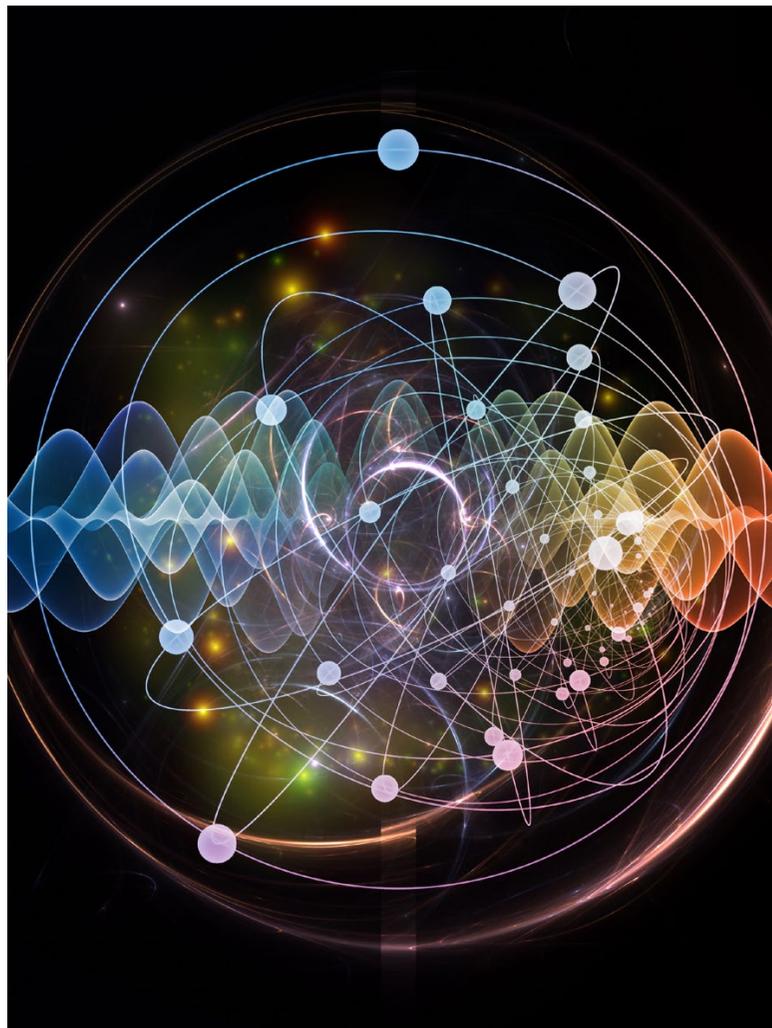
AIXTRON supports next-generation scientists

As a partner in QUANTIMONY, the new international doctorate program, we are supporting the training of upcoming scientists while at the same time researching the forward-looking field of quantum technologies using the chemical element antimony (Sb). The EU's funding program QUANTIMONY ("Innovative Training Network in Quantum Semiconductor Technologies Exploiting Antimony") is an innovative network for doctoral studies and offers high-quality training for 14 next-generation researchers.



The network comprises 11 internationally renowned research teams and is supported by 12 strong partner organizations from Europe, the USA, Taiwan, and Brazil.

QUANTIMONY is intended to assist in bringing antimony (Sb) compounds to serial production using MOCVD technology and subsequently use in computers and memories, telecommunications, cars, robotics, and numerous other applications going beyond existing applications in the fields of aviation, space travel, and security. Antimony-based quantum technologies are an important forward-looking field and have a highly promising range of potential applications. ■



Personnel development, training and education

We see life-long learning on the part of our employees and our expertise in the specialist fields in which we operate as essential for maintaining our position as a technology leader in the long term. We therefore accord great importance to accompanying our staff competently and as partners, supporting them individually, and challenging them with forward-looking projects. Ongoing comparisons with the company's needs are just as important as the measures taken by employees to actively shape their own development.

Year	Total hours	Number of employees	Average hours per employee	Number of hours for men	Average hours for men	Number of hours for women	Average hours for women
2021	9,822	739	13.3	7,331	12.5	2,491	16.5
2020	6,273	745	8.4	4,981	8.3	1,292	8.9

Overview of average training hours at the AIXTRON Group with breakdown by men and women

As part of our company-wide personnel development program, we provide our employees with numerous measures for ongoing training, as well as individual training measures and development opportunities. One core component of this approach is the in-house AIXTRON Academy, which offers a wide range of training measures, such as discussion, time, and stress management skills, as well as topic-specific content.

Furthermore, we promote the development of executives and employees with external individual coaching and internal coaching programs. We are also increasingly encouraging employees to share experiences and ideas with each other.

Since 2013, personnel development and career planning have been based on the annual employee appraisal meeting, at which the employee's training needs for their current and future roles are identified and the employee's personal interests and wishes are determined. Based on a company-wide standard, managers and employees can give each other feedback and discuss measures to enhance their cooperation, where appropriate, and to promote the employee's strengths. A further major component of the employee appraisal meeting is the agreement of development goals.

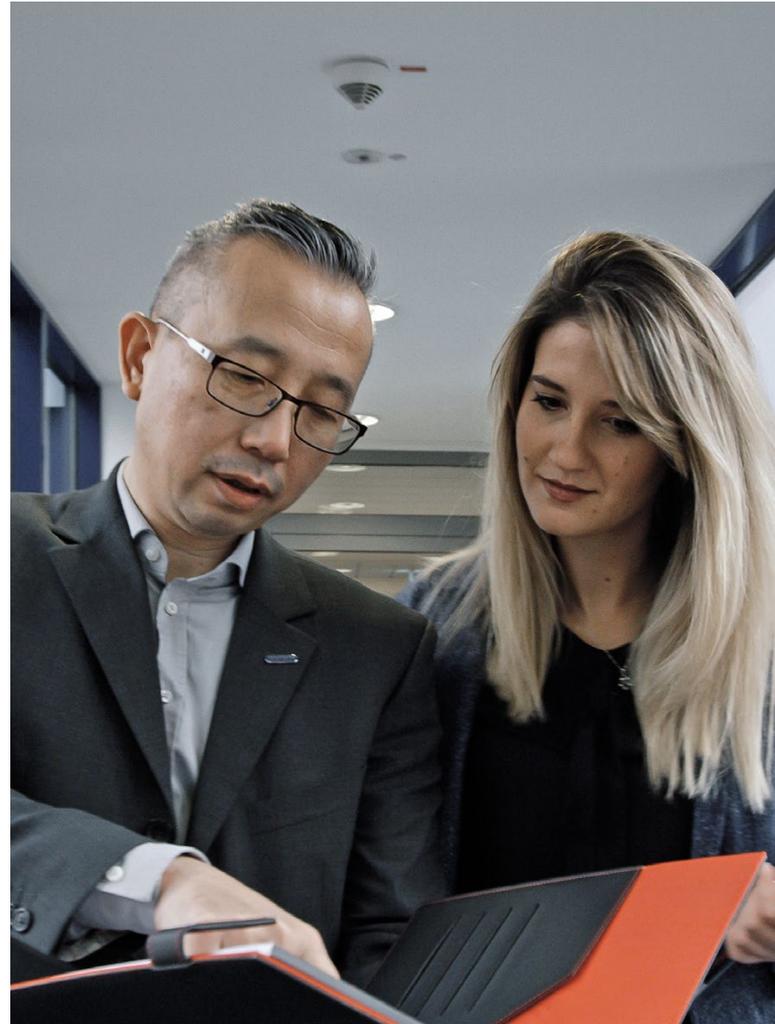
In 2021, AIXTRON invested an average of EUR 472 per employee in personnel development and training (2020: EUR 324). On average, each employee trained for more than 13 hours in the 2021 year under report (2020: 8). ■

Offering training to secure the next generation of staff

We see the training we offer to the next generation of staff in technical and commercial vocations and in dual study programs not only as part of our responsibility to society, but also as the basis for our company's ongoing success. This way, we give young people the opportunity to prove themselves, to develop their strengths, and to contribute their ideas. We are proud that AIXTRON trainees have repeatedly been singled out by the Aachen Chamber of Industry and Commerce in recognition of their outstanding performance.

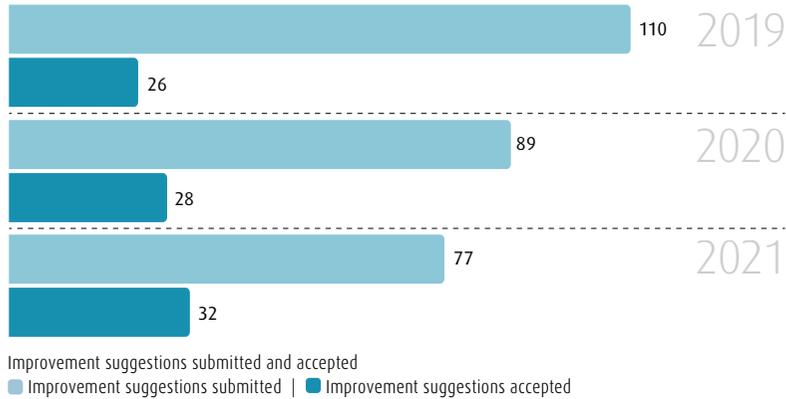
In fiscal year 2021, we employed a total of 16 trainees and students in dual study programs in Germany and the UK (2020: 18). It is important to us to offer young people a perspective upon the successful completion of their training.

Consistent with this, in recent years AIXTRON has accepted all of the trainees and dual study program students wishing to remain at the company. To this end, a corresponding agreement has also been reached with the Works Council at the Herzogenrath location. ■

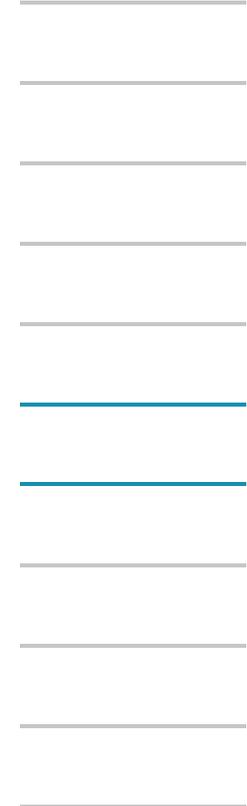


Innovation management

A structured working environment characterized by well-planned daily processes gives rise to new ideas and wishes that are sometimes not implemented or shared throughout the company. We would nevertheless like to make these ideas available to everyone and show our appreciation. In 2015, we therefore established a company suggestion scheme based on uniform principles worldwide as part of our innovation management process.



We encourage our employees to submit their ideas on how to improve processes, save costs, enhance products, etc. If the suggestions are accepted, then the company pays a reward to the employee. This year, a total of 77 suggestions were submitted, of which 32 were accepted. Since the scheme was introduced, the number of improvement suggestions submitted has been pleasingly high. Since 2015, we have acknowledged and rewarded the suggestions thereby submitted at a consistently high level. ■



Regional and social commitment

We see our company as part of society and, consistent with this, also aim to meet our responsibility towards society. For this reason, we have for many years promoted welfare projects, supported the voluntary commitment shown by our employees in the annual company run, and provided school pupils and students with the opportunity to gain insights into our company and form ideas about their own future careers. ■

Promotion of science, education, and career development

Supporting young people in science, education, and their career development is important to us. Since 2017, we have therefore cultivated a long-term cooperation with Einhard-Gymnasium, a high school in Aachen. By offering presentations, company tours, and internships, we also provide school pupils and students with the opportunity to gain insights into the various career options on offer at our technology company.

As a supporting member in the Industry and Business Workgroup (AIW) of the German Physics Society (DPG), we have also offered the “Day on Site” for many years now. Regrettably, due to coronavirus-related restrictions, this could not take place in 2021. ■



Cooperation with Einhard-Gymnasium in Aachen

Since 2017, a learning partnership has been in place between AIXTRON and Einhard-Gymnasium, a high school in Aachen. Within the “KURS” initiative (cooperation network of companies and schools in the region), these partnerships give schools the opportunity to provide their pupils with vivid and tangible examples of how business actually works by reference to a specific partner company. At the same time, companies have the chance to present themselves as employers and “good neighbors”.

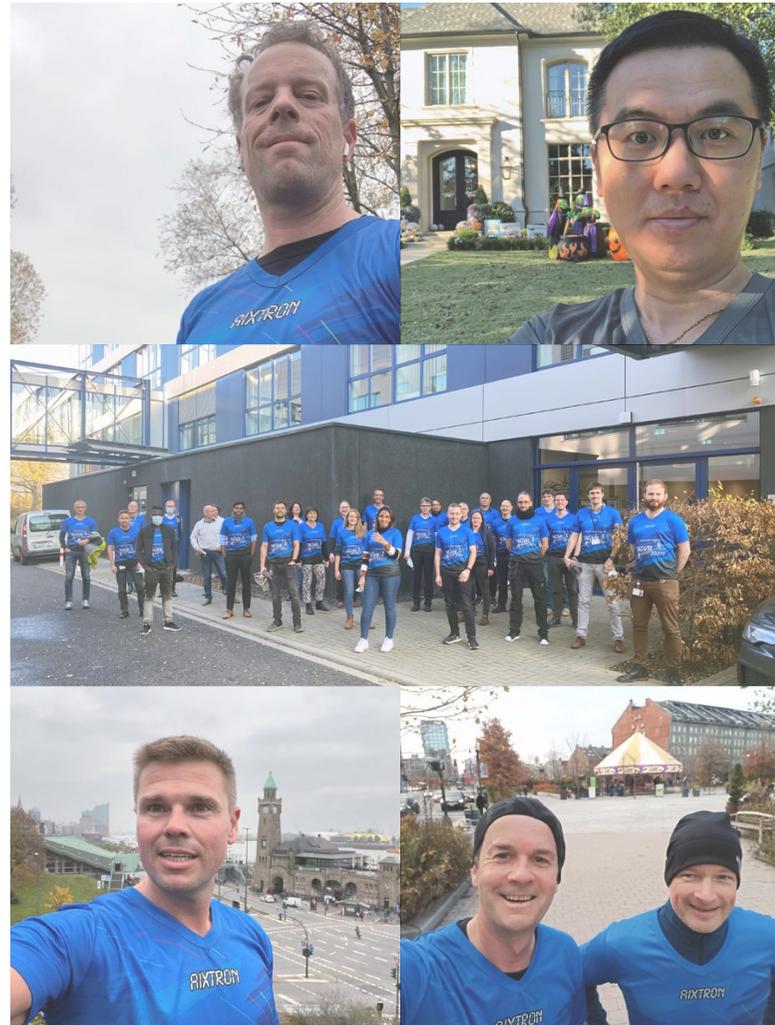
Examples of the opportunities given to pupils include the “Vocation Information Days” and the “Girls and Boys Day”, where pupils visit the company and have the chance to talk to our trainees. Here, the young people share their experiences of careers choices and find out more about vocational training and the resultant career opportunities at AIXTRON. Moreover, the advantages and disadvantages of dual training and study programs as an alternative to college study are presented and a selection process is simulated in an assessment center. In “Road to Jobs”, another regular event, we provide the boys and girls with detailed explanations of the training vocations on offer at AIXTRON and are on hand to answer their individual questions. ■

Second “AIXTRON Global Virtual Run”

Since 2011, we have taken part in the annual Aachen Company Run and have also repeatedly participated in the “Chariots of Fire” relay race in Cambridge. We support the motivation shown by our employees to do something for their health and cover the entry fees, which then benefit charities in the region. Due to the measures taken by the Federal and State Governments to contain the coronavirus pandemic, however, it was once again not possible for these events to take place in the 2021 year under report.

In the past 2021 year under report, we successfully held our global virtual company run for the second time. This is becoming ever more popular. While a total of 116 employees took part in the first run, in the year under report this figure rose to 176 employees from all AIXTRON locations. This means that 20% of all employees participated in the “2nd AIXTRON Global Virtual Run”.

Participants were free to decide where and when they would run in the period from November 1 to 21, 2021, as well as whether they would run alone or with others. Aged between 19 and 60, the runners could also opt for one of three distances (5, 10 and 15 kilometers). The runners then documented their timings and the distance chosen with the help of customary digital tracking apps or tracking devices. ■



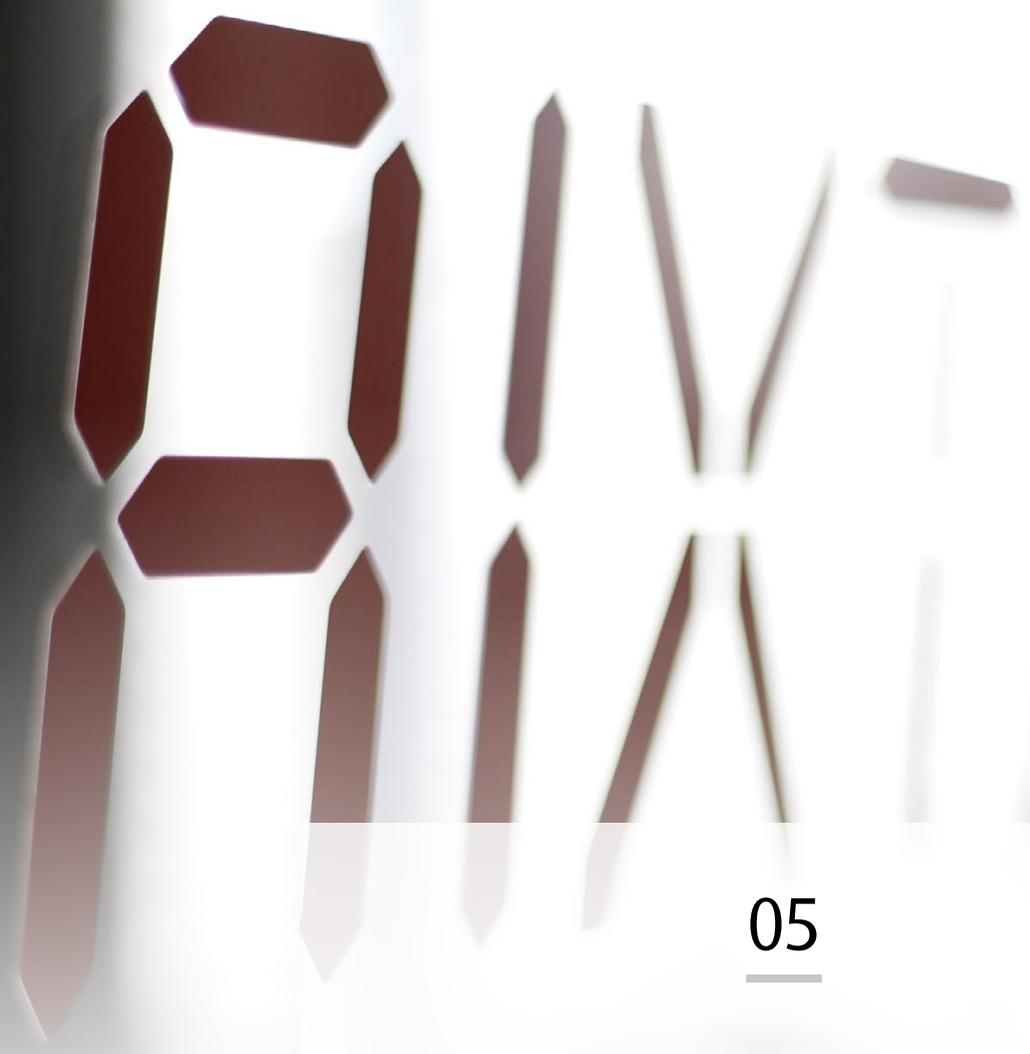
AIXTRON helps

In all, the participants ran a total of around 1,500 kilometers. Given our offer to donate EUR 2 for each kilometer run, this led to a total donation of EUR 3,000. This amount was transferred in January 2020 to “Wings for Life”, an officially recognized charitable foundation for bone marrow research which has set itself the goal of finding ways to heal paraplegia.

Parts of Germany witnessed floods on an unprecedented scale in July 2021. In response, we donated EUR 50,000 to the “Menschen helfen Menschen” charity. The flood left its mark not only on the Ahr Valley, but also on towns and villages in our own region. Many people were severely affected, for example by the destruction of their houses and/or the losses of their livelihoods. As part of our responsibility to society, we provided rapid uncomplicated assistance here.

A cancer diagnosis radically alters the life of any family. It comes as a shock and triggers great changes not only for the patients themselves, but also for children and young people living in the families affected. To provide assistance here, shortly after the end of the year under report we donated EUR 5,000 to a regional charitable organization called *Brückenschlag*, which is run by Caritas. ■





05

Governance

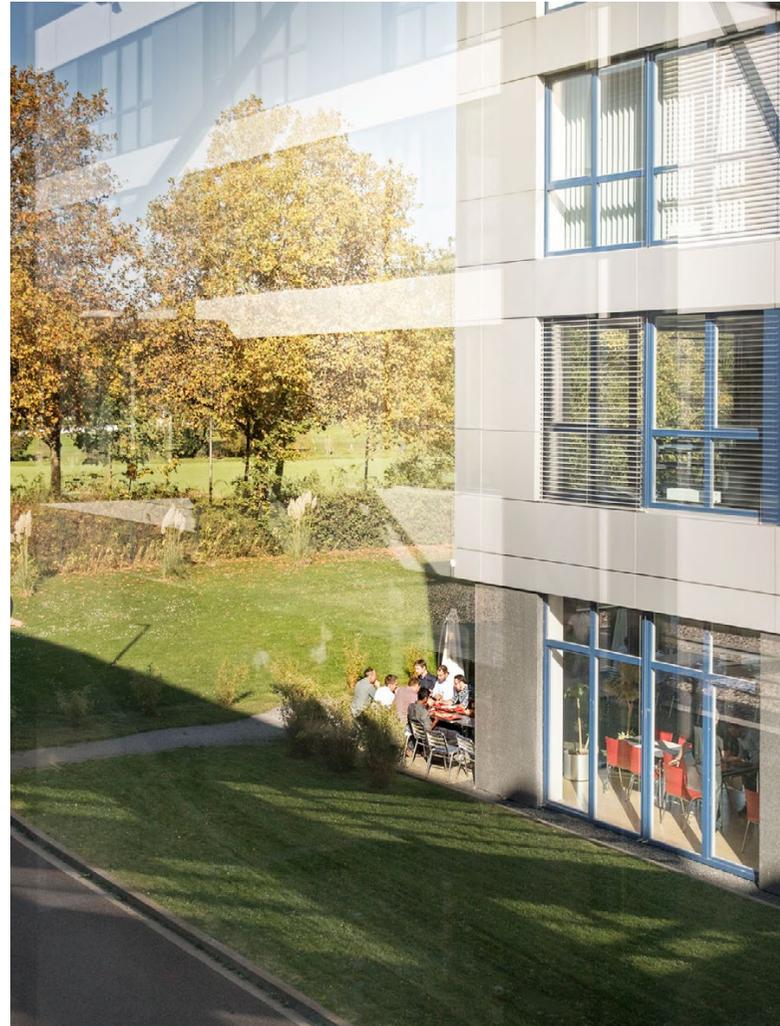


Corporate Governance

At AIXTRON, governance is based on the principles and standards of corporate management and supervision. These are safeguarded by the high-quality and responsible management and supervision of the company by its governing bodies.

The aim here is also to raise awareness for high-quality corporate governance and to enable the company to perform its tasks more effectively, more economically and more sustainably. According to the “German Corporate Governance Code”, the management and supervisory boards of listed companies should base their corporate governance on the principles of the social market economy.

These require the company to conduct its business not only in accordance with all applicable laws but also to adopt an ethics-based approach that assumes responsibility for its own actions in keeping with the traditional model of a respectable merchant. ■



Legal conformity, compliance and information security

As the highest decision-making body, the Executive Board takes due account of the precautionary principle in all its business decisions. Alongside compliance with legal requirements, due account is also taken of our company-internal policies and of the interests of material stakeholder groups.

AIXTRON does not tolerate any corrupt or criminal behavior and expressly distances itself from any human rights violations. Over and above legal requirements, our company-internal codes, policies, and management systems provide the framework for our actions in this respect.

AIXTRON's Ethics Code, which has been in force since 2006, is applicable to the members of the Executive Board, as well as to managers in the Finance department and persons in key positions, and safeguards honest and ethical conduct.

For their respective areas of responsibility, Finance department managers and persons in key positions each year confirm their acknowledgement of and compliance with the rules set out in the Ethics Code issued by the Executive Board.

Furthermore, AIXTRON has a Compliance Code of Conduct, which is applicable to the Executive Board, the Supervisory Board, the Senior Management Team, and all employees throughout the company and requires them to ensure that their actions are responsible and conform to the law. This Code of Conduct is underpinned by the regularly updated Compliance Manual and more specific

compliance regulations which set out specific action guidelines and are communicated with suitable training. In their quarterly written declaration of compliance, the Senior Management Team and employees in key positions are required to provide confirmation of adherence to our compliance requirements. Participation in compliance training is mandatory for all company employees. This process is managed and monitored by our Compliance Office. Any reports of potential infringements of international and national laws, or of any compliance requirements and codes of conduct at the AIXTRON Group, can be addressed directly to AIXTRON's Compliance Office or via AIXTRON's whistleblowing system.

Our company-wide Anti-Corruption Policy sets out formal and specific rules and principles of conduct for combating corruption and bribery and is binding for all employees. Raising awareness for the early detection of potential corruption and bribery risks in day-to-day work and promoting preventive anti-corruption measures are also fundamental components of our company-wide compliance training.

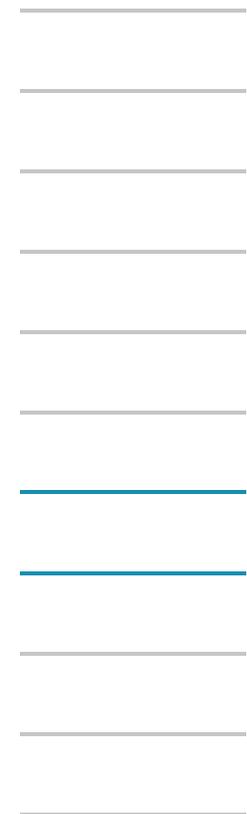
As in the previous year, no incidents of bribery or corruption were reported anywhere in the entire AIXTRON Group in the 2021 year under report. ■

Supplier handbook

AIXTRON places the same expectations and conditions in its suppliers as it does in itself. For suppliers, these are defined in a binding Supplier Handbook.

This sets out the ethical and legal framework for social and ecological standards, such as those relating to human rights, corruption, or conflict materials such as commodities and mineral resources that are mined or extracted in conflict areas.

Alongside the price and quality of purchased goods, compliance with these standards is a basic prerequisite for any ongoing cooperation (cf. page 60 [Conflict Minerals](#)). ■



Ω Conflict Minerals

Competition for natural resources, such as minerals, oil, and charcoal, is promoting systematic human rights abuses and pollution worldwide. Revenues from the mining of commodities help to fuel armed conflicts and finance civil wars. The production or mining of these materials is often performed illegally and outside the sphere of government control and is managed by rebel or militia groups at the expense of mineworkers.

AIXTRON is firmly committed to doing business fairly and with decency and respect in all the countries in which it operates. AIXTRON therefore supports both the objectives of the US Dodd-Frank Act, as well as those of the EU regulations on conflict minerals to disclose the origin of risk minerals used in our products. As part of its duty of care, the AIXTRON Group has therefore implemented a management system that is based on the OECD Guideline for Responsible Supply Chains of Minerals from Conflict and Risk Regions.

All direct suppliers who may supply minerals with potential conflict minerals are contacted and asked to identify and report to AIXTRON the countries of origin of the minerals. If there are indications of the use of a raw material supplier associated with human rights violations and pollution, we react consistently and take action to ensure that this supplier critically examines the raw material supplier in question and, where applicable, removes it from the joint supply chain. AIXTRON has established a complaints mechanism to allow internal and external individuals and stakeholders to anonymously provide tip-offs, raise concerns, and submit complaints about conflict minerals.

AIXTRON only has a limited ability to work towards completely conflict-free global smelts in its supply chain. To maximize the influence and impact of our conflict-free procurement policy, we decided many years ago already to join the Responsible Minerals Initiative (RMI). We are actively involved in this orga-



nization and, among other aspects, support smelts in sustainably meeting their documentary evidence requirements with regard to the conflict-free purchase of minerals and in connection with the RMI certification process. ■

Compliance with data protection

Treating the personal data of our customers, partners, and employees confidentially and in accordance with legal requirements is absolutely imperative for us. Data protection has been firmly anchored at our company with suitable guidelines, standards, and processes in place for many years now. Upon the introduction of the General Data Protection Regulation of the European Union (EU-GDPR), which has been in force in all member states since May 2018, we reviewed our existing processes and improved these where necessary.

As a company with trailblazing technology, we have a particular focus on protecting our IT infrastructure. This way, we aim to avert the loss of valuable and important data and avoid any damaging interruptions to our operating business. We take these threats extremely seriously.



Dr. Christian Danning · Executive Board member (CFO)

In implementing legal requirements, we are also supported and advised by an external and independent data protection officer. For the 2021 year under report, we notified our data protection officer and the relevant authorities of one incident. However, the authorities classified this incident as not severe. ■

Information security

We are a highly innovative technology company with global operations. This means that the suitable protection of our business and operating secrets and of sensitive data is a matter of existential importance. As we make advances in digitalizing and networking our company, the threat posed by cyber espionage and sabotage is also growing in parallel. Information security has played a crucial role for years now and enjoys very high priority. After all, any attacks on the IT infrastructure could result in the loss or compromised integrity of this sensitive and confidential data.

Together with our IT department and other specialist departments, our “Information Security” department is charged with continually detecting, analyzing, and evaluating any potential weak points. Based on their findings, suitable protective mechanisms are integrated into our existing information security environment and their effectiveness is subsequently monitored. Alongside technical and organizational measures, our employees also have a very important role to play in terms of their awareness in dealing with sensitive and confidential data. The training program we have implemented throughout the Group and the mandatory participation of all employees in regular training sessions make an important contribution towards raising awareness. We are permanently improving our information security environment in order to provide the best possible protection for our business and operating secrets and for sensitive data. In fiscal year 2021, we did not become aware of any incidents in respect of any breach of our information security. ■

Quality management and product safety

Optimal product safety and the reliability of our equipment are the result of high quality standards and form a key foundation for our ongoing business success.

Dr. Jochen Linck · Executive Board member (COO)



We hold a leading position in the market, one that is based in the great trust our customers place in us. We see this as both obliging us and motivating us to safeguard our technical excellence, our first-class services, and our high quality standards at all times.

When it comes to our commitment to quality and the safety of our equipment, we consistently pursue a zero defect strategy. This is the standard we set for ourselves and for our suppliers as well. For us, satisfying all statutory requirements, standards, and norms, meeting safety requirements, and ensuring suitable labeling is just the start.

Over and above this, we have set ourselves the standard of implementing all local requirements in our customer markets. That is why our product safety begins in the product development stage already and continues throughout the purchasing and production process.

Formal responsibility for product safety and quality is incumbent on the Executive Board, which has assigned the targets and tasks involved to the Head of Quality Management. Our Quality department is responsible for further developing our quality management system, issues company-wide regulations, and regularly checks that these are complied with. The Quality Manual and Quality Policy describe the core of our activities and are publicly available.

We have policies and processes governing aspects such as product safety, product development, the handling of defective products, and the corresponding escalation levels. The Head of Quality Management reports to the Executive Board at regular intervals in respect of major developments and of quality-related incidents that are classified as critical.

No notable quality defects with any material impact on the health and safety of our customers were identified in fiscal year 2021. ■

Key figures on supplier relationships

Given the high share of value contributed by the supply chain, the purchasing process is a very significant factor in AIXTRON's long-term success. AIXTRON does not produce any mechanical or electrical systems and components itself, but rather focuses on development, configuration, and final assembly.

We attach great importance to working together with our suppliers on a basis of partnership. This is reflected, for example, in development partnerships in which we develop components and modules in cooperation with suppliers. The key factors determining our selection of suppliers are primarily quality, production competence, supply reliability, and price.

We also require our suppliers to comply with applicable laws and legal requirements, as well as with the requirements of Supplier Handbook. Furthermore, we require compliance with international minimum standards in the area of sustainability, such as the core labor standards of the International Labour Organization (ILO). We do not tolerate any use of conflict minerals within the supply chain.

We currently work with a total of 1,021 suppliers from 27 countries (2020: 1,102 suppliers from 30 countries) and have purchasing volumes of EUR 337.2 million (2020: EUR 179.9 million). Compliance with sustainability aspects is monitored using a risk-oriented approach. In the first stage, compliance with environmental and social standards at all suppliers is reviewed by the information they provide in a survey. This requires suppliers to explain those processes established at their companies which safeguard compliance with the standards. Material disclosures

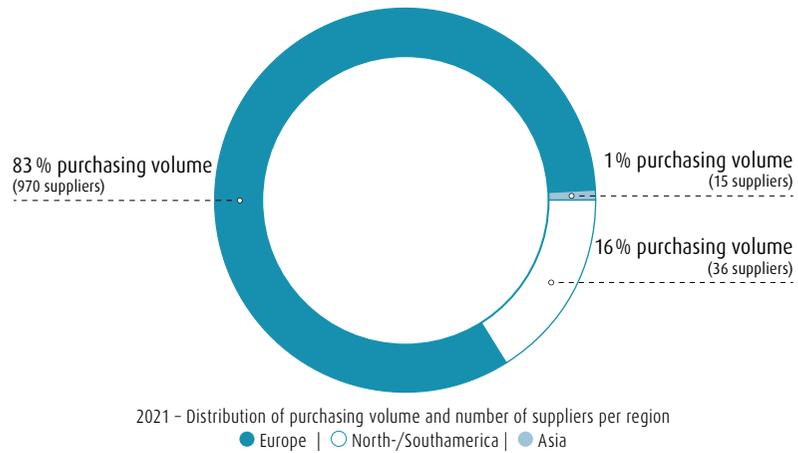
made by suppliers also have to be documented with suitable evidence. All relevant documents are provided to existing and potential suppliers via our company website.

In the course of expanding our Quality department, we had planned to increase the frequency and extend the scope of our audits on location. Due to the pandemic, however, it was not possible to conduct on-site audits in 2021 to the extent originally planned.

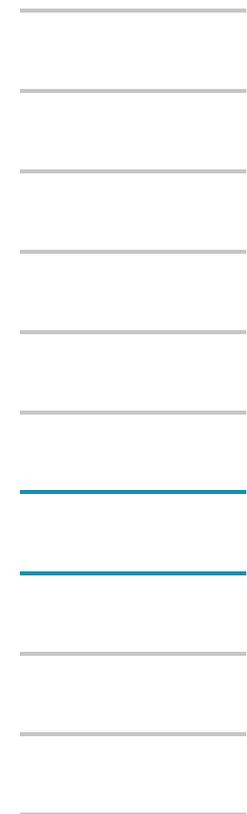
We encourage our suppliers to establish management systems in the areas of work safety, health protection, and environmental protection that conform to the DIN EN ISO 9001, ISO 14001, and BS OHSAS 18001 standards or to similar standards.

	2021	2020	2019
Number of suppliers (worldwide)	1,021	1,102	1,335

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



Despite global purchasing, local value creation plays a very important role due to the high technical requirements placed in suppliers. In Germany, more than 82% of procurement is local, while in the UK this share is even almost 90%. The precondition for cooperation is in all cases compliance with the company's high quality standards and the supplier's ability to ensure the necessary production competence at a comparable price. ■



Associations and initiatives

We are involved in a large number of organizations and associations with the aim of advancing sustainable developments and resource efficiency in photonics and semiconductor technology. We are founding members 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 its further development. ■

I really appreciate the dialog with other energy experts from a variety of industries, particularly on topics such as heating energy, cooling energy, compressed air generation etc. This is apparent, for example, in the energy structure of our laboratory facilities and the air conditioning based on heat pumps.

Karl-Heinz Göbbels, Head of Plant and Facility Management department and Energy Management Officer

Carbon Disclosure Project (CDP) / MSCI

As part of our involvement in the Carbon Disclosure Project (CDP), we have been reporting once a year since 2010 on the ecological impact of our business activities and our corporate strategy to reduce CO₂ emissions.

This way, AIXTRON is promoting transparency for investors, companies, political decision-makers, and the media. In the 2021 year under report, AIXTRON improved its assessment from D to B. This clearly shows the significant progress we made with environmental and climate issues in the past year under report. ■



Part of the nationwide “Energy Efficiency and Climate Protection Networks Initiative”



As founding members, we have been involved in this initiative with eight other companies in the Aachen region since 2016. The objective of the network is to identify and implement economic energy savings potential at the companies. Over the past three years, it has already managed to save 41,000 MWh of energy and thus avoid more than 11,000 tonnes of CO₂ emissions. AIXTRON too has been able to draw on the advantages of the network and its quarterly meetings for its own energy and climate balance sheet. We extended our membership of the Energy Efficiency Network for another two years in 2020 and plan to continue participating in the years ahead as well.

The network forms part of the nationwide initiative “Energy Efficiency Networks” founded by the Federal Government and leading German business associations and organizations. The initiative had set itself the aim of establishing and implementing around 500 new energy efficiency networks at companies by 2020 and thus to save up to 75 PJ of primary energy and 5 million tonnes of GHG emissions. In September 2020, the Federal Ministry for Economic Affairs and Energy (BMWi) decided to continue the project through to 2025 with the new name of “Energy Efficiency and Climate Protection Networks Initiative”. By the end of 2025, the initiative should lead to the establishment of 350 new networks, enabling nine to eleven terawatt hours of end energy and five to six million tonnes of greenhouse gas emissions to be saved. ■

Memberships of organizations and associations

Organizations/associations	Function/committee	Thematic focus	Headquarters of 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 most important memberships in industry or other associations.



06

Key Figures

Ω Overview of Non-Financial Key Figures

We have summarized the most important non-financial key figures in the table below. We have also presented the content index of the Global Reporting Initiative (GRI), which states the sections of this report in which information meeting GRI requirements can be found. We have also included the report from the auditor that subjected this report to an independent limited assurance audit. ■

Performance aspect		2021	in %	2020	2019
Environment EU taxonomy <small>(first calculated for 2021)</small>	Total revenues (EUR 000s)	428,954	100		
	of which taxonomy-eligible	243,160	57		
	of which taxonomy-aligned	243,160	57		
	Total CapEx* (EUR 000s)	19,400	100		
	of which taxonomy-eligible	7,624	39		
	of which taxonomy-aligned	7,624	39		
	Total OpEx* (EUR 000s)	56,809	100		
	of which taxonomy-eligible	42,974	76		
	of which taxonomy-aligned	42,974	76		
<small>* as defined in the EU Taxonomy Regulation</small>					
Environment Innovation		2021	Δ		
	Funds received for research and development (EUR 000s)	8,933	881	8,052	7,866
	Proprietary expenses for R&D (EUR 000s)	56,809	-1,570	58,379	54,955
Environment Climate balance sheet	Scope 1 emissions (CO₂e in t)	304	-19	323	171
	Scope 2 emissions (CO₂e in t)	499	101	398	407
	Scope 3 emissions (CO₂e in t)	258,626	136,323	122,303	3,638*
	Total emissions volume (Scopes 1-3) (CO₂e in t)	259,429	136,405	123,024	4,215
	<small>* only includes a small share of Scope 3 emissions</small>				

Ω Overview of Non-Financial Key Figures

Performance aspect		2021	Δ	2020	2019	
Environment Climate balance sheet Scopes 1+2	Natural gas for heating (CO ₂ e emissions)	268	95	173		
	Vehicle pool (CO ₂ e emissions)	31	3	28		
	Process emissions sulfur hexafluoride / methane / nitrous oxide (SF ₆ / CH ₄ / N ₂ O)	5	-105	110		
	Energies procured	499	100	399		
Environment Climate balance sheet Scope 3	Paper	24	17	7		
	Purchased goods (CO ₂ e in t)	Drinking water	14	8	6	
		Other purchased goods and services	227,738	108,374	119,364	
		Total	227,775	108,398	119,377	
	Energy-related emissions (CO ₂ e in t)	475	74	401		
	Emissions from logistics activities (CO ₂ e in t)	16,370		672*		
	Waste (CO ₂ e in t)	12,702	---	---	---	
	Business travel (CO ₂ e in t)	Air travel	1,213	-376	1,589	
		Cars	50	49	1	
		Employee work journeys	20	-241	261	
		Public transport	0	-1	1	
Rail travel		21	19	2		

* incomplete in 2020

Overview of Non-Financial Key Figures

Performance aspect		2021	Δ	2020	2019
Environment Energy key figures					
Electricity (kWh)	Germany	9,850,302	-594,170	10,444,472	10,658,090
	United Kingdom	838,739	-134,207	972,946	856,253
	USA	30,869	5,262	25,607	41,413
	China	24,977	2,094	22,883	27,201
	Japan	30,755	-7,776	38,531	42,160
	South Korea	85,179	-17,318	102,497	173,783
	Taiwan	22,713	-42,877	65,590	75,472
	Total (kWh)	10,883,534	-788,992	11,672,526	11,874,372
Natural gas (kWh)	Germany	1,326,842	468,248	858,594	608,462
District heating (kWh)	Germany	2,126,050	725,790	1,400,260	1,957,130
Environment Waste key figures					
Hazardous waste (kg)	Germany	1,972	-211	2,183	1,042
	United Kingdom	361,5	311,5	50	46
	Asia / USA	0	0	0	0
	Total	2,333,5	100,5	2,233	1,088
Non-hazardous waste (kg)	Germany	62,380	14,850	47,530	54,380
	United Kingdom	42,852	16,279	26,573	17,023
	Asia / USA	21,504	-10,964	32,468	---
	Total	126,736	20,165	106,571	71,403
* It was not yet possible to calculate the volume of non-hazardous waste for Asia/USA for 2019.					
Environment Mobility key figures					
	Flights / total kilometers traveled	3,646,072	-1,037,087	4,683,159	14,518,438
	Company vehicles / total kilometers traveled	216,412	36,710	179,702	192,386
	Rental cars / total kilometers traveled	738,882	379,803	359,079	508,787
	Private vehicles of our employees used for business purposes and taxi bookings / total kilometers traveled	639,833*	---	---	---
	Rail journeys / Gefahrene Kilometer gesamt	643,259	443,545	199,714	168,530

Ω Overview of Non-Financial Key Figures

Performance aspect		2021	Δ	2020	2019	
Social Employee health & safety	Lost Time Injury Frequency Rate - LTIFR	0,146		---	---	
	Injury Rate - IR	2,049		---	---	
	Accidents at work	2				
	No. of workdays lost (work-related sickness + accidents)	Men	43	25	18	230
		Women	0	0	0	0
	Number of injuries	Men	11	-1	12	20
		Women	3	-3	6	9
	Accidents on way to/from work	Men	1	-1	2	3
		Women	0	0	0	0
		Work-related fatalities	0	0	0	0
Social Training & personnel development	Hours of further training	Men	7,331	2,350	4,981	12,739
		Women	2,491	1,199	1,292	2,134
	Average hours of training per employee	13	5	8	21	
	Average hours of training	Men	13	5	8	23
		Women	17	8	9	15
		Hours of further training (total)	9,822	3,549	6,273	14,873

Overview of Non-Financial Key Figures

Performance aspect		2021	Δ	2020	2019
Social Vocational training					
Germany	IT specialist for system integration	4	-3	7	6
	Mathematical-technical software engineer (MATSE)	3	1	2	3
	Industrial clerk	2	-2	4	3
	Bachelor of Science (BWL+)	2	1	1	2
	Mechatronic engineer	2	0	2	2
	IT specialist for application development	0	-1	1	1
United Kingdom	IT specialist	1	---	1	1
	Design engineer	0	---	0	1
	Production trainee (technicians)	2	1	1	2
	Total trainees	16	-2	18	20
Social Innovation management					
Improvement suggestions submitted and accepted	Total	Submitted	-12	89	110
		accepted	4	28	26
Governance Value chain and suppliers					
Regional distribution of purchasing volumes	Number of suppliers	1,021	-81	1,102	1,051
	European share	83 %	0 %	83 %	83 %
	North and South American share	16 %	0 %	16 %	9 %
	Asian share	1 %	0 %	1 %	9 %

GRI Content Index

GRI disclosures	Disclosures/topic	Page in 2021 Sustainability Report	Page in 2021 Annual Report	Note
GRI 100	General disclosures			
GRI 101:	FOUNDATION 2016	General Disclosures		
GRI 102:	GENERAL DISCLOSURES 2016			
1.	Organizational profile & strategy			
GRI 102-1	Name of the organization	Cover/imprint		
GRI 102-2	Activities, brands, products and services	Foreword, 12	5, 66	
GRI 102-3	Location of headquarters	6-7, 80	5	
GRI 102-4	Location of operations	6-7	67	
GRI 102-5	Ownership and legal form	6, 56	67	Further explanations in "Investors" section of our website
GRI 102-6	Markets served	9	68, 71, 80-83	
GRI 102-7	Scale of the organization	45, 46		
GRI 102-8	Information on employees and other workers	37-38	70, 71	
GRI 102-9	Supply chain	63, 64		
GRI 102-10	Significant changes to the organization and its supply chain	63, 64		There were no significant changes to the supply chain in the 2021 year under report.
GRI 102-11	Precautionary principle or approach	57, 58		More detailed information in Annual Report
GRI 102-12	External initiatives	65, 66		<ul style="list-style-type: none"> ▶ Responsible Minerals Initiative (RMI) ▶ GRI ▶ Energy Efficiency Network Aachen
GRI 102-13	Membership of associations	66		
2.	Strategy			
GRI 102-14	Statement from senior decision-maker	5-6		
3.	Ethics and integrity	Foreword		
GRI 102-16	Values, principles, standards, and norms of behavior	9		
4.	Governance			
GRI 102-18	Governance structure	17	26-36	

GRI Content Index

GRI disclosures	Disclosures/topic	Page in 2021 Sustainability Report	Page in 2021 Annual Report	Note
5.	Stakeholder engagement			
GRI 102-40	List of stakeholder groups	9, 10		
GRI 102-41	Collective bargaining agreements	No reference		AIXTRON is not subject to any collective bargaining agreements
GRI 102-42	Identifying and selecting stakeholders	14		
GRI 102-43	Approach to stakeholder engagement	13		
GRI 102-44	Key topics and concerns raised			None
6.	Reporting practice			
GRI 102-45	Entities included in the consolidated financial statements		67, 144, 180	
GRI 102-46	Defining reporting content and topic boundaries	15		The reporting contents are significantly influenced by the materiality analysis, Sustainability strategy and legal requirements.
GRI 102-47	List of material topics	15		
GRI 102-48	Restatements of information	GRI content index		Basis for quantitative data —> Explanation of extension and revision of climate balance sheet
GRI 102-49	Changes in reporting	21, 29		Publication of a complete climate balance sheet EU taxonomy report
GRI 102-50	Reporting period	6, 54		
GRI 102-51	Date of most recent report	Foreword, imprint		
GRI 102-52	Reporting cycle	Imprint		
GRI 102-53	Contact point for questions regarding the report	76, 80		Contact partner on website
GRI 102-54	Claims of reporting in accordance with the GRI Standards	7		
GRI 102-55	GRI content index	73-75		
GRI 102-56	External assurance	77, 78		Audit opinion in notes to financial statements
GRI 200:	Economic			
GRI 103	Management approach			
GRI 103-1	Explanation of the material topic and its boundary	14, 15		
GRI 202-2	Proportion of senior management hired from the local community	48		100% of senior managers were hired locally in Germany and locally in Asia/USA (for the 2021 year under report)
GRI 202-4	Proportion of spending on local suppliers			
GRI 205-2	Communication and training about anti-corruption policies	52		
GRI 205-3	Confirmed incidents of corruption and actions taken	58		No incidents requiring report here occurred in 2021

GRI Content Index

GRI disclosures	Disclosures/topic	Page in 2021 Sustainability Report	Page in 2021 Annual Report	Note
GRI 300:	Environmental			
GRI 302-1	Energy consumption within the organization	34, 37, 70		
GRI 302-2	Energy consumption outside of the organization	69, 70,		
GRI 302-4	Reduction of energy consumption	32, 33		
GRI 305:	Emissions			
GRI 305-1	Direct (Scope 1) GHG emissions	29, 34, 68-70		
GRI 305-2	Energy indirect (Scope 2) GHG emissions	29, 34, 68-70		
GRI 305-3	Other indirect (Scope 3) GHG emissions	29, 68-70		
GRI 306:	Effluents and waste			
GRI 306-2	Waste by type and disposal method	35, 70		See climate balance sheet (Pages 68-70) for information about waste-related emissions
GRI 400	Social topics			
GRI 401	Employment			
GRI 401-1	New employee hires and employee turnover	48		
GRI 401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	46		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	46		
GRI 403	Health and safety			
GRI 403-1	Workers representation in formal joint management-worker health and safety committees	34		
GRI 403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	41, 71		
GRI 404	Training			
GRI 404-1	Average hours of training per year per employee	39		
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	40		
GRI 405	Diversity and Equal Opportunity			
GRI 405-1	Diversity of governance bodies and employees	43	37-40	

^{a)} Reference is made within this document to those pages addressing the respective GRI content. References to which "AR" is added refer to our 2021 Annual Report.

Independent Auditor's Report

Independent Auditor's Report

The Supervisory Board of AIXTRON SE commissioned an independent audit service provider to review the legally relevant information in the separate non-financial report. The external audit conducted by Deloitte assists the Supervisory Board in fulfilling its audit duty pursuant to § 171 (1) of the German Stock Corporation Act (AktG). The disclosures made and key figures provided in this report with regard to our sustainability activities were subject to an independent limited assurance audit by Deloitte GmbH Wirtschaftsprüfungsgesellschaft, Düsseldorf (Germany).

Note

Numerous employees support the development of AIXTRON's CSR program, whether in devising our targets, defining programs, or collecting and calculating the necessary figures. We would like to thank them for their ongoing contributions as we continue to integrate sustainability into our corporate culture and further extend our leading position as the most sustainable company in our market.

Contact details for questions about this report

E-mail: communications@aixtron.com

LIMITED ASSURANCE REPORT OF THE INDEPENDENT PRACTITIONER REGARDING THE NON-FINANCIAL STATEMENT

To AIXTRON SE, Herzogenrath/Germany

Our Engagement

We have performed a limited assurance engagement on the separate consolidated non-financial report pursuant to Section 315b German Commercial Code (HGB) of AIXTRON SE, Herzogenrath/Germany, ("the Company") for the financial year from January 1 to December 31, 2021 (hereafter referred to as "non-financial statement"). This separate non-financial report comprises the text passages, tables and graphics of AIXTRON SE's sustainability report that are marked with the omega symbol ("Ω").

Our engagement did not cover any sections not marked with an "Ω" nor any other disclosures of AIXTRON SE's sustainability report nor any external sources of documentation or expert opinions referenced in the non-financial statement.

Responsibilities of the Executive Directors

The executive directors of the Company are responsible for the preparation of the non-financial statement in accordance with Section 315c in conjunction with Sections 289c to 289e HGB and Article 8 of Regulation (EU) 2020/852 of the European Parliament and the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (hereafter referred to as "EU Taxonomy Regulation") and the delegated acts adopted thereon, as well as with their own interpretation of the wording and terminology contained in the EU Taxonomy Regulation and the delegated acts adopted thereon, as is presented in section "EU Taxonomy" of the non-financial statement.

These responsibilities of the executive directors include the selection and application of appropriate methods regarding the non-financial statement and the use of assumptions and estimates for individual non-financial disclosures of the Group which are reasonable under the given circumstances. In addition, the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of a non-financial statement that is free from material misstatement due to fraudulent behavior (manipulation of the non-financial statement) or error.

Some of the wording and terminology contained in the EU Taxonomy Regulation and the delegated acts adopted thereon are still subject to considerable interpretation uncertainty and have not yet been officially clarified. Therefore, the executive directors have laid down their own interpretation of the EU Taxonomy Regulation and of the delegated acts adopted thereon in section "EU Taxonomy" of the non-financial statement. They are responsible for the reasonableness of this interpretation. As there is the inherent risk that indefinite legal concepts may allow for various interpretations, the legal conformity of the interpretation is prone to uncertainty.

The preciseness and completeness of the environmental data in the non-financial statement is subject to inherent restrictions resulting from the manner in which the data was collected and calculated as well as from assumptions made.

Independence and Quality Assurance of the Audit Firm

We have complied with the German professional requirements on independence and other professional rules of conduct.

Our firm applies the national statutory rules and professional announcements – particularly of the "Professional Charter for German Public Auditors and German Sworn Auditors" (BS WP/vBP) and of the IDW Quality Assurance Standard "Quality Assurance Requirements in Audit Practices" (IDW QS 1) promulgated by the Institut der Wirtschaftsprüfer (IDW) and does therefore maintain a comprehensive quality assurance system comprising documented regulations and measures in respect of compliance with professional rules of conduct, professional standards, as well as relevant statutory and other legal requirements.

Responsibilities of the Practitioner

Our responsibility is to express a conclusion on the non-financial statement based on our work performed within our limited assurance engagement.

We conducted our work in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised) "Assurance Engagements Other than Audits or Reviews of Historical Financial Information", adopted by the IAASB. This Standard requires that we plan and perform the assurance engagement so that we can conclude with limited assurance whether matters have come to our attention to cause us to believe that the non-financial statement of the Company, with the exception of the external sources of documentation or expert opinions referenced therein, has not been prepared, in all material respects, in accordance with Section 315c in conjunction with Sections 289c to 289e HGB and the EU Taxonomy Regulation and the delegated acts adopted thereon, as well as with the interpretation by the executive directors presented in section "EU Taxonomy" of the non-financial statement.

The procedures performed in a limited assurance engagement are less in extent than in a reasonable assurance engagement; consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. The choice of assurance work is subject to the practitioner's professional judgment.

Within the scope of our limited assurance engagement, which we performed primarily during the months from January to February 2022, we performed, among others, the following procedures and other work:

- Obtaining an understanding of the structure of the Group’s sustainability organization and of the stakeholder engagement,
- On-site visits as part of an investigation into the processes for collecting, analyzing and aggregating selected disclosures at selected locations of the Group,
- Interviewing the executive directors and relevant employees involved about the process of preparation, including the arrangements and measures in place, for the preparation of the non-financial statement as well as about disclosures contained in the non-financial statement,
- Identification of risks of material misstatement in the non-financial statement,
- Analytical evaluation of selected disclosures contained in the non-financial statement,
- Cross validation of selected disclosures and the corresponding data in the consolidated financial statements as well as in the combined management report,
- Evaluation of the presentation of the sustainability performance,
- Evaluation of the process to identify taxonomy-eligible economic activities and the corresponding disclosures in the non-financial statement.

The determination of the disclosures pursuant to Article 8 of the EU Taxonomy Regulation requires the executive directors to make interpretations of indefinite legal concepts. As there is the inherent risk that indefinite legal concepts may allow for various interpretations, the legal conformity of the interpretation, and hence our related examination, is prone to uncertainty.

Practitioner’s Conclusion

Based on the work performed and the evidence obtained, nothing has come to our attention that causes us to believe that the separate consolidated non-financial report of the Company for the financial year from January 1 to December 31, 2021 has not been prepared, in all material respects, in accordance with Section 315c in conjunction with Sections 289c to 289e HGB and the EU Taxonomy Regulation and the delegated acts adopted thereon, as well as with the interpretation by the executive directors presented in section “EU Taxonomy” of the non-financial statement.

This conclusion solely relates to the text passages, tables and graphics in AIXTRON SE’s sustainability report that are marked with the omega symbol (“Ω”). Our conclusion does not relate to any sections not marked with an “Ω” nor any other disclosures of AIXTRON SE’s sustainability report nor any external sources of documentation or expert opinions referenced in the non-financial statement.

Restriction of Use

We issue this report as stipulated in the engagement letter agreed with the Company (including the “General Engagement Terms for Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften (German Public Auditors and Public Audit Firms)” as of January 1, 2017 promulgated by the Institut der Wirtschaftsprüfer (IDW)). We draw attention to the fact that the assurance engagement was performed for the purposes of the Company and the report is solely designed for informing the Company about the findings of the assurance engagement. Therefore, it may not be suitable for another than the aforementioned purpose. Hence, this report should not be used by third parties as a basis for any (asset) decision.

We are liable sole to the Company. However, we do not accept or assume liability to third parties. Our conclusion was not modified in this respect.

Düsseldorf/Germany, February 23, 2022

Deloitte GmbH
Wirtschaftsprüfungsgesellschaft

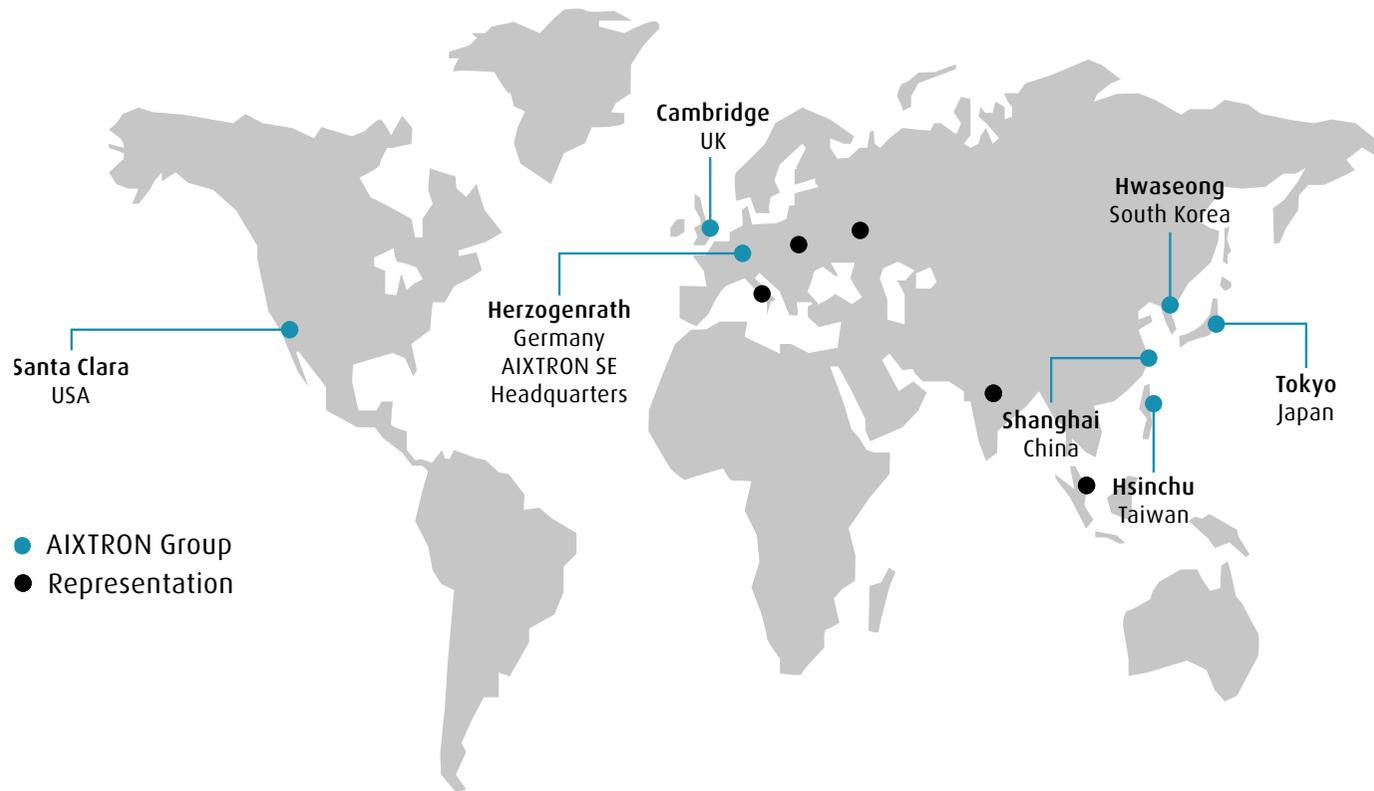


Signed:
(André Bedenbecker)
Wirtschaftsprüfer
(German Public Auditor)



Signed:
(ppa. Dr. Matthias Schmidt)

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Imprint

Imprint

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Reporting period: The reporting period is the calendar year 2021, which corresponds to the reporting period of the Annual Report. The previous report was published in February 2021.

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

Auditor: Deloitte GmbH, Wirtschaftsprüfungsgesellschaft, Düsseldorf

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