AIXTRON GROUP

Annual Report 2022

We are shaping the future.
With innovation and precision.

AIXTRON

CONTENT

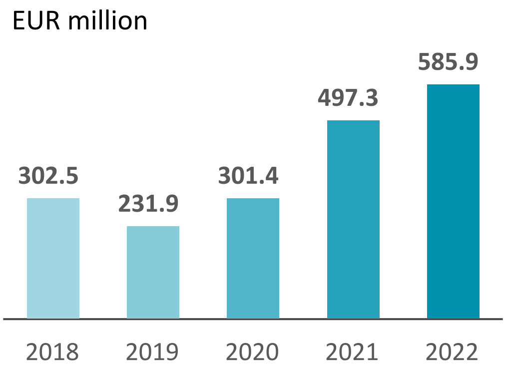
AIXTRON GROUP

2022 at a Glance

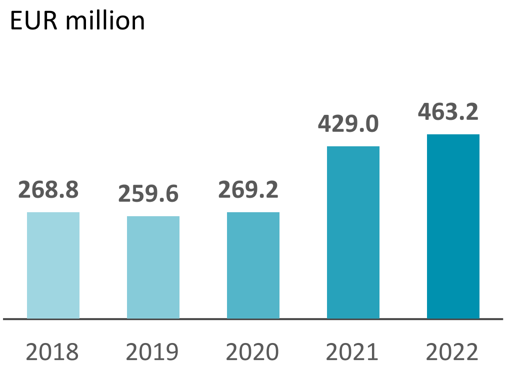
EUR **585.9** million ***Order Intake*** previous year: EUR 497.3 million	EUR **463.2** million ***Revenues*** previous year: EUR 429.0 million
42% ***Gross Margin*** previous year: 42%	EUR **104.7** million ***EBIT*** previous year: EUR 99.0 million
EUR **0.89** ***Earnings per Share*** previous year: EUR 0.85	**58.5%** ***EU Taxonomy-Aligned Revenues*** Details: AIXTRON Sustainability Report
EUR **57.7** million ***R&D Expenditure*** previous year: EUR 56.8 million	**895** ***Employees at Year-End*** previous year: 718

Key Figures 2022

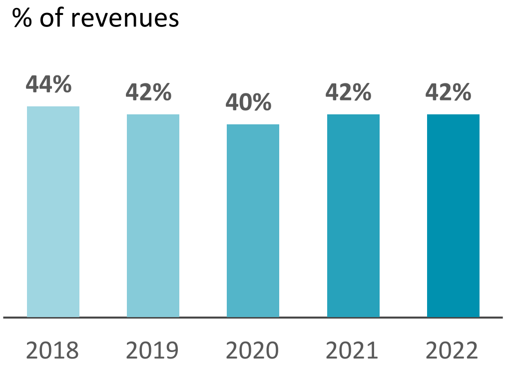
Order Intake



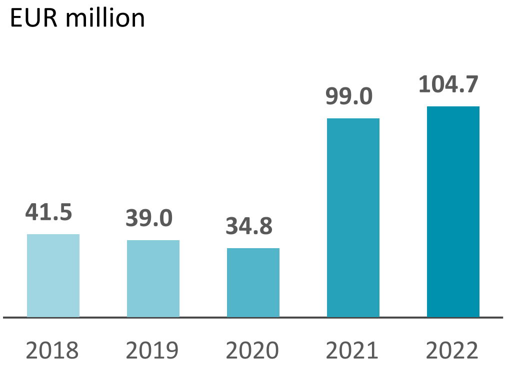
Revenues



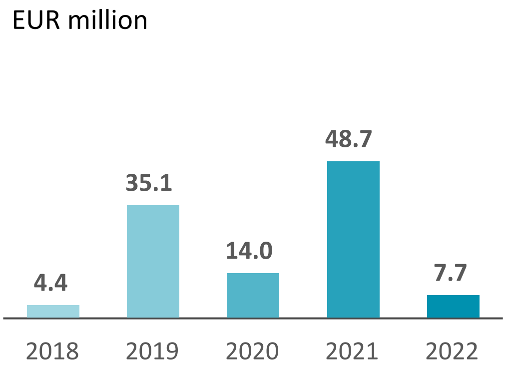
Gross Margin



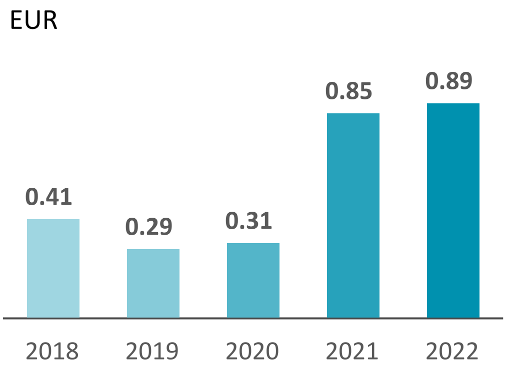
Operating Result (EBIT)



Free Cash Flow



Earnings per Share



Company Profile

AIXTRON SE is a leading global provider of deposition equipment to the semiconductor industry with subsidiaries in Europe, Asia and in the United States. The Company's high-tech solutions are used by a broad range of customers for the manufacture of high-performance and optoelectronic applications based on compound semiconductors. These devices are used in a variety of innovative applications and industries. These include laser, LED, display technologies, optical and wireless data transmission, SiC and GaN power electronics, and many other leading-edge applications. The Company was founded in 1983 and is headquartered in Herzogenrath, Germany (City Region of Aachen).

For further information on AIXTRON (FSE: AIXA, ISIN DE000A0WMPJ6) please visit our website at: www.aixtron.com

Our registered trademarks: AIXACT(R), AIXTRON(R), Close Coupled Shower- head(R), EXP(R), EPISON(R), Gas Foil Rotation(R), OptacapTM, OVPD(R), Planetary Reactor(R), PVPD(R), STExS(R), TriJet(R)

Letter to Shareholders

Dear Shareholders, Ladies and Gentlemen,

AIXTRON continued to grow in its fiscal year 2022: despite a slowdown in some areas of the semiconductor market and the strain on supply chains, we succeeded in raising order intake to EUR 585.9 million (+18%), revenues to EUR 463.2 million (+8%), and operating income to EUR 104.7 million (+6%). These figures underline the continued success of our strategy with its clear focus on the compound semiconductor equipment business.

Compared to traditional silicon – the conventional base material of the semiconductor industry – compound semiconductors offer superior physical properties in terms of electrical performance, switching speed, and light generation. Step by step, our vision of emerging markets driven by the overarching themes of ecological sustainability, electrification, and digitalization is becoming a reality. This is the foundation for our growth, and in 2022 we made significant progress in all core areas.

For example, our new G10-SiC deposition system for the innovative material silicon carbide (SiC) already generated the highest order intake of all our products in its first quarter on the market. The G10-SiC enhances both performance and productivity for the established 150 mm SiC wafer size and also gives customers the option to process emerging 200 mm SiC wafers. As such, AIXTRON is making a significant contribution to the reduction of CO_2 emissions and the transition to electromobility. SiC is fast becoming a key technology for electric vehicle power trains and charging infrastructure, as well as for the efficient conversion of renewable energy. The market launch of the G10-SiC not only represents a first milestone in the revamping of our product portfolio, but also lays the foundation for additional growth in SiC power electronics. Analysts forecast sustained growth for the SiC device market over the coming decades – the electrification of our world is still in its infancy.

We also made significant progress in the field of gallium nitride (GaN) power electronics in 2022. Since its commercial breakthrough two years ago, this material system has been opening up an increasing number of new applications. Several customers continued their build-up of production facilities for the large-scale production of GaN power semiconductors last year and numerous new customers chose GaN as their material system and ordered AIXTRON equipment. In addition to initial applications in consumer electronics, there is particularly strong growth in industrial applications – such as power supply for data centers and telecommunication facilities – as well as in photovoltaics. Further applications are set to follow and will help make our vision of efficient, compact, and fast electricity conversion a reality, thus largely replacing the incumbent material silicon.

In optoelectronics, we were able to meet consistently strong demand for systems to manufacture lasers for optical data communication via glass fiber optic networks. The megatrend digitalization continues to drive strong growth in data transmission volumes – be it for video streaming, virtual meetings, or cloud and edge computing. We have also been working closely with customers on the development of micro LEDs for the next generation of displays. Micro LED displays are far superior to conventional LCD- or OLED-based displays in terms of image quality: they consume up to 90% less energy and also offer greatly superior luminosity and color gamut. This makes Micro LED displays particularly attractive for mobile devices such as smartwatches, smartphones, and augmented reality glasses, but also for next-generation televisions. In this particular field, we received our first volume production order for Micro LEDs supporting the target to launch the first commercial Micro LED product on the market. This is a first, highly promising step into a further new market segment.

All these developments demonstrate that compound semiconductors play an increasingly significant role in the semiconductor industry and are gradually opening up further applications. We expect this trend to generate further growth in the coming years. In order to cope with this growing demand, we worked hard to strengthen our internal structures and processes across all areas of the company in 2022. In addition, our asset-light business model gives us considerable flexibility to adapt to rising production volumes. We receive valuable support in this regard from our business partners and suppliers, with whom we regularly exchange information on expected business developments. We also actively support them with their own development and systematically qualify new partners to meet anticipated volume growth. In view of the prevailing shortage of materials in the manufacturing sector, these measures proved to be highly effective in fiscal 2022: despite global supply chain bottlenecks, we were able to satisfy all customer requirements and at the same time increase revenues.

Our customer proximity and strong connection to the academic world allow us to identify industrial and technological trends at a very early stage and to incorporate these insights into our processes to develop products that best meet customer requirements in terms of performance and cost. With our completely revamped product portfolio, we expect to achieve or maintain strong positions in all our markets – both now and in the future. Following the launch of the G10-SiC, we also recently introduced our G10-AsP platform on the market. A further product platform will follow in the current year.

Our Executive Board Members Dr. Jochen Linck, Dr. Felix Grawert and Dr. Christian Danninger (from left to right).

AIXTRON also plays a pioneering role when it comes to ecological sustainability: we have been carbon neutral since 2019 and AIXTRON was one of the first companies to report EU taxonomy aligned figures in 2021 – when it was still voluntary. We made further progress in this field in the fiscal year 2022: our taxonomy alignment for revenues is now 58%, for OpEx 73%, and for CapEx 38%. The driving force behind these figures are our markets, as environmentally sustainable applications in the field of SiC power electronics and micro LEDs in particular accounted for a higher share of revenues last year. Our sustainable business model is also reflected in the positive and steadily improving ESG ratings we received, e.g. the upgrade of our MSCI rating from A to AA.

The key to our success are our employees. Their creativity and problem-solving skills, their experience and industry know-how, combined with an outstanding commitment to performance, continue to be the foundation of AIXTRON. In 2022, we were able to recruit more than 230 highly skilled colleagues who will help us successfully scale up for future growth. After all, we are extremely optimistic about the future. And this is reflected in our strong, AIXTRON-specific corporate culture and the special spirit that permeates the company. We will continue to carefully nurture this culture with a great sense of responsibility. Our special thanks go to all our colleagues for their dedication and hard work!

Our suppliers and business partners also played a decisive role in our success. Despite the constraints on global supply chains, they successfully contributed to another very strong year of growth for AIXTRON. We are also indebted to them. We would also like to express our sincere gratitude to the Supervisory Board for their trust and cooperation. Finally, we would like to thank you, our shareholders, for your confidence in us and in our ability to lead AIXTRON into a successful future of ecologically and economically sustainable growth.

The Executive Board of AIXTRON SE

Dr. Felix Grawert	**Dr. Christian Danninger**	**Dr. Jochen Linck**
Chairman	Member	Member

Supervisory Board Report

AIXTRON can again look back on a very successful fiscal year. Order intake increased by 18% and Revenues by 8% compared to the previous year. This development is the result of a consistent implementation of the corporate strategy pursued by the Executive Board and supported by the Supervisory Board.

The addressed growth markets of compound semiconductors developed very positively and enabled AIXTRON to benefit from this development with its leading technologies. The new successfully launched AIX G10-SiC system platform has already generated very strong customer interest in its initial phase. AIXTRON also has its supply chain under control and the Company is making great progress in attracting new employees to strengthen the Company's structures for further growth. Through targeted investments in research and development, AIXTRON is laying the foundations for future success, both in the short and long term.

In addition to commercial success, the Company is also focusing on ESG (Environment, Social and Governance) aspects. Further progress was made in this area and the very good results in the EU taxonomy aligned key figures again impressively demonstrate the good and sustainable path AIXTRON is on.

Throughout the reporting year, the Supervisory Board performed the duties and responsibilities entrusted to it by law, the Articles of Association, and the Rules of Procedure without limitation. The training and continuing education measures of the Supervisory Board members are appropriately supported by the Company.

Cooperation between the Supervisory Board and the Executive Board

The Supervisory Board continuously monitored the Executive Board in its management of the Company and advised it on all matters of importance to the Company, so that the Supervisory Board was always able to verify the legality and regularity, expediency, and economic efficiency of the Company’s management.

The Supervisory Board was directly involved at an early stage in all decisions of fundamental importance to the Company. The Executive Board informed the Supervisory Board regularly, promptly, and comprehensively about the course of business, corporate planning, and the strategic development of the AIXTRON Group. In addition, the Supervisory Board regularly consulted with the Executive Board on the Company’s risk situation, risk management, and compliance. Particular attention was paid to the areas of information security and ESG, about which the Executive Board also provided the Supervisory Board with comprehensive information. Based on the Executive Board’s reports, business developments and other events of importance to the Company were discussed in detail. The Supervisory Board approved the respective resolution proposals of the Executive Board after thorough examination and consultation.

The Supervisory Board did not make use of the opportunity to review the Company's books and records (Section 111 (2) of the German Stock Corporation Act (AktG)).

Cooperation with the Executive Board was characterized in every aspect by responsible and targeted action. The Executive Board fully complied with its reporting obligations to the Supervisory Board, both verbally and in writing.

The Executive Board supports the members of the Supervisory Board to an appropriate extent in the training and continuing education measures they are generally responsible for. In addition, the Company provides the members with up-to-date, topic-specific information material in order to keep them informed about current market trends in the semiconductor industry and important capital market issues. In addition, AIXTRON supports participation in further training events relevant to Supervisory Board activities. New Supervisory Board members are introduced to all relevant topics and processes in an onboarding program, in particular with comprehensive background information on the technologies and markets in which AIXTRON operates (recommendation D.11 German Corporate Governance Code 2022).

As Chairman of the Supervisory Board, I was also in regular contact with the Executive Board even beyond the Supervisory Board meetings. In addition to the current business situation and important business transactions, we discussed especially matters of strategic positioning of the Company.

Supervisory Board Meetings 2022

In 2022, the Supervisory Board held five ordinary meetings on February 23, May 24 and 25, September 20, and December 12, and three extraordinary meetings on July 25, November 18, and December 11. Of these, three meetings were held by videoconference (May 25, July 25, November 18). All other meetings were held in person. All members of the Supervisory Board attended the meetings held in 2022.

Prior to the meetings, all Supervisory Board members received detailed quarterly reports on the Company's situation, as well as other information, such as internal control reports, meeting minutes, Company presentations, analyst reports, consensus estimates, press releases, and the AIXTRON financial reports or financial news. These are made available via an encrypted digital platform specially set up for the Supervisory Board. The Supervisory Board obtained a comprehensive picture of the business situation before and during the meetings based on current financial figures as well as updated forecast reports and development plans (orders, revenues, competition, market shares). Deviations in the course of business from the planned budgets were explained and justified in detail.

In addition, the Supervisory Board focused intensively on the development progress of new equipment generations and their customer acceptance. These are key to the Company's ecologically and economically sustainable growth, resulting from the expected growth in AIXTRON’s target markets. The Supervisory Board also received detailed reports on the supply chain situation and the status of outstanding export licenses.

The meeting on **February 23, 2022**, focused on the annual and consolidated financial statements and the combined management report for fiscal year 2021 and the corresponding discussions and resolutions. In addition, the Supervisory Board discussed and approved the draft agenda presented and the form of conduction of the Annual

General Meeting 2022. Furthermore, the Supervisory Board discussed and approved the proposed Declaration of Corporate Governance. The non-financial report of AIXTRON SE and the Group (Sustainability Report) for fiscal year 2021 prepared by AIXTRON was extensively discussed, reviewed and approved. The non-financial consolidated report of AIXTRON SE was undertaken an independent limited assurance review by the auditor. In addition to the status on strategic projects, the Executive Board presented an internal efficiency program as well as measures to strengthen the organization in terms of structure and personnel. The winding up of the OLED subsidiary APEVA was also discussed, and the establishment of a service organization in Malaysia was explained.

At the meeting on **May 24, 2022**, the Executive Board explained the year-to-date business performance and the planned course of the 2022 Annual General Meeting, which was to be held virtually in accordance with the pandemic regulation once again for the protection of all participants. The Executive Board gave a detailed overview of the strategy and development in the Power Electronics technology segment based on the material systems gallium nitride (GaN) and silicon carbide (SiC), as well as on the progress of various strategy projects.

At the constituent meeting of the Supervisory Board, which was expanded by one person to now six members, on **May 25, 2022**, both the incumbent members of the Supervisory Board and the newly elected member of the Supervisory Board, Dr. Stefan Traeger, participated via video conference. At this meeting, Dr. Traeger was congratulated on his election and both the Chairman and his Deputy were confirmed as well as new appointments were made to the Supervisory Board committees.

During the meeting on **July 25, 2022**, the Executive Board reported on the business development in the 1st half of the year and provided an outlook for the second half of fiscal year 2022.

At the ordinary meeting on **September 20, 2022**, the Executive Board reported on the business development in the first half of the year as well as the development in the area of ESG and provided an outlook for the second half of the fiscal year 2022. The Supervisory Board received a comprehensive update on the strategy and development in the optoelectronics technology area. The strategy in general, and of the Micro LED technology area in particular, were discussed in detail. The Executive Board also presented the technology roadmap derived from its strategy. Following a presentation by the Executive Board on the current status of diversity within the Company, discussions were held on ways to further promote diversity at AIXTRON.

In the meetings on **November 18** and **December 11**, the Supervisory Board dealt with succession planning for the Supervisory Board.

On **December 12, 2022**, the Supervisory Board of AIXTRON SE held its last ordinary meeting of the year. The budget for 2023 presented by the Executive Board was discussed in detail and was approved by the Supervisory Board. The 2023 budget includes, among other things, the detailed revenue, earnings, financial and investment planning as well as the planned personnel development of the AIXTRON Group. Furthermore, the Supervisory Board discussed the agenda for the next Annual General Meeting on May 17, 2023 which is to be held in presence again for the first time since 2019. As part of the annual efficiency review, the Supervisory Board's activities were assessed and deemed effective using a comprehensively revised questionnaire. The appropriateness of the

Executive Board's remuneration was discussed and determined. In addition, the Executive Board's targets for subsequent years were set as part of the remuneration system. The rules of procedure for the Executive Board, the Supervisory Board and the Audit Committee were revised and adopted.

Committees

The Supervisory Board has formed four committees: an Audit Committee, a Capital Markets Committee, a Nomination Committee, and a Remuneration Committee. The committees prepare resolutions and issues to be dealt with in the plenary sessions of the Supervisory Board.

The **Audit Committee** deals with the monitoring of accounting, the accounting process, corporate governance & compliance, the effectiveness of the internal control system, the risk management system, the internal audit system, the audit of the financial statements as well as assessing the quality of the audit. The Chairwoman of the Audit Committee, Prof. Dr. Anna Weber, has expertise in the areas of accounting and auditing (Section 107 (4), Section 100 (5) of the German Stock Corporation Act (AktG)) as well as special knowledge and experience in the application of internal control and risk management systems. Accounting and auditing also include the non-financial (sustainability) reporting and its audit. Mr. Kim Schindelhauer, as a further member of the Audit Committee, also has expertise in the field of accounting.

In the year under review, the Supervisory Board commissioned KPMG AG Wirtschaftsprüfungsgesellschaft for the first time to audit the separate and consolidated financial statements and the combined management report of AIXTRON SE as of December 31, 2022. Based on an invitation to tender for the audit, the Audit Committee recommended to the Supervisory Board to propose to the general shareholders meeting to elect KPMG AG Wirtschaftsprüfungsgesellschaft as auditor for fiscal year 2022. The Annual General Meeting on May 25, 2022 followed this proposal with a large majority. KPMG was also appointed to review the content of the separate non-financial Group report to be prepared for fiscal 2022. In addition, the key audit matters to be mentioned in the auditor's report on the AIXTRON annual and consolidated financial statements 2022 were discussed with the auditor.

The Audit Committee consists of three members and met a total of six times in 2022 (February 23, May 24, September 20, October 24 and 26, December 12), of which two meetings were held virtually (October 24 and 26). All meetings were attended by Prof. Dr. Weber and all acting members of the Audit Committee. All resolutions were passed unanimously. For the quarterly financial statements as of March 31, 2021, June 30, 2021, and September 30, 2021, the Audit Committee held discussions with the auditors and accounting representatives in each case and discussed the publication of the quarterly figures in detail with the Executive Board.

In addition to the above-mentioned tasks and the quarterly accounting issues, the Audit Committee dealt with the following special topics, among others:

- Declaration of independence and ongoing monitoring of the auditor's independence
- Non-financial Group report (Sustainability Report), in particular implementation of the requirements of the EU Taxonomy Directive

- Risk management, in particular implementation of the requirements from the new version of the auditing standard IDW PS 340 n.F.
- Implementation of the requirements under the Financial Market Integrity Strengthening Act (Finanzmarktintegritätsstärkungsgesetz – FISG)
- Implementation of the amendments from the German Corporate Governance Code (GCGC 2022)
- Adequacy and effectiveness of the internal control system (ICS) and the risk management system (RMS)
- Internal audits 2022 and audit planning for the following year
- Compliance, esp. compliance training plan for 2022
- Information security, esp. cyber security risks
- Tax audits, esp. at AIXTRON SE
- Assessment of the quality of the audit of the financial statements

The **Capital Market Committee** is concerned with the evaluation of activities with potential capital market relevance. It consists of three members with Mr. Kim Schindelhauer as Chairman. No meetings were held in 2022.

In fiscal year 2022, the **Nomination Committee** consisted of four members with Mr. Frits van Hout as Chairman. The committee makes appropriate proposals to the full Supervisory Board in the event of new appointments to the corporate bodies. In doing so, it also considers the targets for the composition of the corporate bodies. During 2022, a total of three meetings was held (May 23, July 23, September 14) to search for suitable candidates for election to the AIXTRON Supervisory Board. All meetings were attended by all members in office. Two of these meetings were held virtually (July 23, September 14). As of January 1, 2023, Mr. Schindelhauer took over the role of Chairman from Mr. van Hout. Since then, the committee has consisted of three members.

The **Compensation Committee** mainly deals with issues relating to the remuneration of the Executive Board members, in particular its variable short-term and long-term remuneration components. No separate meetings were held in 2022.

Corporate Governance and Declaration of Conformity

The Supervisory Board continuously monitors the development of corporate governance standards and prepares a joint corporate governance report together with the Executive Board. The Supervisory Board will continue to support the Executive Board in its efforts to fully comply with the recommendations of the German Corporate Governance Code ("GCGC").

In the current Declaration of Conformity pursuant to Section 161 of the German Stock Corporation Act (AktG) dated February 2023, full compliance with the recommendations of the German Corporate Governance Code is declared, except for the deviation explained.

No conflicts of interest involving members of the Supervisory Board or Executive Board were reported in the fiscal year.

Audit, Annual Financial Statements and Non-Financial Report

In accordance with the resolution of the general shareholders meeting on May 25, 2022, the Supervisory Board commissioned KPMG AG Wirtschaftsprüfungsgesellschaft, Essen, Germany with the audit of the annual financial statements and the consolidated financial statements as well as the combined management report of AIXTRON SE for fiscal year 2022. The audit was performed by the audit team of the lead auditor Dr. Kathryn Ackermann.

The **audits also covered** the measures taken by the Executive Board to identify risks at an early stage that could jeopardize the success and continued existence of the Company. It was also agreed that the auditor must inform the Supervisory Board or make a note in the audit report if, during the performance of the audit, it ascertains facts that show a misstatement in the Declaration of Conformity issued by the Executive Board and Supervisory Board in accordance with Section 161 of the AktG. As in previous years, such a determination was not necessary for the 2022 fiscal year.

The annual financial statements and the combined management report of AIXTRON SE and the AIXTRON Group as of December 31, 2022, were prepared in accordance with the rules of the German Commercial Code (HGB), the consolidated financial statements and the group management report as of December 31, 2022, were prepared in accordance with Section 315e HGB on the basis of the International Financial Reporting Standards IFRS. The independent auditing Company KPMG AG audited the annual financial statements and the consolidated financial statements and combined management report prepared by AIXTRON SE for fiscal year 2022 and has reviewed the separate non-financial report of the group. The financial statements including the combined management report were issued with an unqualified audit opinion. The non-financial consolidated report received the note on an audit to obtain limited assurance. The auditors found that the combined management report of the Company and the Group accurately presents the current business and future development of the Company and the Group.

The financial statement documents (annual financial statements of AIXTRON SE and consolidated financial statements as of December 31, 2022, as well as the combined management report of AIXTRON SE and the Group), the proposal for the appropriation of profits, the separate Group non-financial report as well as the auditor's reports were submitted to the Audit Committee and the Supervisory Board in a timely manner. These documents were reviewed in detail by the Supervisory Board. In the meeting of the Audit Committee and the full Supervisory Board on February 27, 2023, both the annual financial statements of AIXTRON SE and the consolidated financial statements as well as the combined management report and the Group non-financial report were discussed and debated in detail, considering the audit reports of the auditor. The auditor, who attended both the Audit Committee meeting and the Supervisory Board meeting, reported on the main results of its audit, which also included the internal control and risk management system regarding the accounting process, and was available to the Audit Committee and the Supervisory Board, respectively, for any additional questions and information.

The results of our own review did not give rise to any objections either to the Group non-financial report or to the annual financial statements, the consolidated financial statements and the combined management report. The combined management report is consistent with our own assessment of the situation and business development of the Company and the Group. We concurred with the auditor's findings, with which we fully agreed in terms of content and approved the annual financial statements and the consolidated financial statements as well as the combined management report prepared by the Executive Board, as well as the Group non-financial (sustainability) report of the Company for fiscal year 2022, by resolution dated February 27, 2023. The annual financial statements of AIXTRON SE were thus formally adopted.

Note of thanks from the Supervisory Board

On behalf of the Supervisory Board, I would like to thank the members of the Executive Board and all employees of the AIXTRON Group for their extraordinary commitment in fiscal year 2022, which was characterized by many in particular external challenges. The entire Supervisory Board would also like to thank the employee representatives for their constructive cooperation with the Company's executive bodies in this successful and challenging year.

Herzogenrath, February 2023

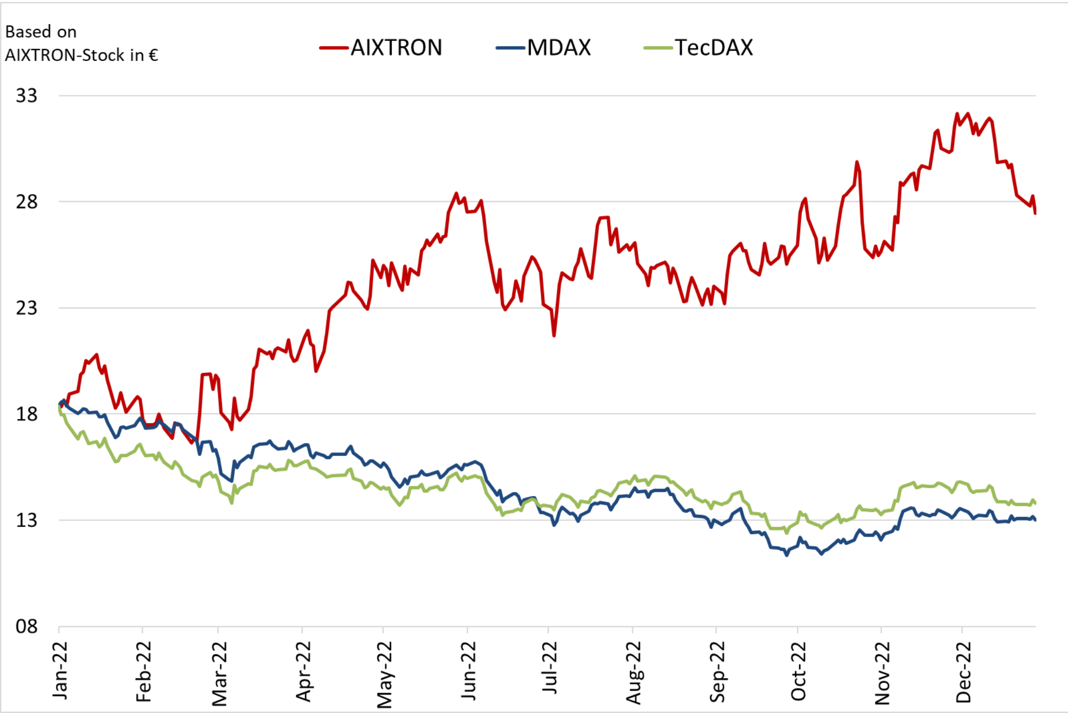
Kim Schindelhauer
Chairman of the Supervisory Board

THE AIXTRON SHARE

The AIXTRON share is listed in the Prime Standard of the Frankfurt Stock Exchange as well as in the MDAX and TecDAX. In Deutsche Börse's MDAX ranking, which includes a total of 50 stocks, it was ranked 15th in terms of market capitalization as of December 31, 2022 (2021: 42nd place). Among the 30 TecDAX members, the share marked an 8th place (2021: 17th place).

In addition to the traditional trading platforms such as XETRA and the German regional stock exchanges, trading in AIXTRON shares also takes place to a significant extent on alternative trading platforms such as Tradegate or Chi-X.

AIXTRON Share Price Development during 2022



AIXTRON Share: High Volatility and Significant Gains

The **AIXTRON share** benefited from the very successful business development of the group and was able to clearly set itself apart from the total market and the competition in the overall challenging market environment from March onwards. Due to the high valuation levels that had then been reached, technology stocks in particular reacted very sensitively to the news about the war in Ukraine, the associated sharp increase in inflation and interest rate hikes by the European Central Bank and the US Federal Reserve. The AIXTRON share was not always able to escape this development.

After a positive start to the stock market year 2022, the upward movement ended at the end of January and the subsequent downward movement was reinforced by interest rate movements and the beginning of the Russian invasion into Ukraine. The publication of the annual results for 2021 and the positive prospects for 2022 were able to break the downward trend in the following trading weeks. The share price rose significantly by the end of May. The announcement of further operational successes, the very good result for the first quarter of 2022 and positive studies from renowned analyst firms such as Jefferies or Exane supported this positive development.

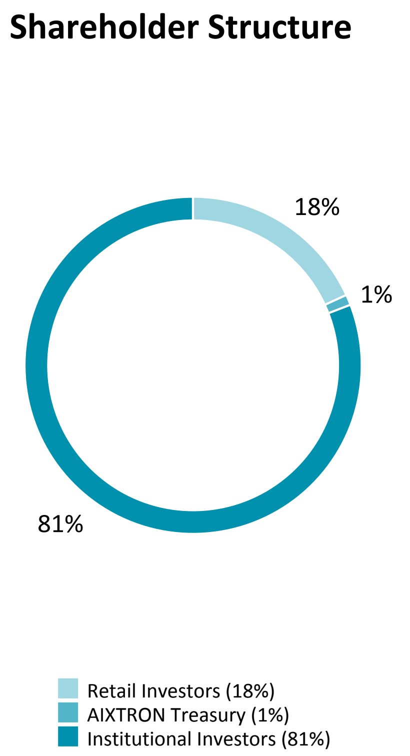
After profit-taking and a volatile month in June, the share traded around the barrier of EUR 21.18 in early July, only to reach its multi-year high of EUR 31.65 in early December. The publication of the third quarter results led to a short-term consolidation of the share. However, the share was able to quickly break through this trend, as investors assumed strong market growth for SiC, GaN and Micro LEDs. After the stock's excellent year-to-date performance, some investors took profits towards the end of the year.

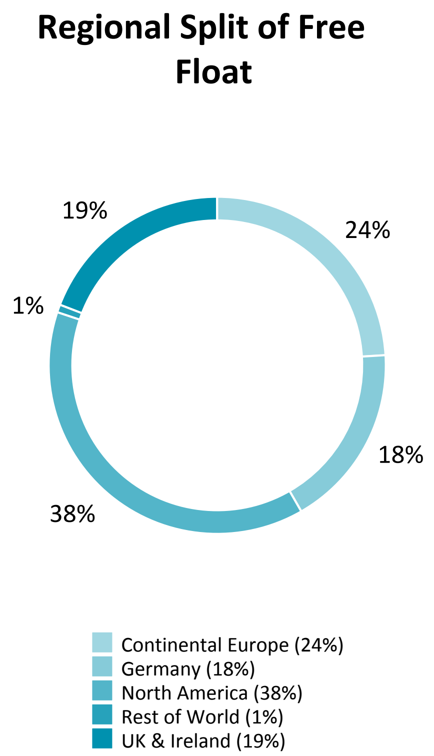
Despite the slight sell-off at the end of the 2022 stock market year, the AIXTRON share clearly set itself apart with a plus of 51% at a XETRA closing price of EUR 26.97 on December 30 compared to the benchmark indices, which fell significantly in value during this period. The market capitalization at the end of the year was EUR 3,057 million (year-end 2021: EUR 2,024 million). The benchmark indices MDAX and TecDAX fell by 28.5% to 25,117 points and 25.2% to 2,921 points over the course of 2022.

Broadly Diversified Shareholder Structure

As of December 31, 2022, around 18% of AIXTRON shares were held by private individuals (2021: 22%), mostly based in Germany. Around 82% of the outstanding AIXTRON shares were held by institutional investors (2021: 77%). The majority of institutional investors are based in North America (38%), followed by Great Britain and Ireland (19%) and Germany (18%). The remaining investors come from other parts of Europe and the rest of the world. According to voting rights notifications received by the end of 2022, Baillie Gifford & Co. was the largest single shareholder with 4.9%, followed by Bank of America Corp. with 4.8%, Invesco International Mutual Funds with 4.3% and Norges Bank with 3.7%. According to the definition of Deutsche Börse, 99% of the shares were in free float and around 1% of the AIXTRON shares were held by the company itself.

All voting rights notifications made in 2022 and thereafter in accordance with sections 33 et seq. of the German Securities Trading Act (WpHG) can be found on our website. Information on reportable holdings that currently exceed or fall below a certain threshold can be found in the appendix to this report.





Research-Coverage

During the fiscal year of 2022, a total of eleven international banks and brokerage houses (2021: twelve) published stock research reports on AIXTRON and the development of the semiconductor industry on a frequent basis. Barclays stopped analyzing AIXTRON shares last year. Nomura, Jefferies and Bank of America initiated coverage in 2022. Of the eleven financial analysts who observed our shares at the end of 2022, eight issued a buy recommendation and three recommended holding the AIXTRON share. The average target price at the end of December 2022 was EUR 25.00 (2021: EUR 23.55). At the end of the year, the AIXTRON share was covered by the following sell-side analysts (the current status can be found on our website):

Broker	Analyst	Location
Alster Research	Oliver Wojahn	Hamburg
Bank of America	Adam Angelov	London
Berenberg	Gustav Froberg	London
Deutsche Bank	Michael Kuhn	Frankfurt
DZ Bank	Armin Kremser	Frankfurt
Exane BNP Paribas	David O'Connor	San Francisco
Jefferies	Olivia Honychurch	London
Nomura	Donnie Teng	Hong Kong
Oddo BHF	Martin Marandon-Carlhian	Paris
Stifel (MainFirst)	Jürgen Wagner	Frankfurt
Warburg Research	Malte Schaumann	Hamburg

Investor Relations Activities Significantly Intensified

Our aim is transparency and openness in a continuous dialogue with our shareholders and participants in the capital market. Our Investor Relations work aims at strengthening long-term trust in our share and at achieving a fair valuation on the capital market. To this end, we provide our shareholders and the capital market with accurate, timely and relevant information both about the business of the AIXTRON Group and about the market environment. In addition, AIXTRON is committed to complying with the principles of good corporate governance.

In one-on-one or group discussions at investor roadshows and conferences, our management and Investor Relations team answered questions from investors and financial analysts on the business strategy and development of the AIXTRON Group as well as on industry and market trends. With more than 400 discussions (2021: 250) with 530 financial market players, the exchange was significantly intensified in the fiscal year of 2022.

Dividend Payout Increase

The virtual Annual General Meeting of AIXTRON SE took place on May 25, 2022. Around 64% of the share capital was represented. The Executive Board explained the results of the 2021 fiscal year and the first quarter of 2022 as well as the operational highlights and technologies of the AIXTRON Group. Together with the Chairman of the Supervisory Board, the Executive Board answered in detail the questions submitted by the shareholders ahead of the Annual General Meeting. For the 2021 fiscal year, AIXTRON significantly increased the dividend payment to shareholders to EUR 0.30 per share (2020: EUR 0.11 per share). This corresponded to a payout of EUR 33.7 million.

Dividend Proposal of EUR 0.31 per Share

In view of the strong operational and financial development in 2022, the company's solid financial position and the management's confidence in the long-term growth prospects, the Executive Board and Supervisory Board of AIXTRON SE will propose a dividend of EUR 0.31 per dividend-entitled share to the Annual General Meeting on May 17, 2023 (2022: EUR 0.30 per share). The total payout of EUR 34.8 million (2022: EUR 33.7 million) corresponds to a payout ratio of around 35% of AIXTRON's consolidated net income for the year (2022: around 35%), based on the number of shares outstanding as of December 31, 2022.

CORPORATE GOVERNANCE

Declaration of Corporate Governance

AIXTRON is committed to the principles of transparent and responsible corporate governance aimed at creating sustainable value. Through appropriate management and supervision of the Company, we – the Executive Board and the Supervisory Board – aim to merit the trust placed in us by our shareholders, the financial markets, our customers, business partners, employees, and the general public. We are convinced that this approach to corporate governance, as well as the responsible actions of our employees, are an essential basis for the success of our Company.

The Declaration of Corporate Governance in accordance with Sections 289f, 315d of the German Commercial Code ("Handelsgesetzbuch", HGB), as well as the current Declaration of Conformity in accordance with Section 161 of the German Stock Corporation Act ("Aktiengesetz", AktG) as adopted by the Executive Board and the Supervisory Board in February 2023, are permanently available on our website at Investors/Corporate Governance.

Declaration of Conformity

The German Corporate Governance Code ("Deutsche Corporate Governance Kodex", DCGK) was revised during the year under review. The new version dated April 28, 2022 became the basis for the Declaration of Conformity upon publication in the Federal Gazette on June 27, 2022 ("GCGC 2022"). The Executive Board and the Supervisory Board of AIXTRON SE declare that AIXTRON SE has complied with the recommendations of the GCGC 2022 and will continue to comply with them in the future with the following exception:

Consideration of the higher time commitment of the Chair and Deputy Chair of the Supervisory Board as well as the Chair and the members of committees in Supervisory Board compensation (G.17 GCGC 2022)

According to G.17 GCGC 2022, the remuneration of Supervisory Board members shall take into account, in an appropriate manner, the higher time commitment of the Chair and the Deputy Chair of the Supervisory Board as well as of the Chair and the members of committees. The Supervisory Board remuneration resolved by the Annual General Meeting on May 16, 2018, only takes into account the Chair and Deputy Chair of the Supervisory Board and the Chair of the Audit Committee in addition to membership of the Supervisory Board.

Further consideration of the Deputy Chair of the Audit Committee, Chair or Deputy Chair of other committees, and membership of committees is not deemed appropriate, as the time and effort involved in these activities is already adequately covered by the Supervisory Board remuneration.

Herzogenrath, February 27, 2023

AIXTRON SE

The Executive Board of AIXTRON SE

Dr. Felix Grawert
Chairman

Dr. Christian Danninger
Member

Dr. Jochen Linck
Member

For the Supervisory Board of AIXTRON SE

Kim Schindelhauer
Chairman of the Supervisory Board

Information on Corporate Governance Practices

AIXTRON SE has defined a **Code of Ethics** which applies throughout the Group and is primarily aimed at Executive Board members as well as managers and selected employees in the finance department. The aim of this Code is to promote upright and ethical conduct, including the handling of conflicts of interest, the timely disclosure of complete, accurate, and clear quarterly and annual reports, compliance with applicable laws, rules and regulations, and the prompt internal reporting of breaches of the Code where necessary, and to ensure accountability for compliance with the Code. It is published on the AIXTRON website under Code of Ethics.

In addition, a **Compliance Code of Conduct** applies to the Executive and Supervisory Boards, to the senior management team as well as to all employees throughout the Company, holding them accountable for responsible conduct in conformity with the law. Among the topics addressed, this Code covers the following issues: responsibility and respect towards people and the environment, compliance with the legal conditions, lawful and ethical conduct of each individual employee, loyalty to the Company, fair and respectful treatment of fellow employees, rejection of any form of discrimination, dealing responsibly with corporate risks, acting in an environmentally responsible manner, safety in all working areas, professionalism, reliability and fairness in all business relationships, compliance with guidelines on giving/accepting unfair advantages, dealing with insider information, and the treatment of Company property. The full text of the Compliance Code of Conduct can be downloaded from the AIXTRON website at Code of Conduct.

Furthermore, AIXTRON issued a Group-wide **Compliance Manual** which applies to all members of the Executive and Supervisory Boards, as well as to senior management, and which further sets out the principles of the Compliance Code of Conduct. The Compliance Manual provides detailed explanations on AIXTRON's compliance organization, the legal, regulatory and internal requirements, and the resulting conduct requirements for the Executive Board, Supervisory Board, senior management team, and employees. This Compliance Manual is regularly updated to reflect new and/or amended legal, regulatory and internal requirements, most recently in December 2022. The teaching of the contents is an elementary component of the Company-wide compliance training program. Compliance training is mandatory throughout the Group for members of the senior management team as well as for all other Company employees. It is controlled and monitored by our Compliance department.

In addition, every quarter all members of the Company's senior management team, as well as selected employees declare in writing that the compliance requirements were observed in their area of responsibility. If the Compliance Manual has been updated, they also declare that they will take note of the updated version, follow and communicate its contents within their area of responsibility, and monitor its implementation. Leadership principles have also been defined for the Company's managers, which include rules of conduct for managers when dealing with staff.

AIXTRON's corporate governance system is based on the Company's risks and opportunities. The main features of the **risk management system (RMS)** and the **internal control system (ICS)** are explained in the Group Management Report. The design of these systems is based on the legal framework and international standards – such as the German Stock Corporation Act (AktG), the German Corporate Governance Code (GCGC), or the auditing standard IDW PS 340 n.F. issued by the Institute of Public Auditors in Germany ("Institut der Wirtschaftsprüfer", IDW). The AIXTRON Group's Senior Vice President/Chief Compliance Officer is responsible for the implementation and maintenance of these systems and regularly reports to the Chief Financial Officer and the full Executive Board on the effectiveness of the installed corporate governance management systems. In addition, he regularly reports to the Audit Committee of AIXTRON SE's Supervisory Board or its Chairman. In fiscal year 2022, the risk management system (RMS) and the internal control system (ICS) were reviewed by external experts (Deloitte) with regard to the core elements, the framework and selected risks and controls on the basis of the auditing standards IDW PS 981 and PS 982. This review did not reveal any indications that speak against the appropriateness and effectiveness of these systems. Based on the information provided to the Executive Board of AIXTRON SE, it is not aware of any circumstances that could impair the appropriateness and effectiveness of the risk management system (RMS) or the internal control system (ICS).

AIXTRON also has a **whistleblower hotline**. Notifications of violations of legal, regulatory and internal company requirements can be sent confidentially to the Chairman of the Supervisory Board of AIXTRON SE via a specified e-mail address or in the form of a letter. The Chairman of the Supervisory Board decides together with the Compliance department, depending on the subject matter and scope of the report, whether to involve other persons and/or bodies. In the event of proven violations or grievances, the involved persons/bodies will work out proposed solutions with the aim of a prompt remedy, including any necessary sanctions and improvements to the management and monitoring processes. All information received will be treated discreetly, confidentially, and anonymously by the persons/bodies involved.

Furthermore, AIXTRON has established a **Vendor Code of Conduct** that defines ethical, moral and legal standards relating to the purchase and use of what are known as conflict minerals (gold, tantalum, tungsten, tin) within the AIXTRON supply chain. The key content of this Code includes information on regulations about the use of conflict minerals, the expectations placed on suppliers and the consequences in the event of non-compliance. The Vendor Code of Conduct is summarized in the Supplier Manual, which can be found on the AIXTRON website under Supplier Management.

Executive Board and Supervisory Board Operating Procedures as well as Composition and Mode of Operation of Committees

AIXTRON SE is a European stock company (Societas Europaea) and is subject not only to the German stock corporation law but also to the superordinate European SE regulations and the German SE Implementation Act. The Company has a two tier board structure consisting of an Executive Board and a Supervisory Board.

The Executive Board is responsible for managing the Company and informs the Supervisory Board regularly, comprehensively, and without delay about all relevant issues involving strategy, planning, business development, the risk situation, risk management, and compliance.

The Supervisory Board appoints the Executive Board members and monitors and advises the Executive Board in its management duties. To perform certain transactions and measures specified by law, the Articles of Association of AIXTRON SE, or the Executive Board's bylaws, the Executive Board must obtain the prior approval of the Supervisory Board. The Executive Board is required to report to the Supervisory Board on the conclusion, amendment, or termination of important agreements that do not require approval under the Articles of Association or the Executive Board's by-laws. The Executive Board is also required to notify the Supervisory Board of all material events, even those that do not require the approval of the Supervisory Board.

In 2022, the Executive Board and the Supervisory Board once again worked closely together for the benefit of the Company and all stakeholders. The shared objective is to secure and expand AIXTRON's leading market positions in the long term in order to benefit from growing end markets.

No committees have been set up by AIXTRON SE's Executive Board.

The Supervisory Board of AIXTRON SE has set up four committees, an Audit Committee, a Capital Market Committee, a Nomination Committee, and a Remuneration Committee. The Supervisory Board is authorized to establish additional committees from among its members.

The **Audit Committee** consists of a Chairwoman and two other members. As an independent member, the Chairwoman of the Audit Committee, Prof. Dr. Anna Weber, has expertise in the areas of accounting and auditing (Section 107 para. 4, Section 100 para. 5 AktG) and special knowledge and experience in the application of internal control and risk management systems. Sustainability reporting and the respective audit are also part of accounting and auditing. A further member of the Audit Committee, Mr. Kim Schindelhauer, also has expertise in the field of accounting. The members are also familiar in their entirety with the sector in which AIXTRON is represented, which is partially due to their many years of experience. The Audit Committee deals in particular with the audit of the accounting, the monitoring of the accounting process, corporate governance and compliance, the effectiveness of the internal control system, the risk management system, and the internal audit system. The Audit Committee also deals with the audit of the financial statements, the assessment of the quality of the audit, and the review of the Group Non-Financial Report to be prepared by the Company. The Audit Committee discusses with the auditor the assessment of the audit risk, the audit strategy and planning, and the audit results. The Chairwoman regularly confers with the auditor on the progress of the audit and reports her findings to the Audit Committee. In accordance with D.10 GCGC 2022, the Audit Committee also consults regularly with the auditor without the presence of the Executive Board. Furthermore, the Audit Committee submits to the full Supervisory Board a reasoned recommendation for the appointment of the auditor. This was done in November 2021 after the audit mandate for 2022 was re-tendered and a comprehensive selection process was conducted. In accordance with the resolution of the Annual General Meeting of May 25, 2022, the Supervisory Board appointed KPMG AG Wirtschaftsprüfungsgesellschaft, Essen, as the new auditor. The Audit Committee monitors the necessary independence of the auditor and the additional services provided by the auditor. Finally, it deals with the issuing of the audit mandate to the auditor, the determination of auditing focal points, and the fee agreement. The Chairwoman of the Audit Committee, Prof. Dr. Anna Weber, reports regularly to the Supervisory Board on the work of the Audit Committee.

For the purpose of evaluating, supporting and implementing projects with capital market relevance, a **Capital Market Committee** was set up in 2014, consisting of three members, the Chairman of the Supervisory Board and two other members of the Supervisory Board.

The **Nomination Committee**, which consisted of the Chairman Mr. Frits van Hout and three other members of the Supervisory Board in fiscal 2022, makes selection proposals to the full Supervisory Board in the event of new appointments to executive bodies and discusses issues relating to the replacement of members of the Supervisory Board. As of January 1, 2023, Mr. Kim Schindelhauer took over as Chairman from Mr. van Hout. The Nomination Committee has since consisted of three members in total.

In addition, a **Remuneration Committee** has been established, which consisted of the same members as the Nomination Committee in 2022. This committee deals with the application of the remuneration system in accordance with the requirements of the German Act Implementing the Second Shareholder Rights Directive (ARUG II) and the GCGC. The Remuneration Committee continues to comprise four members. Its composition has not changed as of January 1, 2023.

Further details on the work of the Executive Board, Supervisory Board and committees during fiscal year 2022 can be found in this Annual Report in the Report of the Supervisory Board. Full details on the composition of the committees can be found in the section “Supervisory Board and its Composition”.

Executive Board and its Composition

According to Article 8 of AIXTRON SE's Articles of Association, the Executive Board consists of two or more people. The Supervisory Board determines the precise number of Executive Board members. It also decides whether there should be a Chairman and whether deputy members or a Deputy Chairman should be appointed. At the time of reporting, the Executive Board consists of three persons:

Executive Board
(as of December 31, 2022)

Name	Position	Since	End of Term
Dr. Felix Grawert	Chairman	August 14, 2017	August 13, 2025
Dr. Christian Danninger	Member	May 01, 2021	April 30, 2024
Dr. Jochen Linck	Member	October 01, 2020	September 30, 2023

Notwithstanding the Executive Board's overall legal responsibility and the obligation of the Executive Board members to collaborate closely and in confidence with their colleagues, the assigned responsibilities of the individual members of the Executive Board in accordance with the currently valid **business distribution plan** as of December 12, 2022 are as follows:

The **Chairman of the Executive Board, Dr. Grawert**, coordinates the work of the Executive Board and is also responsible for Strategic Planning, Marketing, Sales, Customer Service, and Innovation within the AIXTRON Group.

Executive Board member Dr. Danninger is responsible for the Group's Finance and Reporting, Human Resources, Investor Relations & Communications, ESG (Environment, Social and Governance), Corporate Governance, Compliance & Risk Management, Information Security, and Legal departments.

The Executive Board member Dr. Linck has Group-wide responsibility for Procurement, Manufacturing and Logistics, Product Cost Management, Quality Management, Facility Management, Information Technology, and Research and Development.

With the approval of the Supervisory Board, the Executive Board has adopted Rules of Procedure which are regularly reviewed for their appropriateness and topicality. Among other things, they contain a list of matters of fundamental or significant importance on which the Executive Board must formally resolve. This concerns, for example, decisions on the Company's strategies, business plans and budgets; material changes to the Company and Group organization; the commencement or cessation of areas of activity of the Company; the acquisition and sale of land or land rights; the conclusion, amendment and termination of corporate or significant license agreements; the award of major external consulting and research contracts; fundamental issues relating to human resources and personnel policy; determining the principles for representation in business organizations and associations; appointments to the management and supervisory bodies of subsidiaries and associated companies; important publications and information for the public outside of mandatory disclosure duties; initiating lawsuits and legal disputes; providing collateral and assuming guarantees.

The Rules of Procedure for the Executive Board and the Articles of Association each contain a catalog of significant transactions and measures that additionally require the prior approval of the Supervisory Board. The transactions and measures requiring approval under the Articles of Association or the Rules of Procedure include, for example, decisions on the establishment or sale of business premises, the acquisition or sale of land, the commencement or cessation of areas of activity, or the granting or taking out of loans.

In accordance with the Rules of Procedure, meetings of the Executive Board are held at least twice a month and whenever required for the good of the Company. Meetings of the Executive Board are convened and chaired by the Chairman of the Executive Board. Each member of the Executive Board can arrange an additional meeting on a specific topic at any time. If the Chairman of the Executive Board is unable to attend, the meeting is chaired by the member of the Executive Board designated for this purpose by the Chairman of the Executive Board, or by the oldest member of the Executive Board. The Executive Board constitutes a quorum if all members have been invited and more than half of its members are present at the time a resolution is adopted, whereby members of the Executive Board connected by telephone or video conference are deemed to be present. Unless otherwise stipulated by law, the Articles of Association or the Rules of Procedure, the Executive Board adopts resolutions by a simple majority of the votes cast. In the event of a tie, the Chairman of the Executive Board has the casting vote.

Each member of the Executive Board must disclose any conflicts of interest to the Supervisory Board without delay and inform the other members of the Executive Board accordingly. Members of the Executive Board may only take on secondary activities, in particular supervisory board mandates outside the Company, with the approval of the Supervisory Board.

Long-term Succession Planning for the Executive Board and Age Limit for the Executive Board

AIXTRON is a globally operating company in a highly dynamic and technologically demanding market environment. It is therefore of strategic importance for AIXTRON to have a competent Executive Board and to appoint suitable candidates to the Executive Board. Following the generational change on the Executive Board, the Supervisory Board is also pursuing long-term succession planning. The Nomination Committee bases its work on the requirements and competency profile that has been developed and described, which is continuously reviewed and refined. As part of succession planning, the Supervisory Board and the Executive Board will also discuss suitable internal candidates for the Executive Board. The age limit for the Executive Board is 65 and is set out in the Executive Board’s Rules of Procedure.

Supervisory Board and its Composition

Pursuant to Article 11 of AIXTRON SE’s Articles of Association, the Supervisory Board consists of six members. According to the Articles of Association, the members of the Supervisory Board are appointed until the end of the Annual General Meeting which resolves on the approval of the Supervisory Board’s activities for the fourth fiscal year after the term of office begins, whereby the fiscal year in which the appointment was made is not included. The Annual General Meeting may provide for a shorter term of office.

The Supervisory Board elects a Chairman and a Deputy Chairman from among its members. The Supervisory Board Chairman convenes and conducts the Supervisory Board meetings. If he is unable to do so, his Deputy takes over this function.

The Supervisory Board has adopted Rules of Procedure. They govern the tasks, rights and obligations of the Supervisory Board, the organization of meetings and resolutions, and the formation of committees. The Rules of Procedure of the Supervisory Board were last revised in December 2022. The Audit Committee has separate Rules of Procedure established by the Supervisory Board.

The Chairman of the Supervisory Board is generally available for discussions with investors but only to the extent that such discussions take place within a reasonable framework and the topics fall within the sole competence of the Supervisory Board. No discussions with the Chairman of the Supervisory Board were requested in the past fiscal year. Accordingly, no such discussions took place.

As of December 31, 2022, the composition of the Supervisory Board in accordance with the Articles of Association and as determined by the Annual General Meeting was as follows:

Composition of the Supervisory Board

(as of December 31, 2022)

Name	Position	Member since	End of term
Kim Schindelhauer[1)2)3)4)5)]	Chairman of the Supervisory Board, Chairman of the Capital Market Committee	2002	HV 2023
Frits van Hout [3)4)]	Deputy Chairman of the Supervisory Board, Chairman of the Remuneration and Nomination Committee	2019	HV 2024
Prof. Dr. Andreas Biagosch[2)]		2013	HV 2024
Prof. Dr. Petra Denk[3)4)]		2011	HV 2024
Dr. Stefan Traeger[1)2)3)4)]		2022	HV 2025
Prof. Dr. Anna Weber [1)]	Chairwoman of the Audit Committee	2019	HV 2024

[1)] *Member of the Audit Committee*
[2)] *Member of the Capital Market Committee*
[3)] *Member of the Nomination Committee*
[4)] *Member of the Remuneration Committee*
[5)] *Former AIXTRON Executive Board member*

Composition of Committees

(as of December 31, 2022)

Audit Committee	Capital Market Committee	Nomination Committee	Remuneration Committee
Prof. Dr. Anna Weber (Chairwoman)	Kim Schindelhauer (Chairman)	Frits van Hout (Chairman)	Frits van Hout (Chairman)
Kim Schindelhauer	Prof. Dr. Andreas Biagosch	Prof. Dr. Petra Denk	Prof. Dr. Petra Denk
Dr. Stefan Traeger	Dr. Stefan Traeger	Kim Schindelhauer	Kim Schindelhauer
		Dr. Stefan Traeger	Dr. Stefan Traeger

Independence of Supervisory Board Members and Cooperation between the Supervisory Board and the Executive Board

The Supervisory Board shall comprise what it considers to be a sufficient number of independent members (recommendation C.6 GCGC 2022). Accordingly, the Supervisory Board has set itself the goal that more than half of its members shall be independent (recommendation C.7 GCGC 2022). The Chairman of the Supervisory Board shall be independent of the Company and the Executive Board (recommendation C.10 GCGC 2022). AIXTRON considers Mr. Schindelhauer to be independent despite the period of time he has been a member of the Supervisory Board. During his time as Chairman of the Supervisory Board, Mr. Schindelhauer has always maintained a professional distance from the Company and the Executive Board and has fulfilled his monitoring and advisory duties by applying an appropriate critical attitude at all times (recommendation C.8 GCGC 2022).

As all members of the Supervisory Board, which consists exclusively of elected shareholder representatives, are therefore to be regarded as independent, this recommendation is also met.

The Supervisory Board includes Mr. Schindelhauer, a former member of the Executive Board, whose term of office as a member of the Executive Board, however, was more than two years ago (see also C.7 GCGC 2022). The Supervisory Board therefore complies with recommendation C.11 of the GCGC 2022 that it shall not include more than two former members of the Executive Board.

The Supervisory Board must include at least one member with expertise in the field of auditing and at least one other member with expertise in the field of accounting. These requirements are met by the two members, Prof. Dr. Weber and Mr. Schindelhauer.

Ahead of the Supervisory Board meeting in December 2022, the members of the Supervisory Board received the self-evaluation questionnaire, which was comprehensively revised by the Chairman of the Supervisory Board. After evaluation of the questionnaire, the Supervisory Board determined that the Supervisory Board performs its activities effectively in accordance with recommendation D.12 of the GCGC 2022.

Further mandates of the members of the Executive Board and the Supervisory Board are listed in the Notes to the Consolidated Financial Statements in section 36 “Supervisory Board and Executive Board”.

The Company did not enter into or carry out any material transactions with any related parties in the fiscal year 2022.

The Audit Committee is chaired by Prof. Dr. Weber, an independent and expert member of the Supervisory Board in accordance with recommendation D.3 GCGC 2022. She is not the same person as the Chairman of the Supervisory Board. In the persons of Prof. Dr. Weber and Mr. Schindelhauer, the Audit Committee includes one member with expertise in the field of auditing and one further member with expertise in the field of accounting.

Like the Audit Committee, the Supervisory Board holds four regular meetings per calendar year. Extraordinary Supervisory Board meetings as well as meetings of the Audit, Nomination, Remuneration, and Capital Market Committees are convened as required.

At the request of the Chairman of the Supervisory Board, or the Chairpersons of the Committees, the Executive Board regularly attends the ordinary meetings (generally four times a year) of the Supervisory Board or individual committee meetings, reports in writing and orally on the individual agenda items and draft resolutions, and answers the questions of individual Supervisory Board members. Between meetings, all members of the Supervisory Board receive detailed quarterly reports from the Executive Board on the situation of the Company. In addition, the Chairman of the Supervisory Board or the Chairwoman of the Audit Committee are informed by the Executive Board about important developments and upcoming important decisions in telephone calls and personal discussions. In accordance with recommendation D.6 GCGC 2022, meetings are also held without participation of the Executive Board.

As a rule, resolutions of the Supervisory Board and its committees are passed at the meetings. In justified exceptional cases, Supervisory Board members may also participate in a meeting of the Supervisory Board or a committee by telephone or video conference. The Supervisory Board and its committees each constitute a quorum if two thirds of the members participate in the adoption of the resolution (outside of meetings by means of a vote conducted in writing, by fax, by telephone or by e-mail, or by a combination of the aforementioned communication media, provided that no member of the Supervisory Board objects to this procedure). Resolutions require a simple majority of the votes cast. In the event of a tie, the chairman of the meeting has the casting vote.

Each member of the Supervisory Board shall disclose to the Supervisory Board any conflicts of interest, in particular those that may arise as a result of a consultancy or directorship function with customers, suppliers, lenders or other third parties. Any conflicts of interest on the part of a member of the Supervisory Board that are material and not merely temporary shall result in that person having to resign from office.

Self-evaluation of the Supervisory Board

In fiscal year 2022, the Supervisory Board conducted an internal self-evaluation based on a questionnaire, taking into account AIXTRON-specific criteria. The results were discussed by the Supervisory Board and confirmed that cooperation both within the Supervisory Board and with the Executive Board was characterized by a high degree of trust and openness and was always professional and constructive. The Supervisory Board and its committees were also considered to be adequately informed and effective in their work. Hence there is no fundamental need for change.

Information on the Equal Representation of Men and Women as per Section 76 para. 4 and Section 111 para. 5 AktG

Pursuant to Sections 76 para. 4, 111 para. 5 AktG, the supervisory boards and executive boards of companies listed on the stock exchange or subject to co-determination must set target figures for the proportion of women on their supervisory boards, executive boards and the two management levels below the executive board. The GCGC 2022 reflects these regulations in principle 3 and principle 9 sentence 2 for the executive board and in recommendation C.1 sentence 2 for the supervisory board.

AIXTRON aims to increase both the proportion of women and the internationality of its employees and managers. In doing so, the Company is primarily committed to the professional and social skills of all employees.

The **Supervisory Board** of AIXTRON SE has set the following **target figures for the proportion of women** to be reached by **December 31, 2025**:

Level	Target as of 31.12.2025	Women's quota as of 31.12.2022	Determined by
Supervisory Board	33%	33%	Supervisory Board
Executive Board	0%	0%	Supervisory Board

Since initially setting the target figures, the Supervisory Board of AIXTRON SE was first reduced from six to five members. On May 25, 2022, the Annual General Meeting elected Dr. Stefan Traeger as a new member of the Supervisory Board. As a result, the Supervisory Board consists of six members again. It continues to include two women, bringing the proportion of female Supervisory Board members to around 33% as of December 31, 2022. The current composition of the Executive Board is in line with the target set for the Executive Board.

The **Executive Board** of AIXTRON SE has set itself the objective of specifically promoting women in the Company. In line with this objective, the Executive Board has now raised the **targets for the proportion of women** to 10% for the first level below the Executive Board and to 20% for the second level below the Executive Board. These targets are to be achieved by **December 31, 2025**.

Level	Target as of 31.12.2025	Women's quota as of 31.12.2022	Determined by
1. tier management	10%	4%	Executive Board
2. tier management	20%	26%	Executive Board

Based on the current composition of the Executive Board, no changes in the composition are initially planned until the end of 2025, so that the target for the proportion of women on the Executive Board valid until December 31, 2025 has been set at 0%. The proportion of women at all management levels will be prioritized as part of long-term succession planning. To this end, the Executive Board has rolled out various personnel development initiatives that promote the advancement of young female talent at AIXTRON. These include, for example, coaching and mentoring programs for selected female managers. In addition, there were regular women's network meetings in 2022, which enabled participants to share their views on strategic corporate management topics. In order to ensure equal participation of women in management positions, the Supervisory Board and Executive Board of AIXTRON SE are focusing even more on women when evaluating job candidates.

Diversity Concept for Executive Board and Supervisory Board; Objectives for the Composition of the Supervisory Board and Ctatus of Implementation

Executive Board

As required by the GCGC 2022, AIXTRON has addressed the issue of objectives with regard to an appropriate level of diversity in the Company's management (recommendations B.1 and C.1).

When proposing the appointment of new members to the Executive Board by the Nomination Committee, the Supervisory Board takes into account their personal and professional suitability, international experience and leadership qualities, the age limit set for members of the Executive Board, and diversity – also with regard to aspects such as age, gender, and educational and professional background. The Executive Board shall consist of members with different, complementary skill profiles as well as a sufficient age mix and possess different personalities.

In addition to the above-mentioned qualities, members of the Executive Board should, as far as possible, have different knowledge and experience as well as educational and professional backgrounds, both individually and in their entirety as a team. In view of the Company's international orientation, experience abroad is an advantage. In its search for suitable candidates to fill vacant positions on the Executive Board, the Supervisory Board took account of the diversity concept and, as part of this, also considered female candidates.

Supervisory Board

The Supervisory Board has set the target for the proportion of women on the Supervisory Board at 33% by December 31, 2025. With Prof. Dr. Petra Denk and Prof. Dr. Anna Weber, two of the six members of the Supervisory Board are currently women, corresponding to a proportion of around 33%.

The targets for the composition of the Supervisory Board are shown in detail below:

- When proposing candidates for election to the Supervisory Board, the Nomination Committee ensures that the Supervisory Board always includes members who, individually and collectively as a team, have the knowledge, skills and professional experience required to properly perform their duties. Furthermore, the members should be independent. In this way, the Nomination Committee contributes to increasing the efficiency and transparency of the selection process. As a general rule, Supervisory Board members should be elected for the longest period of time permitted by the statutes.

- AIXTRON is strongly export-oriented. Experience in AIXTRON's specific electronics and semiconductor markets is therefore a great advantage.
- As a general rule, an age limit of 70 should be appropriate for Supervisory Board members upon retirement. New Supervisory Board members should be available to the Company for at least two election periods.
- It is desirable that the individual members of the Supervisory Board have the most diverse education, qualifications, expertise and international experience possible in order to have the knowledge, skills and professional experience necessary to properly perform their duties. Company- and product-oriented coverage with an understanding of the business model, the industry-specific features and the processes in the various areas of business administration, accounting, auditing, corporate development, capital markets, technology, special equipment manufacturing, markets/sales, semiconductor market etc. are advantageous.
- It is in the best interests of the Company to utilize the potential of well-trained and motivated employees of different nationalities and genders. The Supervisory Board considers appropriate participation of women on the Supervisory Board to be very important. This is reflected in the current proportion of women on the Supervisory Board of around 33%.
- In its opinion, the Supervisory Board should have a sufficient number of independent members, whereby a member of the Supervisory Board shall not be considered independent in particular if he or she has a business or personal relationship with the Company, its executive bodies, a controlling shareholder, or a company affiliated with the latter that could give rise to a material and not merely temporary conflict of interest.
- More than half of the Supervisory Board shall consist of independent members.
- No more than two former members of the Executive Board shall be members of the Supervisory Board.
- The members of the Supervisory Board shall not exercise any executive or advisory functions at major competitors of the Company.
- At least one member of the Supervisory Board must have expertise in the field of accounting and at least one other member of the Supervisory Board must have expertise in the field of auditing. These two members shall then also be members of the Audit Committee.
- Due to the increased demands on the professionalization of the Supervisory Board's members and in order to simultaneously ensure the greatest possible efficiency of the Supervisory Board's activities as in previous years, new Supervisory Board members shall not hold more than five mandates in other listed companies or other companies if they have comparable requirements, whereby a supervisory board chairmanship counts double.

In addition to the objectives set for its composition, the Supervisory Board has also drawn up a skills profile for the Supervisory Board as a whole. In view of AIXTRON's business activities and the markets addressed by the Company, the Supervisory Board shall have expertise in the areas of technology, finance/accounting, capital markets, strategy and corporate governance, and in ecological sustainability topics of relevance to AIXTRON SE. Furthermore, a grown network of contacts and many years of experience in the respective disciplines are advantageous.

The requirement for diversity within the Supervisory Board (recommendation C.1 sentence 2 GCGC 2022) is taken into account, among other things, as a result of the diverse skills of the individual Supervisory Board members (with regard to areas such as finance, capital markets, M&A, and technology and markets).

The Executive Board and the Supervisory Board of AIXTRON SE are convinced that the composition of the Supervisory Board fully complies with its own objectives and skills profile as well as with the requirement of the current GCGC for appropriate diversity and an appropriate number of independent Supervisory Board members.

In the following qualification matrix (recommendation C.1 GCGC 2022), the Supervisory Board presents a clear overview of the implementation status of the desired skills profile for the Supervisory Board as a whole:

	Kim Schindelhauer	Frits van Hout	Prof. Dr. Andreas Biagosch	Prof. Dr. Petra Denk	Dr. Stefan Traeger	Prof. Dr. Anna Weber
Membership duration						
Member since	2002	2019	2013	2011	2022	2019
General suitability						
Independence [1]	+	+	+	+	+	+
No overboarding	+	+	+	+	+	+
Diversity						
Year of birth	1953	1960	1955	1972	1967	1984
Gender	m	m	m	w	m	w
Nationality	German	Dutch	German	German	German	German
International experience	+	+	+		+	+
Educational background	Business Admini-stration	Physics	Mechanical Engineering and Business Admini-stration	Physics and Business Admini-stration (EBW)	Physics and Business Admini-stration (MBA)	Business Admini-stration
Professional knowledge [2]						
Company management [3]	+	+	+		+	
Strategy	+	+	+	+	+	
Sales & marketing	+	+			+	
Operations	+	+	+		+	
Digitalization		+	+		+	
Personnel / HR	+	+	+	+	+	+
Capital market / IR	+	+			+	
Accounting and Auditing	+					+
Legal / Compliance / Corporate Governance	+		+		+	+
Sustainability / ESG	+			+	+	+
Knowledge of technologies & markets						
Semiconductor (equipment) industry	+	+	+	+	+	
Compound semiconductors	+	+	+	+		

[1] *In accordance with the German Corporate Governance Code*

[2] *Criterion met (+), based on self-assessment by Supervisory Board member*

[3] *Experience as Executive Board member of capital market-oriented companies of similar complexity or comparable experience*

Due to her many years of experience as an auditor, as well as a member of the Supervisory Board of another listed company – also serving as the Chairwoman of its Audit Committee – and her professorship for general business administration focusing on external accounting, the Chairwoman of the Audit Committee of AIXTRON SE, Prof. Dr. Anna Weber, is deemed to have expertise in the field of accounting and auditing. Moreover, the Chairman of the Supervisory Board, Mr. Kim Schindelhauer (member of the Audit Committee), is deemed to have expertise in the field of accounting. He served as Chief Executive Officer, Chief Financial Officer, and Chief Commercial Officer of AIXTRON for many years and held various management positions in the financial divisions of other international groups (recommendation D.3 GCGC 2022).

Information on the Remuneration of the Executive Board and Supervisory Board and on the Remuneration System of the Executive Board

Detailed information on the structure and amount of remuneration paid to the individual Executive Board members and on the remuneration of the members of the Supervisory Board as well as an exact list of the outstanding Executive Board stock options can be found in the Company's Remuneration Report.

The remuneration system pursuant to Section 87a para. 1 and para. 2, sentence 1 AktG approved by the 2020 Annual General Meeting pursuant to Section 113 para. 3 AktG with an approval rate of 90.3% is publicly available on the Company's website under Executive Board Remuneration Policy. In accordance with Section 113 para. 3 AktG, the Annual General Meeting 2021 confirmed the remuneration of the Supervisory Board; this resolution is also available on the Company's website under Voting Results AGM 2021. A Remuneration Report prepared in accordance with Section 162 AktG for the past fiscal year, together with an auditor's report in accordance with Section 162 AktG, is also available on the Company's website under Executive Board Remuneration Report.

Shareholders and Annual General Meeting

In fiscal year 2022, the Annual General Meeting was once again held in completely virtual form on May 25, 2022 due to the COVID-19 pandemic and the associated contact restrictions. The invitation to the Annual General Meeting was published in due time in the German Federal Gazette ("Bundesanzeiger") in accordance with the statutory requirements and contained, among other things, the agenda with the proposed resolutions of the administration or the Supervisory Board as well as the conditions for attending the Annual General Meeting and exercising voting rights. All reports and documents required by law were available on the AIXTRON website, in the Annual General Meeting section, from the time the Annual General Meeting was convened. Immediately after the Annual General Meeting, AIXTRON published the attendance and voting results on its website.

Ten out of eleven agenda items were put to the vote. All resolutions were passed with clear majorities, with almost 64% of AIXTRON's share capital being represented at the Annual General Meeting at the time of voting.

Transparency

To ensure maximum transparency, AIXTRON regularly and promptly informs interested parties such as customers, suppliers, shareholders, shareholder associations, potential investors, financial analysts, and the media of the Group's business developments. The internet is the primary communication channel used for this purpose.

Reports on the business situation and financial results of AIXTRON SE and the AIXTRON Group are made available in German and/or English, in the form of:

- The Annual Report with the Consolidated Financial Statements, the Combined Management Report and the Supervisory Board Report.
- The Financial Statements of AIXTRON SE, with the Combined Management Report.
- The Group Non-Financial Report (Sustainability Report).
- The Interim Financial Reports.
- Quarterly conference calls for the press and analysts with their respective transcripts.
- Company presentations.
- Publication of insider information, corporate and press releases.

The date of the Annual General Meeting or the publication dates of the financial reports are listed in the Company's Financial Calendar on the AIXTRON website. This calendar, as well as the reports, speech manuscripts, presentations, webcasts, and announcements listed above, can be freely viewed on the AIXTRON website.

Accounting and Audit of the Annual Financial Statements

The quarterly reports as of March 31, June 30, September 30, and the consolidated financial statements as of December 31, 2022 were prepared in accordance with International Financial Reporting Standards (IFRS). The Separate Financial Statements of AIXTRON SE for fiscal year 2022 and the Combined Management Report were prepared in accordance with the provisions of the German Commercial Code (HGB) and the German Stock Corporation Act (AktG).

The Consolidated Financial Statements and the Separate Financial Statements of AIXTRON SE were audited by the auditor and approved and adopted by the Supervisory Board. It was agreed with the auditor that the Chairman of the Supervisory Board or the Chairwoman of the Audit Committee would be informed immediately of any reasons for exclusion or exemption or any inaccuracies in the Declaration of Conformity that arise during the audit. No such duties to inform were triggered in the year under review.

Remuneration Report

The remuneration report describes the main features of the remuneration system of AIXTRON SE and explains the amount and structure of the remuneration of the Executive Board as well as the remuneration of the Supervisory Board in accordance with the Articles of Association for the 2022 fiscal year. The remuneration of the individual members of the Executive Board and the Supervisory Board is disclosed on an individual basis. The remuneration report for fiscal year 2021 was approved by the Annual General Meeting on May 25, 2022.

This report complies with the requirements of the Act Implementing the Second Shareholders' Directive (ARUG II) pursuant to Section 162 of the German Stock Corporation Act (AktG). For reasons of easier readability, we only use the grammatical masculine form here. It represents people of all genders: male, female, diverse.

Principles of the Remuneration System

The remuneration system for the Executive Board of AIXTRON SE was introduced in 2020. It is in line with the content-related requirements of ARUG II and is based on the recommendations of the German Corporate Governance Code in the version dated April 28, 2022 (“GCGC 2022”). A detailed description of the remuneration system for the Executive Board which was approved by the Annual General Meeting on May 20, 2020 can be found on the AIXTRON SE website under Executive Board remuneration system.

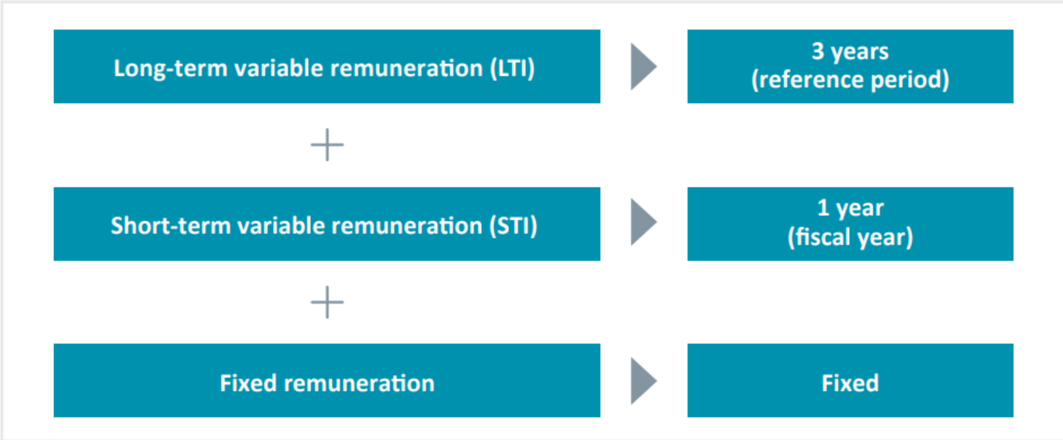
The remuneration system for the 2022 fiscal year applies to the contracts of all Executive Board members for the period from January 1, 2022 to December 31, 2022. The structure of the remuneration of the Executive Board at AIXTRON SE is designed to provide incentives for ecologically and economically sustainable development of the Company as well as for long-term commitment by Executive Board members.

Based on the remuneration system, the Supervisory Board determines the specific remuneration of the individual members of the Executive Board. Within the scope of what is legally permissible, the Supervisory Board targets to offer the members of the Executive Board a remuneration scheme that is customary in the market and at the same time competitive in order to be able to attract outstanding personalities to AIXTRON SE and retain them in the long term.

On the basis of the remuneration system, the Supervisory Board sets a target for the total remuneration for each Executive Board member for the upcoming fiscal year, which consists of three components:

- **fixed remuneration,**
- **short-term performance-related variable remuneration** (short-term incentive, **STI**), and
- **long-term performance-related variable remuneration** (long-term incentive, **LTI**).

Remuneration Structure



Fixed remuneration consists of fixed, non-performance-related base remuneration, which is paid out as a monthly salary. Other components of fixed remuneration include fringe benefits, such as a company car, allowances for individual private pensions, and the assumption of costs for other insurance policies.

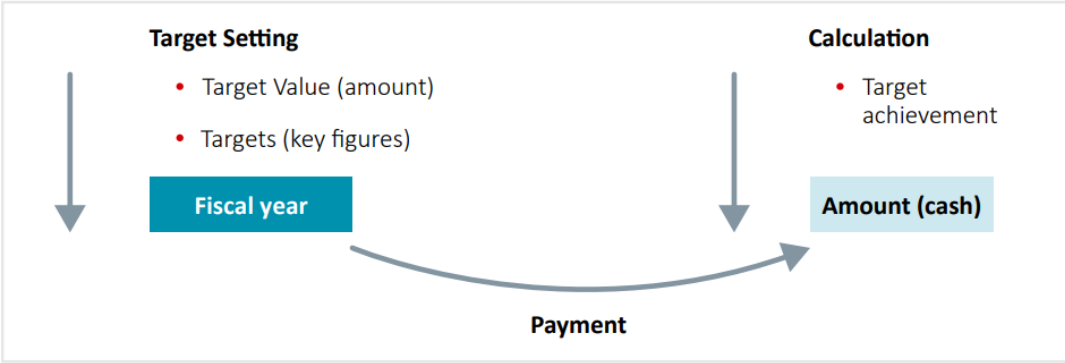
The **variable remuneration** is directly linked to the strategy and the performance of the AIXTRON Group and consists of the short-term STI and the long-term LTI. The amount of the two variable remuneration elements depends on the achievement of financial and non-financial performance criteria. In the interests of the shareholders, the company does not publish the details of individual market-related KPIs that could allow competitors to draw conclusions about the strategic intentions of the company. The weighting and KPI value of each target are determined before the beginning of each fiscal year by the Supervisory Board and the result is solely determined by the actual KPI achievement without any discretionary adjustments.

Short-term Performance-Related Variable Remuneration

The short-term, performance-related remuneration **Short Term Incentive (STI)** is based on the performance achieved by the AIXTRON Group in the fiscal year and is granted entirely in cash.

The STI is measured based on the key indicators of consolidated net income, the market position of the AIXTRON Group and financial and operational targets. The relative weighting is 70% for the consolidated net income, 15% for the market position and 15% for financial and operational goals.

Short-term Variable Remuneration (STI)



The **targets are set** prior to the start of a fiscal year: The Supervisory Board establishes the STI's target value and the targets based on the aforementioned indicators. In the event of 100% target achievement, the individual target STI of the Executive Board members varies from 1.1% to 1.75% of the consolidated net income for the year pursuant to the budget approved by the Supervisory Board for the fiscal year.

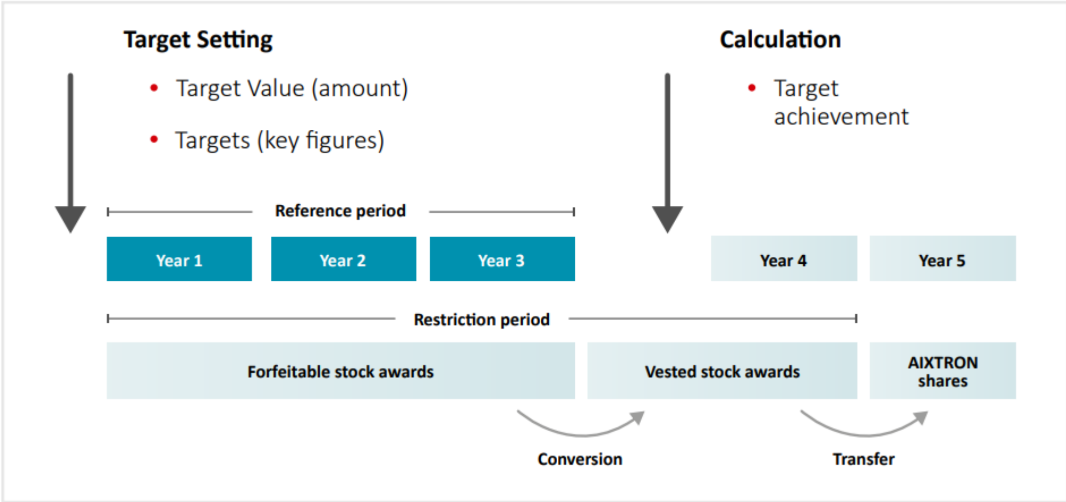
STI **target achievement** is determined after the expiry of the fiscal year. This is capped at a maximum of 250% target achievement. No STI is paid if the consolidated net income for the year is negative, i.e. in years in which the Company posts a loss. STI is paid out in cash after the Supervisory Board has approved the consolidated financial statements.

Long-term Performance-Related Variable Remuneration (LTI)

The amount of long-term performance-related remuneration, also referred to as the **long- term incentive (LTI)**, is geared to the performance of the AIXTRON Group over a **3-year reference period** and is granted entirely in AIXTRON shares. Executive Board members may first dispose of these shares following a four-year holding period calculated from the start of the reference period.

Before the start of a fiscal year, the Supervisory Board determines the **long-term targets** for each Executive Board member for the forthcoming reference period. Each Executive Board member receives forfeitable stock awards in the amount of the **target LTI**, which varies from 1.4% to 2.25% of the consolidated net income for the year pursuant to the budget adopted by the Supervisory Board for the fiscal year. The number of forfeitable stock awards is calculated based on the average of the closing prices on all stock market trading days in the final quarter of the previous year. If consolidated net income for the year is budgeted to be zero or negative, and if a return to profitability is expected during the reference period, the Supervisory Board may within reasonable limits specify a LTI value for the fiscal year.

Long-term variable remuneration (LTI)



LTI target achievement is determined using the indicators consolidated net income for the year and total shareholder return (TSR), as well as sustainability targets. In this regard, the relative weighting amounts to 50% for consolidated net income for the year, 40% for TSR, and 10% for sustainability targets.

For the first **LTI key figure**, the **consolidated net income for the year**, before the start of each fiscal year the Supervisory Board sets a target value on the aggregate consolidated net incomes that are to be achieved during the reference period. After the reference period ends, the ratio of the actual value to the target value is calculated. If the two values are identical, target achievement amounts to 100%. Target achievement is capped at a maximum of 250%. If the ratio is zero or negative, target achievement amounts to 0%. A linear interpolation takes place between the values of 0% and 250%.

The **second LTI key figure**, the **TSR**, denotes the **total shareholder return** over the reference period and is calculated as the ratio of the change in the stock price, plus paid dividends, at the end of the reference period to the value at the start of the reference period. The TSR for AIXTRON stock is determined by the weighted TSR for a comparative group, which consists of the shares of six semiconductor equipment manufacturers – Veeco Instruments, Applied Materials, Tokyo Electron, Lam Research, ASML, and ASMI – and is weighted in proportion to their market capitalization. Changes in the share prices are determined by reference to the difference between the average values of the closing prices on all stock market trading days in the final quarter before the start of the reference period and in the final quarter of the reference period. After the reference period ends, the ratio of the development in the TSR for AIXTRON shares to the development in the TSR for the comparative group is calculated. Target achievement is capped at a maximum of 250% and amounts to 0% if the ratio is less than 50%. A linear interpolation takes place between these values. If during the period under consideration the enterprises in the comparative group experience extraordinary changes (such as mergers, changes in business activities, etc.), the Supervisory Board may take this appropriately into consideration with regard to the composition of the comparative group. In such case, the Supervisory Board will report on this in the annual remuneration report.

The **third LTI key figure** is calculated by reference to **sustainability targets** set by the Supervisory Board at the start of each reference period. These targets refer to the areas of environment, social affairs, and corporate governance. Target achievement corresponds to the ratio of the actual values to the target values and is capped at 250%. Before the start of each fiscal year, the Supervisory Board sets two to three sustainability targets that are to be achieved by the end of the reference period. The sustainability targets that the Supervisory Board may choose from before the start of a fiscal year when setting targets for the respective Executive Board member include, among others: efficient use of energy and raw materials, reduction of emissions, employee satisfaction and development, customer satisfaction, innovation performance, successor planning, and compliance.

After the expiry of the three-year reference period, the degree of LTI target achievement is determined by the Supervisory Board. Depending on the degree of target achievement, the forfeitable stock awards are then converted into vested stock awards or otherwise lapse. The maximum number of vested stock awards that may be granted in connection with LTI is capped at 250% of the number of forfeitable stock awards granted at the start of the reference period.

Following expiry of the four-year restriction period, the shares are transferred to the Executive Board member, with due compliance with the maximum remuneration limits set out below. The Executive Board member is not entitled to receive dividends during the restriction period.

Remuneration limits

The remuneration system is intended to provide appropriate rewards for successful Executive Board work and to ensure that the Executive Board and shareholders all benefit from the Company's positive development. At the same time, to prevent the taking of inappropriate risks and ensure an appropriate relation to the situation of the AIXTRON Group, Executive Board remuneration is limited by setting a **maximum remuneration** and a **remuneration cap.**

Maximum remuneration (expenditure cap) is the total remuneration owed to the Executive Board for a fiscal year. It may not exceed EUR 6.5 million in the case of two Executive Board members or EUR 10.0 million in the case of three or more Executive Board members. This also represents the **expenditure cap**, i.e. the maximum expense for the Company.

There is also a **remuneration cap (allocation cap)** for the aggregate of fixed remuneration, STI, and LTI. The actual allocation for each Executive Board member for a fiscal year is capped at four times the Executive Board member's target total remuneration. This is the **allocation cap**. If the remuneration cap is exceeded, a portion of the vested stock awards previously awarded is forfeited to ensure compliance.

Fixed remuneration will generally account for 20% to 40% of **target total remuneration**, while **variable remuneration** will make up 60% to 80%. Long-term remuneration will account for a greater share of remuneration in order to provide incentives for long-term and sustainable actions. No additional remuneration is paid for group-internal mandates at subsidiaries.

Further Provisions

To ensure that the interests of the Executive Board are aligned with those of shareholders, the Company has a **stock ownership policy**. Following a four-year build-up phase, each Executive Board member is obliged to hold AIXTRON stock worth 100% of their base remuneration on a permanent basis throughout their term of office. The value of vested stock awards is set off against the respective target shareholding value. Executive Board members may sell shares only if they exceed the respective target value.

Furthermore, a **sanctioning mechanism**, i. e. **claw-back policy**, applies for **breaches of duty or compliance**. Based on this mechanism, in the event of such breaches the Supervisory Board may reduce variable remuneration components not yet paid out, allow stock awards to lapse, or even claw these back. These possibilities may be exercised even when the Executive Board member is no longer in office and is no longer employed by the Company.

In justified exceptional circumstances, such as severe economic crises, the effects of which render the original Company targets invalid, the Supervisory Board may resolve a temporary divergence from the remuneration system if such divergence is in the interests of AIXTRON SE. As a general rule, the targets and target values do not change during the periods relevant for the respective target achievement, even if developments in the overall market are unfavorable.

Comparison of Remuneration

The Supervisory Board reviews the appropriateness of the various components of remuneration on an annual basis. The remuneration system is presented to the Annual General Meeting for approval in the event of any material changes to the system and at least every four years.

For the purposes of external comparison, the Supervisory Board refers to remuneration data at the semiconductor equipment manufacturers Veeco Instruments, Applied Materials, Tokyo Electron, Lam Research, ASML, and ASMI, as well as to those companies listed in the TecDAX that have a market capitalization between 50% and 200% of that of AIXTRON SE.

For the internal comparison, the Supervisory Board defines the senior management level as the ten non-tariff remunerated senior managers who have the greatest managerial responsibility and decision-making powers.

Arrangements upon Contract Termination

Should a contract with an Executive Board member be terminated, then the outstanding variable remuneration components attributable to the time through to termination of the contract will be paid out in accordance with the originally agreed targets and comparison parameters and with the due dates or holding periods specified in the contract. If an Executive Board contract ends during a fiscal year, STI and LTI are granted on a prorated basis relative to the length of service in this fiscal year.

The foregoing does not apply to cases in which the employment contract is terminated without notice for cause inherent in the Executive Board member for which he or she is responsible. In such case, variable remuneration will not be paid for the year in which termination becomes effective.

In the case of **premature termination of the Executive Board mandate** by reason of revocation of the appointment, the Executive Board member will be paid a severance equal to the remuneration expected to be owed by the Company for the remaining term of the employment contract, but not more than two years of remuneration (severance cap).

When agreeing employment contracts with Executive Board members, the Supervisory Board may stipulate that, in the event of the contract being terminated due to a **"change-of-control" event**, severance will be paid in the aforementioned maximum amount. A change-of-control event in the foregoing sense exists where a third party, or a group of third parties who combine their shareholding by contract in order to act as a single third party, directly or indirectly holds more than 50% of the Company's share capital.

Benefits in excess of this severance payment are not permitted.

In the event of premature termination of the Executive Board mandate based on mutual agreement to end the employment contract, the total value of benefits pledged by the Company to the Executive Board member in connection with such agreement may not exceed the amount of remuneration expected to be owed by the Company for the original remaining term of the employment contract and may not exceed a maximum of two annual remuneration packages.

Remuneration of Executive Board Members in Fiscal Year 2022

In fiscal year 2022, the remuneration system described above was applied for the members of the Executive Board of AIXTRON SE. The following section specifies the specific Executive Board remuneration for the reporting year and contains detailed information and background on the total Executive Board remuneration, the target setting and target achievement of the variable remuneration as well as individualized information on the remuneration of the individual Executive Board members.

Total Remuneration

The total remuneration of the Executive Board for the fiscal year 2022 amounted to EUR 9,984 thousand (2021: EUR 8,437 thousand). The non-performance-related fixed remuneration of the Executive Board for the fiscal year 2022, consisting of a basic remuneration, pension allowances and benefits in kind, totaled EUR 1,113 thousand (2021: EUR 1,106 thousand).

Base Remuneration

Base remuneration comprised the following amounts in fiscal year 2022:

- for Dr. Felix Grawert: EUR 400 thousand
- for Dr. Christian Danninger: EUR 300 thousand
- for Dr. Jochen Linck: EUR 300 thousand

Pension Allowances

The Executive Board members in office in the year under report do not have individual pension commitments, as a result of which no provisions are stated for pensions. The Company rather pays pension allowances to Executive Board members together with their salaries or makes contributions to an insurance contract with a pension fund.

Pension allowances form a constituent component of the non-performance-related fixed remuneration of the Executive Board. They comprised the following amounts in fiscal year 2022:

- for Dr. Felix Grawert: EUR 30 thousand
- for Dr. Christian Danninger: EUR 30 thousand
- for Dr. Jochen Linck: EUR 30 thousand

Short-term Variable Remuneration (STI)

Target Dimension "Consolidated Net Income for the Year"

In its meeting on December 15, 2021, the Supervisory Board set a target value of EUR 87,500 thousand for the consolidated net income for 2022 (70% of total target). The actually achieved value of EUR 100,472 thousand results in a target achievement of 115% (2021: 211%).

Target Dimension "Market Position"

For the target dimension "market position" (15% of total target), the Supervisory Board has set targets for individual market segments. These targets for the 2022 fiscal year are weighted 50% for existing markets and 50% for new growth markets. A very good sales performance in both the existing and the growth markets led to a target achievement of 175% (2021: 183%) for the existing and 234% (2021: 228%) for the new markets.

Target Dimension "Financial and Operational Targets"

For the target dimension "financial and operational targets" (15% of total target), performance criteria in the area of operational improvements and product-related improvements were defined. Here, the target achievement in the past fiscal year was 142% and 50% (2021: 143% for operational improvements, 129% for the market launch of a new product and 65% for the realignment of OLED activities).

Based on the achievement of these three target dimensions, short-term variable remuneration (STI) is calculated for fiscal year 2022 as follows:

- for Dr. Felix Grawert: EUR 1,963 thousand in cash
- for Dr. Christian Danninger: EUR 1,234 thousand in cash
- for Dr. Jochen Linck: EUR 1,234 thousand in cash.

Long-Term Variable Remuneration (LTI)

The target achievement of the LTI tranche 2022 is calculated based on the results achieved in the period from January 1, 2022 to December 31, 2024. The following performance criteria apply to them:

- Consolidated net income for fiscal years 2022, 2023, and 2024 (50% of total)
- Change in total shareholder return (TSR) from Q4/2021 to Q4/2024 (40% of total)
- Sustainability (10% of total):
    - Percentage of aligned sales, operating expenses (OpEx) and investments (CapEx) as defined by the EU Taxonomy Regulation in 2024
    - Strategic leadership team and personnel development, measured against defined target quotas for the year 2024

The relevant AIXTRON SE share price for the LTI target remuneration for fiscal year 2022 is EUR 19,644. It corresponds to the average of the XETRA closing prices on all stock exchange trading days in Q4/2021. The degree of achievement of the performance criteria will be determined by the Supervisory Board after the end of fiscal year 2024. At that time, the vested share awards will be converted into non-forfeitable share awards depending on target achievement. After the expiry of a 4-year vesting period ending on December 31, 2024, for the fiscal year 2022, one share of the Company will be transferred for each vested share award. This is to take place in the week following the publication of the annual report.

For the long-term variable remuneration (LTI) for 2022, the Supervisory Board stipulated the values of target LTI as follows:

- for Dr. Felix Grawert: EUR 1,969 thousand in forfeitable stock awards
- for Dr. Christian Danninger: EUR 1,225 thousand in forfeitable stock awards
- for Dr. Jochen Linck: EUR 1,225 thousand in forfeitable stock awards

Tabular Overview of Performance Criteria Applied to Executive Board Remuneration pursuant to Sec. 162 (1) Sentence 2 No. 1 Stock Corporation Act (AktG)

Compo-nent	Description of performance measures	Portion	Information on the performance targets			
				a) Minimum target b) Corresponding remuneration	a) Target achievement b) Corresponding remuneration	a) Measured performance b) Corresponding remuneration
STI 2022	Consolidated net income 2022	70%	% kEUR	a) 0 b) 0	a) 100 b) 2,419	a) 115 b) 2,778
	Market position	15%	% kEUR.	a) 0 b) 0	a) 100 b) 518	a) 204 b) 1,060
	Existing markets	50%	% kEUR	a) 0 b) 0	a) 100 b) 259	a) 175 b) 454
	New markets	50%	% kEUR	a) 0 b) 0	a) 100 b) 259	a) 234 b) 606
	Financial and operational targets	15%	% kEUR	a) 0 b) 0	a) 100 b) 518	a) 114 b) 592
	Operational improvements	70%	% kEUR	a) 0 b) 0	a) 100 b) 363	a) 142 b) 514
	Product related improvements	30%	% kEUR	a) 0 b) 0	a) 100 b) 156	a) 50 b) 78
LTI 2022	Consolidated net income 2022-2024	50%	% kEUR	a) 0 b) 0	a) 100 b) 1,792	a) b) will be calculated at the end of 2024
	Total Shareholder Return 2022-2024	40%	% kEUR	a) 0 b) 0	a) 100 b) 1,752	a) b) will be calculated at the end of 2024
	Sustainability targets 2022-2024	10%	% kEUR	a) 0 b) 0	a) 100 b) 358	a) b) will be calculated at the end of 2024
	EU Taxonomy compliant revenues, OpEx and CapEx	50%	% kEUR	a) 0 b) 0	a) 100 b) 179	a) b) will be calculated at the end of 2024
	Development of executive and personnel	50%	% kEUR	a) 0 b) 0	a) 100 b) 179	a) b) will be calculated at the end of 2024

Determination of Target Achievement Tranche 2020:

The reference period for the 2020 LTI tranche expired on December 31, 2022. The originally agreed targets were largely achieved or even exceeded. The achievement of objectives is shown in detail in the following table:

Component	Description of performance measures	Portion	Information on the performance targets			
				a) Minimum target b) Corresponding remuneration	a) Target achievement b) Corresponding remuneration	a) Measured performance b) Corresponding remuneration
LTI 2020	Consolidated net income 2020-2022	50%	% kEUR	a) 0 b) 0	a) 100 b) 115	a) 212 b) 244
	Total Shareholder Return 2020-2022	40%	% kEUR	a) 0 b) 0	a) 100 b) 92	a) 166 b) 153
	Sustainability targets 2020-2022	10%	% kEUR	a) 0 b) 0	a) 100 b) 23	a) 82 b) 19
	Reduction of energy consumtion	50%	% kEUR	a) 0 b) 0	a) 100 b) 11	a) 83 b) 10
	Employee trainings	50%	% kEUR	a) 0 b) 0	a) 100 b) 12	a) 81 b) 9

A target of EUR 115 million was set in 2020 for the **group's net income** in the years 2020-2022. This financial goal was achieved by 212% with a total consolidated net income of EUR 244 million. At the end of this fiscal year, the **'Total Shareholder Return'** TSR was 199% corresponding to a target achievement of 166%. For the non-financial targets, the **energy consumption** of the AIXTRON Group normalized for the number of systems, employees and laboratory runs was reduced by 5% in 2022 compared to the 2019 financial year. This corresponded to a target achievement of 83%. In **employee training**, AIXTRON achieved an increase to 33 hours per employee, which corresponded to a target achievement of 81%.

Deviation from Remuneration System

In 2022, there were no deviations from and no adjustments to the remuneration system compared with the AGM resolution on the remuneration system in May 2020.

Benefits Granted and Payments Made in Fiscal Year 2022

The following tables show the remuneration granted and due to the active members of the Executive Board in each of the fiscal years 2021 and 2022 in accordance with Section 162 (1) sentence 1 AktG. The "Remuneration granted and due" section of the tables thus contains all amounts actually received by the individual Executive Board members in the reporting period (**"remuneration granted"**) and all remuneration legally due but not yet received in the reporting period (**"remuneration due"**). In addition, the individual possible minimum and maximum remuneration values for the 2022 fiscal year are shown here.

Furthermore, the tables show the fixed remuneration and the one-year variable remuneration as an inflow for the respective fiscal year. For subscription rights and other share-based remuneration, the time and value of the inflow is the relevant time and value under German tax law.

In addition to the remuneration amounts, Section 162 (1) sentence 2 no. 1 AktG also requires the disclosure of the relative share of all fixed and variable remuneration components in total remuneration. The relative proportions stated here at the end of each table relate to the remuneration components granted and due in the respective fiscal year in accordance with Section 162 (1) sentence 1 AktG.

In total, the remuneration of the Executive Board ("remuneration granted and due") for fiscal year 2022 amounted to EUR 9,984 thousand (fiscal year 2021: EUR 8,437 thousand).

Remuneration Granted and due pursuant to Section 162 (1) sentence 1 AktG and Payments Made per Executive Board Member in Fiscal Year 2022

Dr. Felix Grawert Chief Executive Officer Member of the Executive Board since August 14, 2017		Remuneration granted and due				Allocation	
in EUR thousands		2021	2022	2022 (Target achievement 100%)	2022 (Target achievement 250%)	2021	2022
Non-performance related remuneration	Fixed remuneration	430	430	430	430	430	430
	Fringe benefits	6	6	6	6	6	6
	Total	**436**	**436**	**436**	**436**	**436**	**436**
Performance-related remuneration	**Short-term variable remuneration**	**1,552**	**1,963**	**1,531**	**3,828**	**1,552**	**1,963**
	STI 2021	1,552	0	0	0	1,552	0
	STI 2022	0	1,963	1,531	3,828	0	1,963
	Long-term variable remuneration	**1,715**	**1,979**	**1,738**	**4,346**	**0**	**1,670**
	Share-based portion of one-year variable remuneration (restriction period 2018-2021)	0	0	0	0	0	1,670
	LTI tranche 2021-2023 (restriction period 2021-2024) *	1,715	0	0	0	0	0
	LTI tranche 2022-2024 (restriction period 2022-2025) *	0	1,979	1,738	4,346	0	0
Total non-performance and performance-related remuneration		**3,703**	**4,377**	**3,706**	**8,610**	**1,988**	**4,069**
Pension allowance		0	0	0	0	0	0
Total remuneration		**3,703**	**4,377**	**3,706**	**8,610**	**1,988**	**4,069**
Thereof as a percentage	**Portion of fixed remuneration**	**12%**	**10%**	**12%**	**5%**	**22%**	**11%**
	Portion of variable remuneration	**88%**	**90%**	**88%**	**95%**	**78%**	**89%**

** Fair value valuation of LTI tranche*

Dr. Christian Danninger Member of the Executive Board Member of the Executive Board since Mai 1, 2021		Remuneration granted and due				Allocation	
in EUR thousands		2021	2022	2022 (Target achievement 100%)	2022 (Target achievement 250%)	2021	2022
Non-performance related remuneration	Fixed remuneration	220	330	330	330	220	330
	Fringe benefits	11	11	11	11	11	11
	Total	**231**	**341**	**341**	**341**	**231**	**341**
Performance-related remuneration	**Short-term variable remuneration**	**655**	**1,234**	**963**	**2,406**	**655**	**1,234**
	STI 2021	655	0	0	0	655	0
	STI 2022	0	1,234	963	2,406	0	1,234
	Long-term variable remuneration	**773**	**1,231**	**1,082**	**2,704**	**0**	**0**
	LTI tranche 2021-2023 (restriction period 2021-2024) *	773	0	0	0	0	0
	LTI tranche 2022-2024 (restriction period 2022-2025) *	0	1,231	1,082	2,704	0	0
Total non-performance and performance-related remuneration		**1,660**	**2,806**	**2,385**	**5,452**	**886**	**1,575**
Pension allowance		0	0	0	0	0	0
Total remuneration		**1,660**	**2,806**	**2,385**	**5,452**	**886**	**1,575**
Thereof as a percentage	**Portion of fixed remuneration**	**14%**	**12%**	**14%**	**6%**	**26%**	**22%**
	Portion of variable remuneration	**86%**	**88%**	**86%**	**94%**	**74%**	**78%**

** Fair value valuation of LTI tranche*

Dr. Jochen Linck Member of the Executive Board Member of the Executive Board since Oct 1, 2020		Remuneration granted and due				Allocation	
in EUR thousands		2021	2022	2022 (Target achievement 100%)	2022 (Target achievement 250%)	2021	2022
Non-performance related remuneration	Fixed remuneration	330	330	330	330	330	330
	Fringe benefits	5	5	5	5	5	5
	Total	**335**	**335**	**335**	**335**	**335**	**335**
Performance-related remuneration	**Short-term variable remuneration**	**976**	**1,234**	**963**	**2,406**	**976**	**1,234**
	STI 2021	976	0	0	0	976	0
	STI 2022	0	1,234	963	2,406	0	1,234
	Long-term variable remuneration	**1,067**	**1,231**	**1,082**	**2,704**	**0**	**0**
	LTI tranche 2021-2023 (restriction period 2021-2024) *	1,067	0	0	0	0	0
	LTI tranche 2022-2024 (restriction period 2022-2025) *	0	1,231	1,082	2,704	0	0
Total non-performance and performance-related remuneration		**2,378**	**2,800**	**2,380**	**5,446**	**1,311**	**1,569**
Pension allowance		0	0	0	0	0	0
Total remuneration		**2,378**	**2,800**	**2,380**	**5,446**	**1,311**	**1,569**
Thereof as a percentage	**Portion of fixed remuneration**	**14%**	**12%**	**14%**	**6%**	**26%**	**21%**
	Portion of variable remuneration	**86%**	**88%**	**86%**	**94%**	**74%**	**79%**

** Fair value valuation of LTI tranche*

Dr. Bernd Schulte Member of the Executive Board Member of the Executive Board until Mar 31, 2021		Remuneration granted and due				Allocation	
in EUR thousands		2021	2022	2022 (Minimum)	2022 (Maximum)	2021	2022
Non-performance related remuneration	Fixed remuneration	100	0	0	0	100	0
	Fringe benefits	3	0	0	0	3	0
	Total	**103**	**0**	**0**	**0**	**103**	**0**
Performance-related remuneration	**Short-term variable remuneration**	**296**	**0**	**0**	**0**	**296**	**0**
	Long-term variable remuneration	**296**	**0**	**0**	**0**	**296**	**1,544**
	Share-based portion of one-year variable remuneration (restriction period 2020-2024)	296	0	0	0	296	0
	Share-based portion of one-year variable remuneration (restriction period 2018-2021)	0	0	0	0	0	1,544
Total non-performance and performance-related remuneration		**696**	**0**	**0**	**0**	**696**	**1,544**
Pension allowance		0	0	0	0	0	0
Total remuneration		**696**	**0**	**0**	**0**	**696**	**1,544**
Thereof as a percentage	**Portion of fixed remuneration**	**15%**	**0%**	**0%**	**0%**	**15%**	**0%**
	Portion of variable remuneration	**85%**	**0%**	**0%**	**0%**	**85%**	**100%**

** Theoretical minimum and maximum remuneration according to that for Dr. Bernd Schulte valid remuneration system.*

Shares Granted and Awarded to the Executive Board under the LTI in Accordance with Section 162 (1) Sentence 2 No. 3 AktG

Name, position	Description of plan	Restriction period	Development of granted or awarded shares: Awarded shares January 1	a) Granted (+) or awarded (-) shares b) Value of granted shares in EUR thousands	Awarded shares December 31
Dr. Felix Grawert Chief Executive Officer	Variable remuneration 2018	2018-2022	61,924	a) -61,924	0
	Variable remuneration 2019	2019-2023	46,987		46,987
	Variable remuneration 2020 old system*	2020-2024	18,072		18,072
	LTI tranche 2020-2022**	2020-2023	21,096	a) 12,845	33,941
	LTI tranche 2021-2023***	2021-2024	112,119		112,119
	LTI tranche 2022-2024***	2022-2025	0	a) 114,070 b) 1,979	114,070
					325,189

** prorated from January 01 to August 13, 2020*
*** prorated from August 14 to December 31, 2020*
**** The number of shares can change due to the actual target achievement at the end of the reference period.*

Name, position	Description of plan	Restriction period	Development of granted or awarded shares: Awarded shares January 1	a) Granted (+) or awarded (-) shares b) Value of granted shares in EUR thousands	Awarded shares December 31
Dr. Christian Danninger Member of the Executive Board	LTI tranche 2021-2023*/**	2021-2024	46,827		46,827
	LTI tranche 2022-2024**	2022-2025	0	a) 70,977 b) 1,231	70,977
					117,804

** prorated from May 01 bis December 31, 2021*
*** The number of shares can change due to the actual target achievement at the end of the reference period.*

Name, position	Description of plan	Restriction period	Development of granted or awarded shares		
			Awarded shares January 1	a) Granted (+) or awarded (-) shares b) Value of granted shares in EUR thousands	Awarded shares December 31
Dr. Jochen Linck Member of the Executive Board	LTI tranche 2020-2022*	2020-2023	8,687	a) 5,290	13,977
	LTI tranche 2021-2023**	2021-2024	69,763		69,763
	LTI tranche 2022-2024**	2022-2025	0	a) 70,977 b) 1,231	70,977
					154,717

** prorated from October 1 bis December 31, 2020*
*** The number of shares can change due to the actual target achievement at the end of the reference period.*

Name, position	Description of plan	Restriction period	Development of granted or awarded shares		
			Awarded shares January 1	a) Granted (+) or awarded (-) shares b) Value of granted shares in EUR thousands	Awarded shares December 31
Dr. Bernd Schulte (Member of the Executive Board until Mar 31, 2021)	Variable remuneration 2018	2018-2022	56,957	a) -56,957	0
	Variable remuneration 2019	2019-2023	41,835		41,835
	Variable remuneration 2020	2020-2024	26,153		26,153
	Variable remuneration 2021*	2021-2025	16,585	a) -5,785	10,800
					78,788

**In the previous year provisionally calculated with the closing price on December 31, 2021. In 2022, the number of shares was adjusted based on the actual underlying price on May 31, 2022.*

Benefits in Connection with the Termination of Executive Board Mandate

Apart from the provisions regarding the termination of an Executive Board member's contract, there are no other contractually agreed benefits that would apply if an Executive Board member were to leave the Company, such as retirement benefits, the further use of a company car or office, or the continued payment of other benefits.

Comparative Presentation of the Annual Change in the Remuneration of the Members of the Executive Board with the Development of Earnings and the Average Remuneration of the Employees of AIXTRON SE

The following table shows a comparison of the percentage change in the remuneration of the members of the Executive Board with the earnings development of AIXTRON SE and the AIXTRON Group as well as with the average remuneration of the employees on a full-time equivalent basis compared to the previous year. The remuneration of the members of the Executive Board included in the table reflects the remuneration granted and due to the respective Executive Board members in the reporting year and thus corresponds to the value stated in the preceding remuneration tables in the column "Remuneration granted and due" for the fiscal years 2021 and 2022 within the meaning of Section 162 (1) sentence 1 AktG. Where members of the Executive Board were only remunerated on a pro rata basis in individual fiscal years, for example due to joining or leaving the company during the year, the remuneration for this fiscal year was extrapolated to a full year to ensure comparability.

The development of earnings is generally presented on the basis of the development of the annual result of AIXTRON SE in accordance with Section 275 (3) No. 16 HGB (German Commercial Code). As the remuneration of the members of the Executive Board is also significantly dependent on the business success of the AIXTRON Group, the development of revenues, EBIT and net income for the year is also stated for the Group.

The comparison with the development of the average remuneration of employees is based on the average remuneration of the workforce of the Group parent company AIXTRON SE in Germany. Since the employee and remuneration structures in the subsidiaries are manifold, in particular in the case of employees abroad, it is appropriate for the comparison of the development of the average remuneration to be based only on the total workforce of AIXTRON SE. This comparison group was also used in the examination of the appropriateness of the remuneration of the members of the Executive Board. In this context, the remuneration of all employees of AIXTRON SE, including the leadership team and excluding student assistants, was taken into account. In order to ensure comparability, the remuneration of part-time employees was extrapolated to full-time equivalents.

Comparison of Annual Changes in Executive Board Remuneration pursuant to Section 162 (1) no. 2 of the German Stock Corporation Act (AktG)

Annual change (in %)	31.12.22 versus 31.12.21	31.12.21 versus 31.12.20
Executive Board remuneration		
Dr. Felix Grawert	18%	166%
Dr. Christian Danninger*	13%	n.a.
Dr. Jochen Linck	18%	128%
Dr. Bernd Schulte**	n.a.	113%
Earnings development of AIXTRON SE and the Group		
Group revenues	8%	59%
Group EBIT	6%	184%
Group net income	6%	175%
AIXTRON SE income	6%	275%
Average remuneration of AIXTRON employees* **		
Employees of AIXTRON SE	3%	9%

** Executive Board member since May 1, 2021, amount for 2021 annualized*
*** Executive Board member until March 31, 2021, amount for 2021 annualized*
**** based on full-time equivalents*

Stock Option Plans

The remuneration system described does not include any stock options. Therefore, Dr. Felix Grawert, Dr. Christian Danninger and Dr. Jochen Linck do not hold any stock options.

Claw-Back Information

There was no claw-back of variable compensation components of the Executive Board members in fiscal year 2022 (claw-back policy).

Outlook for the Application of the Remuneration System for 2023

Short-Term Variable Remuneration (STI)

For the current fiscal year 2023, the Supervisory Board has defined the following target dimensions and performance criteria for the short-term variable remuneration (STI) in December 2022:

- Target dimension “Consolidated net income” (70% of total): The Supervisory Board set a target value for consolidated net income in 2023 in line with the internal forecast.
- Target dimension “Market position” (15% of total): For the “Market position” target dimension, the Supervisory Board has set targets for important markets for 2023.
- Target dimension “Financial and operational targets” (15% of total): Performance criteria were defined for the target dimension “Financial and operational targets” in the area of operational performance and product-related performance.

Long-Term Variable Remuneration (LTI)

The Supervisory Board has defined the following performance criteria for the reference period for long-term variable remuneration (LTI) starting in fiscal year 2023:

- Consolidated net income for fiscal years 2023, 2024 and 2025 (50% of total)
- Development of total shareholder return (TSR) from Q4/2022 to Q4/2025 (40% of total).
- Sustainability targets (10% of total)
    - Proportion of taxonomy aligned revenues, capital expenditures (CapEx) and operating expenses (OpEx) as defined in the EU Taxonomy Regulation in the year 2025
    - Strategic leadership team and personnel development, measured against defined target quotas for the year 2025.

The target achievement of the LTI remuneration 2023 is calculated on the basis of the results achieved in the period from January 1, 2023, to December 31, 2025. The relevant share price of AIXTRON SE for the LTI grant is EUR 28.206. It corresponds to the average of the XETRA closing prices on all stock exchange trading days in the 4th quarter of 2022. The degree of fulfillment of the performance criteria will be determined by the Supervisory Board after the end of fiscal year 2025. At that time, the vested share awards will be converted into non-forfeitable share awards depending on target achievement. After the expiry of a 4-year vesting period for fiscal year 2023 ending on December 31, 2026, one share of the Company will be transferred for each vested share award. This is to take place in the week following the publication of the annual report.

Remuneration of Supervisory Board Members

Remuneration of the Supervisory Board is regulated in Article 17 of AIXTRON's Articles of Association. The currently valid remuneration system was last approved by 2018 Annual General Meeting and the compensation of the Supervisory Board was confirmed by the 2021 Annual General Meeting. Accordingly, annual fixed remuneration for individual members of the Supervisory Board amounts to EUR 60,000, with the Chairman receiving three times and the Deputy Chairman one and a half times the remuneration of an ordinary Supervisory Board member.

The Chairman of the Audit Committee receives additional annual remuneration of EUR 20,000.

No attendance fees or other variable remuneration is granted.

The members of the Supervisory Board who were members of the Supervisory Board or who were the Chairman or Deputy Chairman of the Supervisory Board or Audit Committee for only part of the fiscal year receive one twelfth of the above mentioned remuneration on a prorated basis for each month or part thereof of the corresponding activity on the Supervisory Board.

The Company assumes insurance premiums paid for liability and legal expenses insurance to cover liability risks arising from Supervisory Board activities for the members of the Supervisory Board, as well as the insurance tax payable thereon.

The Supervisory Board members receive no loans from the Company.

At the Annual General Meeting on May 25, 2022, it was decided to expand the Supervisory Board from five to six members. Dr. Stefan Traeger, CEO of JENOPTIK AG, was elected as a new member of the Supervisory Board and Mr. Kim Schindelhauer, previous Chairman of the Supervisory Board, was re-elected in his position.

The remuneration attributable to the respective members of the Supervisory Board in fiscal years 2021 and 2022 is presented on an individualized basis in the table below. As in previous years, no remuneration was paid to Supervisory Board members for individual advisory services in fiscal year 2022.

Supervisory Board Remuneration

Supervisory Board Member	Year	Total fixed compensation in EUR thousands
Kim Schindelhauer[1)2)3)4)5)] (Chairman of the Supervisory Board)	2022	180
	2021	180
Frits van Hout[3)4)] (Deputy Chairman of the Supervisory Board)	2022	90
	2021	90
Prof. Dr. Andreas Biagosch[2)]	2022	60
	2021	60
Prof. Dr. Petra Denk[3)4)]	2022	60
	2021	60
Stefan Traeger[1)2)3)4)]	2022	40
	2021	-
Prof. Dr. Anna Weber[1)] (Chairwoman of the Audit Committee, Independent Financial Expert)	2022	80
	2021	80
Gesamt	**2022**	**510**
	2021	**470**

as of December 31, 2022:

1) Member of the Audit Committee
2) Member of the Capital Markets Committee
3) Member of the Nomination Committee
4) Member of the Compensation Committee
5) Former AIXTRON Executive Board Member

Directors & Officers (D&O) Insurance

In accordance with the requirements of Section 93 para. 2 AktG, AIXTRON SE has arranged a D&O insurance policy for all members of the Executive Board against risks from their professional activities for the Company, which in each case provides for a deductible of at least 10% of the damage up to at least the amount of one and a half times the fixed annual remuneration of the Executive Board member. For the members of the Supervisory Board of AIXTRON SE, the Company has arranged D&O insurance policies.

COMBINED MANAGEMENT AND GROUP MANAGEMENT REPORT

AS OF DECEMBER 31, 2022

This Management Report combines the AIXTRON Group Management Report and the Management Report of AIXTRON SE. In this report, we inform about the business development as well as the situation and the expected development of the AIXTRON Group (hereinafter also referred to as “AIXTRON”, “AIXTRON Group”, or “the Group”) and AIXTRON SE (hereinafter also referred to as “the Company). The information regarding AIXTRON SE is contained in a separate section in the report on economic position with disclosures in accordance with the German Commercial Code (HGB).

The Consolidated Financial Statements of the Group have been prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union, pursuant to section 315e of the German Commercial Code (HGB). With the exception of the HGB disclosures in the chapter Management Report of AIXTRON SE, all financial figures contained in this Group Management Report, including the comparative figures for the previous year, are reported in accordance with IFRS.

Due to rounding, numbers presented throughout this report may not add up precisely to the totals indicated and percentages may not precisely reflect the absolute figures for the same reason.

Fundamental Information on the Group

Business Model

AIXTRON's business activities include the development, production and installation of equipment for the deposition of complex semiconductor materials, the development of deposition processes on such equipment, consulting and training, customer support and service for such equipment. AIXTRON also provides peripheral equipment and services for the operation of its equipment.

AIXTRON supplies deposition equipment for volume production as well as equipment for research and development (R&D) and pre-series production.

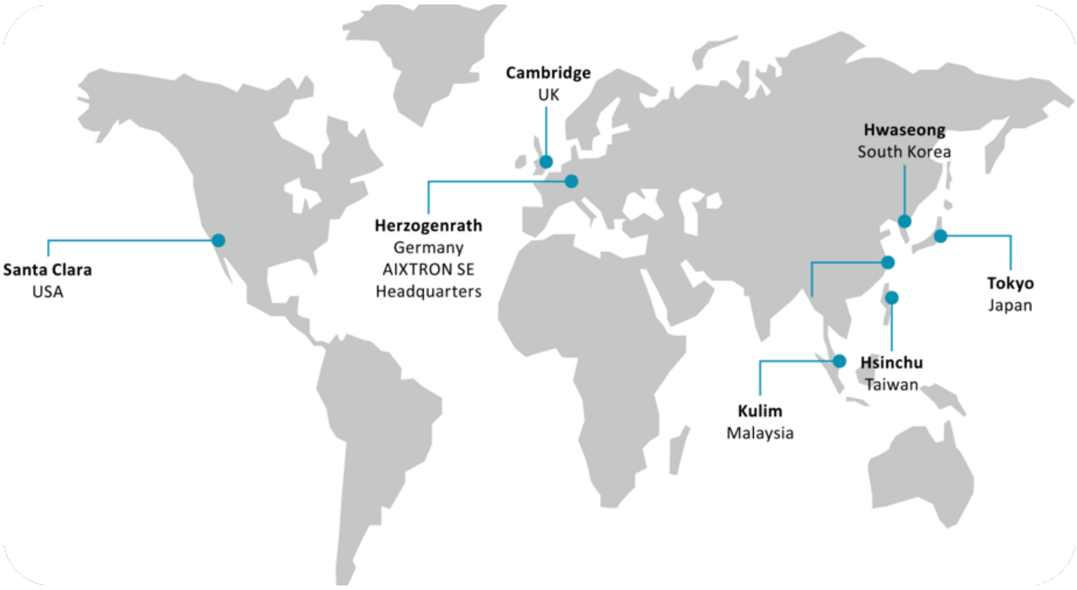
The demand for AIXTRON equipment is influenced by requirements for higher energy efficiency in power electronics, by the transformation towards electromobility, by increasing transmission speeds and volumes of data, as well as by the use of 3D sensor technology in consumer electronics and in the automotive sector, and last but not least, by the use of innovative technologies like micro LEDs in displays. The ability of AIXTRON's technologies to deposit thin material films precisely, enables manufacturers to improve performance, yield and quality in the fabrication process of advanced power- and optoelectronic devices.

Organizational Structure

Locations and Legal Corporate Structure

The AIXTRON Group comprises the parent company AIXTRON SE with its registered office in Herzogenrath, Germany, and its subsidiaries. As of December 31, 2022, AIXTRON SE held direct and indirect stakes in 11 companies which are part of the AIXTRON Group, and which are fully consolidated:

Facility location	Use
Herzogenrath, Germany	Headquarters, R&D, Manufacturing, Sales, Service
Cambridge, United Kingdom	R&D, Manufacturing, Service
Santa Clara, CA, USA	Sales, Service
Hwaseong, South Korea	Sales, Service
Shanghai, China	Sales, Service
Hsinchu, Taiwan	Sales, Service
Tokio, Japan	Sales, Service
Kulim, Malaysia	Service



Management and Control

As a European stock company (Societas Europaea) the AIXTRON SE has a dual management and control structure consisting of an Executive Board and a Supervisory Board. The Executive Board is responsible for managing the Company at its own responsibility while being advised and monitored by the Supervisory Board. In 2022, there were the following personnel changes in the Company's management and supervisory bodies:

At the Annual General Meeting on May 25, 2022, it was decided to expand the Supervisory Board from five to six members. Dr. Stefan Traeger, CEO of JENOPTIK AG, was elected as a new member of the Supervisory Board and Mr. Kim Schindelhauer, previous Chairman of the Supervisory Board, was re-elected as Chairman. The composition of the Executive Board has not changed compared to December 31, 2021.

Detailed information on the composition of the Executive Board and the Supervisory Board, the allocation of responsibilities between them, the operating procedures of the Supervisory Board committees and the Company's diversity concept can be found in the Corporate Governance Declaration, which is part of the annual report and also available on the AIXTRON website at Declaration of Corporate Governance (www.aixtron.com/investoren/corporate-governance/en/corporate-governance-statement/2022_Declaration_Corporate-Governance_EN.pdf).[1]

[1] *The information in the Corporate Governance Declaration was made in accordance with the requirements of the German Corporate Governance Code 2022. They are to be classified as "not related to the Management Report" because they go beyond the legal requirements and are therefore not part of the substantive audit by the auditor.*

Technology and Products

The AIXTRON product range includes customer-specific systems for the deposition of complex semiconductor materials. Here, substrates of different materials and sizes can be coated.

The **MOCVD process (Metal-Organic Chemical Vapor Deposition)** is used to manufacture components for power electronics or for optoelectronics from compound semiconductor materials.

Our systems in the field of **power electronics** are used for the production of gallium nitride (GaN) semiconductor components, which, for example, increase the performance of chargers in consumer electronics, enable energy-saving power supply for servers and data centers and efficient power conversion in the field of renewable energy. A second major field of application for power electronics are silicon carbide (SiC) components, which are used, for example, in the main inverters for electric vehicles, in their charging infrastructure, and also in inverters for renewable energies (solar and wind). These components are also manufactured by our customers using our CVD systems. Both GaN and SiC are material systems with a wide band gap (WBG) that are beginning to be increasingly used in various areas of power electronics. In doing so, they contribute to the decarbonization of our modern society and support climate protection.

On our systems in the field of **optoelectronics**, customers manufacture lasers for fast optical data transmission and for 3D sensors. The latter are increasingly used in applications that require recognition of the spatial context, e.g. in the environment detection of robots or in autonomous vehicles. Another area of application is the production of LED picture elements (pixels) for display applications of the next generation, so-called micro LED displays. Other applications of our systems include the production of special LEDs, such as red, orange and yellow LEDs (ROY) for automotive lighting and indoor farming, among others.

AIXTRON works continuously to improve its existing technologies and products. Last year, AIXTRON presented the G10-SiC, the first system of the newly developed generations. The G10-SiC is a system for the production of SiC components on both 150 mm and 200 mm SiC wafers. In this generation of systems, the focus is not only on continuously improving material performance, but also on further optimizing the systems for large-scale production through more automation with standard interfaces customary in the industry, for example through the efficient use of limited clean room areas in semiconductor factories.

Business Processes

Manufacturing and Procurement

AIXTRON produces its prototype and customer systems at its production sites in Herzogenrath and Cambridge. Production focuses on assembly, testing and qualification as well as commissioning of the systems according to standardized specifications.

The Group obtains the components required to manufacture the systems and the majority of the pre-assembled assemblies from external suppliers and service providers.

The performance of our supply chains will be increased in order to cover the higher overall requirements and to compensate for fluctuating delivery capabilities. Based on a rolling forecast, the necessary measures to ensure material availability are taken in coordination between sales, purchasing and production. This also includes the early detection of bottlenecks in raw materials and components. Appropriate stock availability strategies are applied together with supply chain partners.

The assembly of the systems is carried out with the help of external service providers in our own or, if necessary, in rented nearby production facilities. The subsequent commissioning, testing and qualification of the systems is carried out by AIXTRON specialists. The planning, control and monitoring of production is the sole responsibility of AIXTRON employees, thus enabling quality requirements to be met throughout the entire production process.

In 2022 or early 2023, AIXTRON successfully completed the market launch of the products G10-SiC and G10-AsP in series production.

AIXTRON's production sites have a process-oriented quality management system certified according to ISO 9001:2015. In 2021, external auditors have certified the quality management systems of both AIXTRON SE and AIXTRON Ltd. confirmed without any deviation.

Employees

AIXTRON's leading position in the global market and its ability to continuously innovate are driven by the commitment and excellent knowledge of our employees. Our human resources management is therefore designed to create an inspiring, safe, and supportive environment, as well as to foster appreciative and cooperative interaction.

Attracting and retaining highly qualified and committed specialists and managers is a key success factor. Competing for the best talent, we are continuously enhancing our attractiveness as an employer brand. In addition to a comprehensive, informative careers site and other communication channels, we use a wide variety of target group-oriented recruitment channels, increasingly in social media. Personal contact with potential applicants at job fairs and similar events, as well as in the context of our close cooperation with universities worldwide, is also of great importance to us.

AIXTRON is working consistently to establish a modern corporate culture with a mature leadership culture and good teamwork. We attach great importance to supporting our employees competently and in a spirit of partnership, to promoting them individually, and to challenging them with future-oriented projects and tasks. As part of our company-wide personnel development concept, we offer our employees a wide range of measures for continuous training as well as individual advanced training measures and development opportunities.

Another central pillar of our corporate culture is AIXTRON’s commitment to diversity and equal opportunities, which form an essential basis for our innovative strength and competitiveness. We explicitly encourage collaboration in mixed teams and between different cultures and nationalities. We also attach great importance to an appropriate gender balance and a balanced age structure.

In the 2022 fiscal year, the number of employees in the Group increased significantly by approximately 25% from 718 at the end of 2021 to 895 as at 31 December 2022. The significant increase in the number of headcount is due to the continued strong growth of the Group's core business. As in previous years, the majority of employees are located in Europe.

Customers and Geographic Regions

AIXTRON's customers include the power electronics, optoelectronics and display industries. For example, they manufacture power semiconductor components for applications in IT infrastructure, in consumer electronics, in energy production and for use in the field of electromobility. In optoelectronics, they manufacture, among other things, lasers for data transmission, entertainment electronics and the automotive sector. Customers from the display industry, on the other hand, concentrate, among other things, on the production of new types of LEDs (mini and micro LEDs) in order to address displays of all sizes, from smartwatches to large-area display panels. The area of energy-saving, WBG-based power electronics is gaining in importance in many application areas and is defining new standards, e.g. in energy conversion in household appliances or consumer electronics.

Some of these customers are vertically integrated and supply the entire value chain all the way to the end consumer. Others are independent manufacturers of devices or of epitaxial wafers that supply products manufactured on AIXTRON systems to companies at the next level in the value chain, the electronic component manufacturers. AIXTRON's customers also include research institutes and universities, where research into novel materials and new fields of application is being promoted.

AIXTRON's products are sold worldwide. The market segments and the product mix are regionally different. Many large component manufacturers mainly produce in Asia. Therefore, the majority of AIXTRON's revenues are generated there. However, semiconductor manufacturers are also increasingly expanding their production capacities outside of Asia, which can lead to corresponding changes in the regional distribution of revenues.

The "Development of Revenues" chapter contains a detailed breakdown of revenues by region.

Objectives and Strategies

With the development, manufacture, sale and maintenance of systems for thin-film deposition of complex materials, AIXTRON addresses growing future markets along many end-use fields, such as consumer electronics, IT infrastructure, the automotive industry, telecommunications and power generation.

In the area of these complex deposition processes, AIXTRON's strategy is to develop the technology and products with a clear focus on its core competencies in such a way that they address as many end applications as possible. Above all, it is about increasing productivity and thus a high level of competitiveness in the specific requirement profile of the respective application. In this way, AIXTRON is addressing the fast-growing end markets in order to generate income for the development of other promising future applications.

Technology Portfolio for Complex Material Deposition

Our goal is to secure our market position in the focus markets in the long term through innovation and technological leadership, as well as to expand the addressable end applications and expand to adjacent markets by applying our core competencies. Our strategic planning focuses on the ecological and economic sustainability of the business, increasing revenues and increasing profitability.

The core of AIXTRON's strategy lies in tailoring the products to the requirements of the respective application areas while maintaining the focus on using AIXTRON's core competencies. This targeted addressing of the applications and markets that are attractive for AIXTRON in terms of size, growth, profitability and differentiation potential is currently very successful. Because these applications from different areas such as consumer electronics, IT infrastructure and electromobility are subject to growth dynamics that are largely independent of one another. AIXTRON is not only dependent on a single segment, but strives to be robust against fluctuations in individual application markets across the range of applications and the broadly diversified customer base. For this purpose, AIXTRON is actively developing a broad technology portfolio through its own or funded developments, through cooperation or targeted acquisitions. The maintenance and development of technology ecosystems in close cooperation with customers and, if necessary, their customers or technology partners allows AIXTRON to establish new technologies and develop new applications.

The focus is on markets in which the use of AIXTRON technology enables differentiation from the competition and is intended to offer customers decisive added value. This is achieved, among other things, by the homogeneity of the physical properties of the deposited layers and thus a high yield on the wafer with simultaneous high throughput and low material and maintenance costs. An important differentiating factor is the high productivity and cost-effectiveness of our systems, e.g. due to the high throughput of the systems thanks to the so-called batch reactor, in which several wafers can be produced at the same time. This allows our customers to allocate the direct and indirect system costs, such as costs for clean room space, to high production volumes. In many applications, the high efficiency of the use of materials due to the reactor architecture is another important cost factor. In markets that do not offer sufficient technical differentiation potential for the use of AIXTRON technologies, such as in the market for the production of blue and green LEDs, primarily in China, only low margins can be achieved.

AIXTRON is pursuing a platform strategy with its system families based on the planetary principle. With a high proportion of identical parts, the systems can be customized. As outlined in the previous section, this enables broad diversification and the use of numerous applications. In addition to the planetary systems, which address customers with high production volumes, AIXTRON sells systems based on the showerhead principle in university and niche markets. AIXTRON makes this possible, e.g. to be involved early in the development of newly emerging applications and to understand the emerging customer needs in new markets at an early stage.

Control System

Since numerous business activities within the group are largely integrated at the operational level, the Executive Board of AIXTRON SE controls the group at the level of the overall group. The developments forecast for the Group by the Executive Board therefore also apply to AIXTRON SE.

Key Financial Performance Indicators

The most relevant performance indicators for the AIXTRON Group are order intake, revenues, gross margin and earnings before interest and taxes relative to revenues (EBIT margin). They are determined monthly in the AIXTRON reporting system and made available to management in a comprehensive report. This enables the Executive Board to identify growth drivers at an early stage, to analyze developments during the year and take prompt countermeasures in the event of any discernible deviations.

AIXTRON aims to achieve organic revenue growth, exchange rate effects are excluded when setting revenue targets. Order intake, as explained below in the section "Development of Orders", reflects the investment behavior of the customers and thus serves as an early indicator for revenues. The period between receipt and delivery of an order for an MOCVD system is currently between nine and twelve months.

Gross margin, which expresses gross profit in relation to revenues, provides information on the profitability and return on investment of AIXTRON's operating business. The EBIT margin is used as an additional important indicator for operational management and analysis of the earnings situation.

Non-Financial Performance Indicators

Since the introduction of the new Executive Board remuneration system in fiscal year 2020, AIXTRON has defined annual sustainability targets for the Executive Board as part of the Long Term Incentive (LTI), which are to be achieved over a three-year reference period, and includes corresponding non-financial performance indicators in the Group management.

New non-financial performance indicators were defined for the LTI reference periods beginning in the 2022 and 2023 fiscal years. Essentially these are:

- Percentage of ecologically sustainable revenues, capital expenditures (CapEx) and operating expenses (OpEx) as defined by the EU Taxonomy Regulation
- Strategic executive and personnel development, measured using defined quotas

Research and Development (R&D)

In addition to the R&D center at its headquarters in Herzogenrath, AIXTRON also operates a R&D laboratory in Cambridge, United Kingdom. These in-house laboratories are equipped with AIXTRON systems and are used to research and develop new equipment, materials and processes for the production of semiconductor structures.

Focus on Innovation

The Group's R&D activities in 2022 again included development programs for future technologies and new products, as well as continuous improvement of AIXTRON's existing products. In order to increase industrial maturity, products were optimized along the entire value chain, e.g. through design improvements of externally supplied components or through improved data analysis. In addition, AIXTRON is working on customer-specific development projects and researching new technologies, often in the context of publicly funded projects.

The Group’s R&D expertise remains of great strategic importance to AIXTRON, as we believe it ensures a competitive, leading edge technology portfolio and supports the future business development. AIXTRON invests specifically in research and development projects in order to maintain or expand the Company’s leading position in MOCVD equipment for applications such as lasers, Micro LEDs, specialty LEDs and for the production of wide-band-gap materials for power electronics. In addition, the Group is working on novel 2D-nanostructures, which are currently seen as having great potential in research.

For the consistent technological evolution of our product portfolio, we have invested EUR 57.7 million, or 12% of revenues (2021: EUR 56.8 million, 13% of revenues), in research and development (R&D) in 2022. At year-end 2022, 254 of AIXTRON Group’s total 895 employees were engaged in research and development activities (2021: 223 of 718 employees).

Technology Protection through Patents

AIXTRON aims to secure its technology by patenting and protecting inventions, provided it is strategically expedient for the Company to do so. As of December 31, 2022, the Group had 252 (thereof AIXTRON SE: 237) patent families available (December 31, 2021: 274 patent families). For 8 patent families (AIXTRON SE: 8), patent protection was applied. Usually, patent protection for inventions is applied for in those markets relevant to AIXTRON, specifically in Europe, China, Japan, South Korea, Taiwan and the United States. AIXTRON's patent portfolio is evaluated annually and adjusted accordingly. The individual patents expire between 2023 and 2042. In addition, AIXTRON continuously performs a worldwide patent analysis in order to identify and assess changes in the competitive environment at an early stage.

Research Projects 2022

Together with our project partners, we again worked on promising research projects in the reporting year. Here, too, we operate on a global scale and focus on areas with attractive growth potential.

The project "**GIMMIK**" aimed at increasing the production suitability of our technology for the deposition of graphene and other 2D materials. In this project, we achieved an improvement in MOCVD technology for graphene. In this way, we meet the international requirements of a versatile, highly flexible key technology with frequently changing customer requirements, processes and products. The project was successfully completed in 2022.

We also successfully completed the research project "**UltimateGaN**" (Research for GaN technologies, devices and applications to address the challenges of the future GaN roadmap) in 2022, achieving all key project objectives. The successful testing and evaluation of the solution approaches took place in a near-production environment. AIXTRON's primary goal was to increase the production viability of MOCVD technology for power electronics and microwave applications in the energy, mobile communications and electromobility markets.

Examples of the Group's research work in 2022 include the "**YESvGaN**" and "**Transform**" projects:

The project "**YESvGaN**" (Vertical GaN on Silicon: Wide Band Gap Power at Silicon Cost) is developing a new class of gallium nitride (GaN)-based power transistors that will be both affordable and highly efficient. This will be achieved through so-called vertical GaN (vGaN) diaphragm transistors, which are suitable for conversion at voltages up to 1200 volts and for currents up to 100 amps. The development of these new transistors will involve innovations in several parts of the semiconductor process chain, such as low-cost substrates for thick epitaxial layers, vertical membranes as active layers, or transistors with multiple parallel channels.

The aim of the project "**TRANSFORM**" (Trusted European SiC Value Chain for a greener Economy) is to establish a complete and competitive European supply chain for power electronics based on silicon carbide (SiC) power semiconductors. It includes research and development activities along the entire value chain, from SiC substrates to power converters, to provide European market players with a reliable source of SiC components and systems. The project consortium will use the G10-SiC AIXTRON Planetary Reactor® for SiC epitaxy on multiple 200mm substrates and develop advanced industrial-grade processes.

Report on Economic Position

Global Economy

As a manufacturer of capital goods, AIXTRON may be affected by the development of the general economic environment, as this could impact its own suppliers, manufacturing costs, and sales opportunities, driven by the customers' willingness to invest.

Multiple challenges impacted and significantly slowed global economic development in 2022. Global supply chains remained under pressure in the third year of the COVID-19 pandemic, due in particular to repeated large-scale lockdowns under China's zero COVID policy. In addition, the Russian attack on Ukraine from late February caused further severe dislocations in the global economic cycle. Far-reaching international sanctions meant that important Russian raw materials, particularly in the energy sector, were no longer available, leading to corresponding shortages and drastic price increases. The resulting sharp rise in general inflation rates prompted the central banks, above all the U.S. Federal Reserve, to react. With a series of significant key interest rate increases to fight inflation, they implemented the already announced monetary policy tightening much faster and more extensively than expected. The combination of material shortages, rising prices and rising interest rates confronted consumers, companies and countries with adjustment processes that were as difficult as they were severe, resulting in the short term above all in slower economic activities.

Against this backdrop, the International Monetary Fund (IMF) forecast in its January 2023 World Economic Outlook Update (WEO) significantly lower growth in global economic output in 2022 of 3.4%, down from 6.2% in 2021. The guidance for 2023 at 2.9% is 0.2 percentage points higher than it was in the October 2022 WEO. For the industrialized nations, the expected growth rate for 2022 is 2.7% (2021: 5.4%), expected to decline to 1.2% in 2023. The expected growth rate for the emerging and developing countries in 2022 is 3.9% (2021: 6.7%) projected to rise modestly to 4.0% in 2023. Expectations for world trade volume in 2022 were 5.4% (2021: 10.4%) declining to 2.4% in 2023, while global inflation is expected to have nearly doubled to 8.8% (2021: 4.7%) falling again to 6.6% in 2023.[1]

The strongly export-oriented German machinery and equipment engineering sector also suffered from increasing reluctance of customers to invest over the course of the year due to the increased economic uncertainties. According to reports from the German Engineering Federation (VDMA), companies recorded a price adjusted decline in incoming orders of 4% in 2022. Orders from abroad declined by 4%, while domestic orders decreased by 5%.[2]

---

[1] *IMF: World Economic Outlook Update, January 2023*
[2] *VDMA: Order intake in machinery and plant engineering, December 2022*

Demand for AIXTRON's products remains largely dependent on industry-specific developments, such as the introduction of new applications in consumer electronics, IT infrastructure, electromobility, or demand in sub-segments of the global semiconductor market. These developments are based on the megatrends of digitalization, electrification, and sustainability and thus continued to be very robust.

The U.S. dollar exchange rate initially strengthened significantly under the impact of the U.S. Federal Reserve's rapid and aggressive action to combat inflation in 2022. It had already fallen below parity with the Euro in August and at the end of September, one even had to pay less than 0.96 USD/EUR. By then the US dollar had appreciated by more than 15% in the course of the year. It was not until the European Central Bank (ECB) also took strong interest rate steps and the ECB announced that it would continue to fight inflation consistently that the Euro slowly recovered from its lows by the end of December. As a result, the US dollar closed the year at 1.0674 USD/EUR on December 30, 2022 (2021: 1.1372 USD/EUR), appreciating by around 6% overall. AIXTRON applied an average USD/ EUR exchange rate of 1.06 USD/EUR in fiscal year 2022 (Q1/2022: 1.13 USD/EUR; Q2/2022: 1.08 USD/EUR; Q3/2022: 1.02 USD/EUR; Q4/2022: 1.00 USD/EUR). On average over the year, the exchange rate was thus significantly below the prior-year average (2021: 1.19 USD/EUR). Compared to the previous year, this had a correspondingly positive impact on the Group's US-dollar-denominated revenues.

AIXTRON's Executive Board continues to carefully monitor the developments of the global economy and the financial markets to decide what can potentially be done to mitigate negative external effects on AIXTRON's business. The global crisis situations and market developments continued to have only a minor overall impact on AIXTRON's business. Logistics and supply chains were tense, but remained stable overall in the view of AIXTRON's Executive Board. In 2022, no forward exchange contracts or other hedging transactions were entered into. Therefore, no currency hedging contracts were in place as of December 31, 2022. The Executive Board reserves the right to carry out hedging transactions in the future, should this be deemed appropriate.

Competitive Positioning

Competitors in the market for CVD/MOCVD equipment are Veeco Instruments, Inc. (USA, "Veeco"), Taiyo Nippon Sanso (Japan, "TNS"), Tokyo Electron Ltd. (Japan, "TEL"), Advanced Micro-Fabrication Equipment Inc. (China, "AMEC"), Tang Optoelectronics Equipment Corporation Limited (China, "TOPEC") as well as ASM International N.V. (Netherlands) ("ASMI") and Nuflare Technology Inc. (Japan, "Nuflare"). Other companies are also continuing to try to qualify their own MOCVD-systems with their customers. For example, Technology Engine of Science Co. Ltd. (South Korea, "TES"), Zhejiang Jingsheng Mechanical (China, "JSG") and HERMES Epitek (Taiwan, "HERMES") are working on the development of their own MOCVD system solutions and are trying to establish them in the market.

According to a study by the market research institute Gartner, AIXTRON has extended its global market leadership for MOCVD tools in 2021. AIXTRON again holds the top spot: AIXTRON's market share has increased to 75% (2020: 58%), followed by AMEC (China) with 14% (2020: 16%) and Veeco (USA) with 11% (2020: 26%). At the same time, the global market for MOCVD tools grew 28% year-on-year from USD 438 million to USD 561 million in 2021. For fiscal year 2022, no current market share figures from independent market analysts are yet available.

Key Target Markets

Market For Power Semiconductors Based on Wide-Band-Gap (WBG) Materials Gallium Nitride (Gan) and Silicon Carbide (SiC)

Power semiconductors based on Wide-Band-Gap (WBG) materials are one of the main applications of AIXTRON's deposition technology. These materials enable the production of very compact and highly efficient power supplies and AC/DC as well as DC/DC converters which are used, for example, in the industrial space for applications such as power supplies of modern data centers, the more efficient feed-in of regenerative energies into the power grid and in electromobility. They are therefore increasingly used in a broad spectrum of applications covering a wide power range. WBG power semiconductors reduce conversion losses by up to 40% and thus contribute significantly to increasing energy efficiency and reducing CO_2 emissions. There are two main groups of commercially available WBG power semiconductors: GaN (gallium nitride) and SiC (silicon carbide).

Market for Gallium Nitride (GaN) Power Semiconductors

GaN semiconductor devices are used primarily in low and medium power and voltage classes, such as in power supplies for smartphones and laptops, and in power supplies for data centers. The market volume for GaN semiconductor devices in 2021 exceeded USD 100 million, highlighting the increasing market acceptance of GaN technology in the power semiconductor sector. For example, there is already a wide range of commercially available 65W power supplies that use GaN technology and are marketed as such. In addition, customers are continuously opening up new applications, for example in the field of data centers, in IT infrastructure as well as in micro inverters in the field of photovoltaics or on-board chargers in the field of electromobility. In addition, the customer base for AIXTRON's GaN semiconductor equipment is continuously expanding, while existing customers are increasing their production capacities.

Due to the wide range of applications, analysts of the Yole Group (Yole) expect the market for GaN power semiconductors to grow very strongly, from USD 126 million in 2021 to USD 2.0 billion in 2027, corresponding to a compound annual growth rate (CAGR) of around 60%.

Furthermore, GaN semiconductor devices are increasingly used in high-frequency applications. In 5G telecom networks and likely in subsequent network generations such as 6G, the GaN technology advantage of lower power losses at high frequencies comes into play. As a result, more and more manufacturers are switching their production of high-frequency switches from silicon to GaN. Yole analysts forecast the GaN high-frequency semiconductor device market to grow from USD 891 million in 2020 to USD 2.4 billion in 2026 at a compound annual growth rate (CAGR) of 18%.

Market for Silicon Carbide (SiC) Power Semiconductors

The adoption of SiC power semiconductors in the area of high-voltage and high-power applications has increased further in 2022. The main fields of application within electromobility are in particular the main inverters in the powertrain as well as the on-board chargers, but also the charging stations, as well as the inverters in the field of industrial photovoltaics and wind energy. SiC is also used in industrial motor control systems. In all these applications, SiC enables a significant reduction in conversion losses during the conversion of electrical energy. This leads, for example, to a greater range per battery charge in battery electric vehicles and to lower conversion losses in the field of power generation.

Driven by significantly increased awareness of the importance of energy efficiency and CO_2 reduction, both in the regulatory and private sectors, as well as by bans imposed in several countries on the sale of vehicles with internal combustion engines from 2035 onwards, car manufacturers worldwide have raised their targets for powertrain electrification.

Based on this development, Yole forecasts that the SiC device market will grow from USD 1 billion in 2021 to USD 6.3 billion by 2027 at a CAGR of 34%. According to the analysts, this is particularly due to the development of electric vehicles and the corresponding fast charging infrastructure.

LED Market

Red, orange and yellow LEDs (ROY LEDs) are used in Mini LED displays, among other things, for large-format color displays in sports stadiums, airports and shopping malls, as well as in automotive taillights or in the area of indoor farming. In addition, televisions and monitors in the premium segment are increasingly being equipped with Mini LEDs for backlighting as an alternative to OLED displays. The market for infrared and ROY LED manufacturing equipment is expected to grow at a CAGR of 24% through 2027, according to Yole. The annual growth of the wafer area amounts to approx. 7%, as the size of the chips used is significantly reduced compared to backlight applications. The largest growth is expected in the area of fine pitch displays, which are applications with pixel sizes of less than 1 mm. According to Yole, these are expected to grow by an average of 34% per year in the same period.

The market for UV LEDs (Ultra-Violet Light Emitting Diodes) is another specialized segment in the LED market that AIXTRON addresses. UV LEDs are used for curing plastics and disinfecting surfaces, circulating air and (drinking) water. Due to the increasing demand for hygiene, this market is expected to gain importance in the future. After an initial strong increase in demand for mass production systems for UV LEDs in the first years of the COVID pandemic, this has been significantly reduced to tools for development and small series production in the past year. Nevertheless, UV LEDs are a product segment with very specific applications such as air disinfection systems, vehicle air conditioning or sterilization of running water.

Market for Micro LEDs

Micro LEDs form a basis for new types of displays. Analysts expect Micro LEDs to be used initially in very small displays such as smartwatches and very large displays such as large-screen premium TVs. In the long term, other potential applications include displays in smartphones, tablets and notebooks. Micro LED technology is currently still in the early stages of development but has seen very large investments in the recent past. Market researchers at Yole estimate total cumulative industry investments to date amounting to approximately USD 8.3 billion and predict that all companies combined will invest approximately USD 3 billion in manufacturing capacity by 2025. According to Yole, this equates to an increase in demand for Micro LED epiwafers to 0.5 million 6-inch wafers per year in 2025 and up to 3.9 million 6-inch wafers per year in 2029.

As Micro LED technology matures, AIXTRON expects the currently still very young market for Micro LEDs to mature both technically and commercially. Developments are currently focusing on the cost per pixel, as well as on the yield and quality of the industrial manufacturing process. Accordingly, analysts also expect the initial commercial introductions in the area of high-end applications and a subsequent continuous expansion of the applications across other segments.

Market for Laser-based Optical Data Transmission

The volume of data transmitted via fiber optic cables continues to grow, driven by the increasing use of cloud computing and Internet services in particular during the COVID pandemic. Especially the growing use of video-on-demand, as well as the communication of networked devices via the Internet (“Internet of Things”) contribute to increasing data volumes. In addition to the data volumes, the enormously fast transmission at the speed of light for optical data transmission also plays a major role. Lasers, which are manufactured on AIXTRON equipment, are key components for high-speed optical data transmission. The growth in global data traffic due to mobile telecommunications, the switch to 5G standards, and continuous build out of glass fiber networks, increase the demand for lasers as optical signal generators, photodiodes as receivers, and optical amplifiers and switches.

Market research firms such as Yole and Strategies Unlimited expect investment in laser-based communications to continue to increase to accommodate growing data traffic. For this reason, market research firm Yole predicts that revenues from transceivers used in telecommunications will grow at a compound annual growth rate of 15% from 2021 to 2027. The total market volume in 2027 is forecast by Yole to exceed USD 24.7 billion. Yole also expects demand for the laser diodes used for this purpose to rise sharply by 2026, and now assumes that data communications will be the biggest demand driver over the next five years.

Laser-based 3D Sensor Market

Laser-based 3D sensors are often used in high-end mobile phones. Since this technology was introduced to the market with the iPhone X in 2017, Apple has been using it in its current generation smartphones and is also using it in its tablet series. With these sensors, the environment can be captured in three dimensions, which is important for many applications, e. g. augmented reality. Consumer electronics will therefore be a significant demand driver for laser-based 3D sensors in the next few years, according to market research company Yole. Their analysts expect surface emitting lasers to grow from USD 1.4 billion in 2021 to USD 3.9 billion in 2027, growing at a CAGR of 19%.

In addition to consumer electronics applications, edge and surface emitting lasers are increasingly being used in 3D sensing for the industrial and automotive sectors. Yole expects a strong increase in demand for these devices by 2026.

Business Development

Fiscal year 2022 was dominated by significant geopolitical events with serious macroeconomic impacts. Disrupted supply chains, energy crisis, inflation, the shortage of skilled workers or the COVID-19 pandemic are just a few examples of external factors that many people and companies had to deal with. We successfully met these challenges by introducing targeted measures at an early stage. As a result, we were able to recruit many new colleagues and still achieve our revenues forecast despite delays in the granting of export licenses. Demand for our equipment and in particular our G10-SiC remained very strong. Our profitability also developed as we expected. Accordingly, we also met all other key figures of our guidance, which was increased in the course of the year.

In particular, a strong increase in demand for AIXTRON's Silicon Carbide (SiC) and Gallium Nitride (GaN) energy efficient power as well as Micro LED device production equipment characterized the reporting year. AIXTRON's other products also experienced strong demand in 2022, for example, systems for the production of lasers for optical data communication and 3D sensing, as well as systems for LEDs. With orders totaling EUR 585.9 million (2021: EUR 497.3 million), we recorded an 18% increase in order volume in the fiscal year 2022. As expected, revenues also developed very positively and, at EUR 463.2 million (2021: EUR 429.0 million), were despite the delayed granting of export licenses within our guidance range. At 42%, the gross margin met the expectations. The increased operating expenses of EUR 90.6 million included higher variable compensation components as well as higher fixed personnel cost and increased expenses for Research and Development. The operating result was EUR 104.7 million with an EBIT margin of 23% (2021: EUR 99.0 million; 23%). This resulted in a net profit of EUR 100.5 million (2021: EUR 94.8 million). For 2022, a free cash flow (cash flow from operating activities - investments + proceeds from disposals adjusted for changes in financial assets) of EUR 7.7 million (2021: EUR 48.7 million) was reported.

During 2022, AIXTRON has been actively pursuing the renewal of its product portfolio and the new G10-SiC tool was successfully launched in the reporting year, while the new G10-AsP tool was introduced to the market in early 2023. In addition, we were able to acquire further well-known customers for our deposition technology for the efficient large-scale production of high-performance SiC power electronics. In order to secure a sustainable profitable development of the AIXTRON Group, our product portfolio focuses exclusively on product lines with a positive earnings contribution or those that promise a significant return on investment (ROI) in the foreseeable future.

Results of Operations

Development of Orders

	2022	2021	2022 vs. 2021	
	in EUR million	in EUR million	in EUR million	%
Total order intake incl. spares & services	585.9	497.3	88.6	18
Equipment order backlog (end of period)	351.8	214.6	137.2	64

In fiscal year 2022, US dollar-denominated **order intake** and **order backlog** have been recorded at the budget exchange rate of 1.20 USD/EUR (2021: 1.25 USD/EUR). Spares & service orders are not included in the order backlog.

In 2022, **total order intake** including spares & services stood at EUR 585.9 million, thus significantly higher than the previous year's figure. This development was driven in particular by continuously strong demand from power electronics and micro LEDs. In Q4/2022, order intake was booked at EUR 160.3 million and with that was up 12% against the previous quarter (Q3/2022: EUR 142.8 million).

At EUR 351.8 million, **equipment order backlog** as of December 31, 2022, was also higher than the order backlog of EUR 214.6 million at the end of 2021 (2022 budget rate: 1.20 USD/EUR; 2021 budget rate: 1.25 USD/EUR). Compared to the end of the previous quarter, the order backlog decreased due to the high number of shipments in the fourth quarter by 5% at year-end (September 30, 2022: EUR 369.4 million).

In line with strict internal procedures, AIXTRON has defined clear conditions that must be met for the recording of equipment orders in order intake and order backlog. These conditions include the following requirements:

1. the receipt of a firm written purchase order

2. the receipt or securing of the agreed down payment

3. accessibility to the required shipping documentation

4. a customer confirmed agreement on a system specific delivery date

In addition, and taking into account current market conditions, the Executive Board reserves the right to assess whether the actual realization of each system order is sufficiently likely to occur in a timely manner. If, as a result of this review, the Executive Board comes to the conclusion that the realization of an order is not sufficiently likely or involves an unacceptable degree of risk, it will exclude this specific order or a portion of this order from the recorded order intake and order backlog figures until the risk has decreased to an acceptable level. Such Risk factors include, for example, technological risks in orders for new product generations or delays in the granting of export licenses. The order backlog is regularly assessed and – if necessary – adjusted in line with potential execution risks.

Development of Revenues

Revenues in fiscal year 2022 amounted to EUR 463.2 million and were thus about 8% higher than in the previous year (2021: EUR 429.0 million). EUR 82.8 million or 18% of revenues in fiscal year 2022 were generated from the sale of consumables, spare parts and services (2021: 15%). Revenues with MOCVD systems rose by around 4% year-on-year. In particular, the strong increase in demand for MOCVD equipment for the production of SiC power devices led to an increase of equipment revenues in the power electronics segment. Demand from the application field of LEDs, including Micro LEDs, led to corresponding growth in this area as well. The proportion of application field revenues developed as following: Power electronics contributed 42% of equipment revenues, followed by optoelectronics with 28% and LEDs including Micro LEDs with 27%.

Revenues by Equipment, Spares & Service

	2022		2021		2022 vs. 2021	
	in EUR million	%	in EUR million	%	in EUR million	%
Equipment revenues	380.4	82	366.5	85	13.9	4
Service, spare parts, etc.	82.8	18	62.4	15	20.3	33
Total	**463.2**	**100**	**429.0**	**100**	**34.2**	**8**

With EUR 316.1 million or 68%, demand from customers in Asia continued to account for the majority of total revenues in 2022 (2021: 70%). The slightly higher contribution from customers in the Americas were a result of customers located there serving the above mentioned demand drivers.

Revenues by Region

	2022		2021		2022 vs. 2021	
	in EUR million	%	in EUR million	%	in EUR million	%
Asia	316.1	68	299.90	70	16.2	5
Americas	83.6	18	43.2	10	40.4	93
Europe	63.5	14	85.9	20	-22.4	-26
Total	**463.2**	**100**	**429.0**	**100**	**34.2**	**8**

Development of Results

Cost of Sales, Gross Profit, Gross Margin

Cost of sales amounted to EUR 267.9 million in the past fiscal year (2021: EUR 247.5 million) and were unchanged at 58% in relation to revenues (2021: 58%). This resulted in a **gross profit** of EUR 195.3 million (2021: EUR 181.5 million) in the fiscal year, which corresponds to a **gross margin** of 42% (2021: 42%).

Development of Results

	2022		2021		2022 vs. 2021	
	in EUR million	% Rev.	in EUR million	% Rev.	in EUR million	%
Cost of sales	**267.9**	**58**	**247.5**	**58**	**20.4**	**8**
Gross profit	**195.3**	**42**	**181.5**	**42**	**13.8**	**8**
Operating expenses	**90.6**	**20**	**82.5**	**19**	**8.1**	**10**
Selling Expenses	11.2	2	10.0	2	1.2	12
General and administration expenses	29.2	6	25.4	6	3.8	15
Research and development costs	57.7	12	56.8	13	0.9	2
Net other operating expenses (income)	-7.6	-2	-9.7	-2	2.1	-22

Operating Expenses

In absolute terms, **operating expenses** increased significantly during 2022 compared to the previous year, but only slightly in relation to revenue development. In absolute terms, operating expenses increased to EUR 90.6 million in the year 2022 compared to EUR 82.5 million in the past fiscal year. Higher personnel cost due to the increased staff as well as higher variable remuneration components contributed to the increase in expenses. In addition, R&D expenditures increased as well, while the previous year´s income from government grants was higher.

The following individual effects must be taken into account:

Selling, general and administrative (SG&A) expenses were higher in a year-on-year comparison at EUR 40.4 million (2021: EUR 35.4 million). In proportion to revenues, SG&A expenses amounted to 9% (2021: 8%). The development was mainly attributable to higher variable remuneration components and personnel cost.

Research and development (R&D) expenses, including expenses for development activities for our new generations of systems, increased slightly by 2% year-on-year to EUR 57.7 million (2021: EUR 56.8 Mio.). In fiscal year 2022, AIXTRON has both driven the completion of new product generations and already started to invest in the development of next generation products.

Key R&D Information

	2022	2021	2022 vs. 2021
R&D expenses (in EUR million)	57.7	56.8	2%
R&D expenses, % of revenues	12	13	-1pp

Net other operating income and expenses in 2022 resulted in an income of EUR 7.6 million (2021: operating income of EUR 9.7 million).

In the reporting year, other operating income including grants for **publicly funded development projects** decreased from EUR 8.9 million in 2021 to EUR 5.3 million, which was largely due to the completion of a major funding project. In fiscal year 2022, a **net foreign exchange gain** of EUR 2.8 million (2021: EUR 1.2 million gain) was recorded from transactions in foreign currencies and the translation of balance sheet items.

At EUR 91.1 million, **personnel costs** in fiscal year 2022 were 15% higher than the EUR 79.3 million in 2021. This increase was mainly due to higher variable remuneration components and increased costs in-line with the higher headcount.

Operating Result (EBIT)

The **operating result (EBIT)** improved year-on-year by 6% and amounted to EUR 104.7 million in the fiscal year 2022 (2021: EUR 99.0 million). This resulted in an EBIT margin of 23% (2021: 23%). This development is mainly attributable to the year-on-year increase in revenues and related gross margin and is thus related to the business- and cost developments described above.

Result before Tax

Result before tax at EUR 105.1 million in 2022 was higher than in the previous year (2021: EUR 98.9 million). This includes net interest income of EUR 0.45 million (2021: EUR 0.05 Mio. expense).

Interest and Taxes

	2022	2021	2022 vs. 2021	
	in EUR million	in EUR million	in EUR million	%
Net interest income	**0.45**	**-0.05**	**0.50**	**n.a.**
Interest income	0.80	0.23	0.57	246
Interest expense	0.35	0.28	0.08	27
Tax expense	**4.67**	**4.09**	**0.58**	**14**

In 2022, AIXTRON reported a **net income tax expense** of EUR 4.7 million (2021: EUR 4.1 million income tax expense). This consists of a tax expense from current taxes of EUR 13.9 million (2021: EUR 13.6 million) and an income from the capitalization of deferred taxes on loss carryforwards in the amount of EUR 9.2 million (2021: EUR 9.6 million income) due to expected future profits.

Consolidated Net Income for the Year

The **AIXTRON Group's consolidated net income** in fiscal year 2022 was EUR 100.5 million, or 22% of revenues (2021: EUR 94.8 million or 22%).

Assets and Liabilities

The **balance sheet total** as of 31 December 2022 increased to EUR 902.6 million year-on-year (December 31, 2021: EUR 740.7 million).

Assets

Property, plant and equipment increased from EUR 74.0 million as of 31 December 2021 to EUR 99.0 million as of 31 December 2022. Capital expenditures mainly included laboratory equipment and expansions. In addition, rights of use for leased space were capitalized.

Goodwill was EUR 72.5 million compared to EUR 72.3 million as of December 31, 2021. The difference is entirely related to exchange rate fluctuations. No impairment losses were recognized.

Other intangible assets increased to EUR 3.3 million as of 31 December 2022 (31 December 2021: EUR 2.2 million), due to investments in software and IT-solutions.

Inventories, including components and work in process, increased by EUR 103.0 million year-on-year to EUR 223.6 million (December 31, 2021: EUR 120.6 million), pointing at the high number of deliveries planned in subsequent quarters. The inventory turnover rate at the end of 2022 was 1.2 (2021: 2.0).

Trade receivables were EUR 119.7 million at December 31, 2022 (December 31, 2021: EUR EUR 81.0 million), reflecting the high volume of shipments in the fourth quarter of 2022. The current days sales outstanding was 30 days at the end of 2022 compared to 23 days at the end of 2021.

Cash and cash equivalents and financial assets decreased to EUR 325.2 million as of December 31, 2022 (31. December 2021: EUR 352.5 million). The decrease is mainly due to the build-up of inventories reflecting the higher business volume, and to the increase in receivables resulting from a disproportionately strong revenue contribution of the last quarter.

As of December 31, 2022, **other financial assets** include fund investments of EUR 220.4 million (December 31, 2021: EUR 141.6 million). In previous year, there were also short-term bank deposits of EUR 60.0 million.

Liabilities

Trade payables increased to EUR 46.1 million as of December 31, 2022 (December 31, 2021: EUR 19.6 million), due to the increased procurement volume.

Provisions (non-current and current) increased from EUR 31.8 million as of December 31, 2021, to EUR 36.1 million as of December 31, 2022. This was due on the one hand to a high number of systems being shipped with including the respective warranty provisions, and on the other hand to higher provisions for variable remuneration.

At EUR 141.2 million as of December 31, 2022, **advance payments received from customers** were significantly above the previous year's level (December 31, 2021: EUR 77.0 million), reflecting the currently strong order levels.

Other current liabilities include payments received for publicly funded development projects and increased slightly year-on-year to EUR 6.6 million (December 31, 2021: EUR 6.4 million).

Financial Position

Principals and Objectives of Financial Management

AIXTRON has a central financial management system whose primary objective is to ensure the long-term financial strength of the Group. AIXTRONs financial management includes the control of its global liquidity as well as its interest and currency management. Financial processes and responsibilities are defined throughout the Group. The investment policy is approved by the Supervisory Board.

Our capital structure management aims to determine an appropriate capital structure for each company within the Group while minimizing costs and risks. An appropriate structure must comply with tax, legal and commercial requirements. The Group increases or decreases the capital in line with the strategic orientation of the companies.

Our liquidity management aims to ensure the effective management of cash flows within each company of the group. The central finance department and local management monitor the cash flows within the group on a daily basis and take corrective action where necessary. Financing requirements are covered by cash within the group, either through intra-group loans or through changes in equity.

The principles of the investment policy are determined by the Executive Board and approved by the Supervisory Board of AIXTRON SE. Excess cash is invested by the finance department in accordance with this policy. The policy only allows for low-risk investments.

Due to its global business operations, AIXTRON generates a portion of its revenues in foreign currencies, i. e. in currencies other than the Euro. The most prevalent foreign currency relevant for AIXTRON is the US dollar. The associated exchange rate risk is monitored by the central finance department and taken into account as part of liquidity management. Speculative foreign currency transactions are not entered into.

In the semiconductor equipment industry, it is essential to have sufficient cash and cash equivalents at all times in order to be able to quickly finance possible business expansion. AIXTRON's current cash requirements are generally covered by cash inflows from operating activities. The Company can draw on a high level of cash and cash equivalents and other short-term investments to secure further corporate financing and to support its indispensable research and development activities. In addition, AIXTRON has the option, if necessary and subject to the approval of the Supervisory Board, to issue financial instruments on the capital market to cover additional capital requirements.

Financing

The **equity ratio** decreased slightly mainly due to the significantly increased total value of advance payments from customers and the correspondingly higher balance sheet total compared to the previous year and amounted to 73% as of December 31, 2022 compared to 80% as of December 31, 2021.

The **share capital** of AIXTRON SE amounted to EUR 113,348,420 as of December 31, 2022 (December 31, 2021: EUR 113,292,020). It is divided into 113,348,420 no-par value registered common shares with a pro rata amount of share capital of EUR 1.00 per share. All shares are fully paid in. The increase in share capital is attributable to the shares issued in the fiscal year under stock option programs. In fiscal year 2022, 56,400 stock options from past stock option programs were exercised (2021: 364,700 options) and no new stock options were issued (2021: 0 options).

AIXTRON ordinary shares

	31.12.2022	Exercised	Expired	Allocation	31.12.2021
Stock options to acquire shares	112,100	56,400	14,000	0	182,500

As of December 31, 2022 and 2021, AIXTRON did not have any **bank borrowings**.

To safeguard advance payments received from customers for orders, the Group had **bank guarantee lines** amounting to EUR 105.2 million as of December 31, 2022 (2021: EUR 70.1 million), of which EUR 49.8 million (2021: EUR 24.7 million) had been utilized as of the reporting date.

Capital Expenditures

In the year 2022, AIXTRON´s total **capital expenditures** amounted to EUR 49.2 million (2021: EUR 97.6 million).

Driven by the Group's growth, EUR 27.4 million (2021: EUR 16.4 million) was invested in **property, plant and equipment** in fiscal year 2022. These investments include additional test and demonstration facilities as well as the expansion of production and development areas. In addition EUR 79.6 million were invested in **fund investments** while fixed-term bank deposits were reduced by EUR 60.0 million (2021: EUR 80.1 million investments in fund investments; no change in fixed-term deposits). EUR 2.3 million were invested in **intangible assets** including software licenses (2021: EUR 1.1 million).

All capital expenditures in fiscal years 2022 and 2021 were self-financed.

Liquidity and Cash Flow

EUR million

Description	Balance sheet item	31.12.2022	31.12.2021	+ / -
Bank deposits	Cash and Cash equivalents	104.8	150.9	-46.1
Short-term bank deposits (term of 3 to max. 12 months)	Other financial assets	0.0	60.0	-60.0
Fund investments	Other financial assets	220.4	141.6	78.8
Total liquiditiy		**325.2**	**352.5**	**-27.3**

Cash and cash equivalents including **other financial assets** decreased to EUR 325.2 million as of December 31, 2022 (December 31, 2021: EUR 352.5 million). As of December 31, 2022, other financial assets exclusively included fund investments totaling EUR 220.4 million (2021: EUR 141.6 million). Bank deposits, primarily in euros, with a maturity of less than twelve months in the amount of EUR 60.0 million were included in the previous year balance (see also "Investments").

There are no restrictions on access to the Company's cash and cash equivalents.

Cash flow from operating activities amounted to EUR 37.1 million in fiscal year 2022 (2021: EUR 66.4 million). This is mainly the result of the current year's earnings. This was offset by the effects of the increase in inventories and the higher level of receivables as of the reporting date. In the previous year, investments in funds amounting to EUR 79.9 million were reported in cash flow from operating activities. From fiscal year 2022, these will be recognized retrospectively in cash flow from investing activities.

Cash flow from investing activities in the 2022 fiscal year was EUR -48.3 million (2021: EUR -97.4 million). This figure is mainly attributable to investments in laboratory plant and equipment and fund investments (see also "Investments").

Cash flow from financing activities amounted to EUR -34.6 million in 2022 (2021: EUR -8.6 million). The main drivers were the dividend payment of EUR -33.7 million (2021: EUR -12.3 million) and repayments of lease liabilities EUR -1.5 million, (2021: EUR -1.0 million). Cash inflows from the issue of new shares under stock option programs were of EUR 0.7 million (2021: EUR 4.8 million).

Free cash flow (cash flow from operating activities - investments + proceeds from disposals adjusted for changes in financial assets) for the 2022 fiscal year was EUR 7.7 million compared to EUR 48.7 million in 2021. The difference compared to the previous year is mainly related to the increase in inventories and higher investments in property, plant and equipment and intangible assets.

Management Assessment of Company Situation

In fiscal year 2022, AIXTRON continued to focus on successfully serving the targeted growth markets with sustainable profitability. At the same time, the Group continued to drive development and sales activities, particularly for power electronics equipment and for the production of Mini and Micro LED displays.

Equipment revenues in 2022 amounted to EUR 380.4 million, of which EUR 160.6 million (42 %) was generated by MOCVD/CVD equipment for the production of power electronics devices (GaN/SiC), EUR 106.2 million (28%) by MOCVD equipment for the area of optoelectronics (laser, solar and telecom) and EUR 103.2 million (27%) for the area of LEDs including Micro LEDs. Further fundamental growth is expected in the aforementioned end markets, as modern power electronics devices are increasingly based on SiC or GaN material systems. The use of lasers in optical data transmission and 3D sensor technology also continues to increase and and new types of micro LED displays will increasingly be used commercially.

In addition to the above-mentioned activities, there is a focus on the costs as well as the margin contributions of individual revenue drivers. Furthermore, the Executive Board continuously reviews the product portfolio with a view to changing framework conditions, such as time windows for the market launch of new technologies or evaluation of our customers' product requirements.

Fiscal year 2022 developed very positively in all markets addressed by our core technology. Management expects further revenue growth in the future, driven by the megatrends of digitalization, electromobility, energy efficiency and environmental sustainability.

In this context, the AIXTRON Group maintains a healthy financing structure with a high level of cash and cash equivalents and without any bank debt.

Achievement of Guidance in 2022

The order intake, revenue, gross margin and EBIT margin forecasts for fiscal 2022 published in the Annual Report 2021 and adjusted in conjunction with the publication of the third quarter report were fully met:

	Outlook FY 2022 24.02.2022	1st quarter 2022 05.05.2022	2nd quarter 2022 28.07.2022	3rd quarter 2022 27.10.2022	Result 2022 28.02.2023
Order Intake*	Range of EUR 520m to EUR 580m	Confirmation	Confirmation	**Increase:** Range of EUR 540m to EUR 600m	EUR 586 million
Revenues*	Range of EUR 450m to EUR 500m	Confirmation	Confirmation	Confirmation	EUR 463 million
Gross Margin	around 41%	Confirmation	Confirmation	**Increase:** around 42%	42%
EBIT Margin*	around 21-23%	Confirmation	Confirmation	**Increase:** around 22-24%	23%

**At constant budget exchange rate of 1.20 USD/EUR*

Management Report of AIXTRON SE

Supplementary Explanations According to HGB

The management report of AIXTRON SE and the Group management report of the AIXTRON Group are combined according to Section 315 Para. 5 HGB in conjunction with Section 298 Para. 2 HGB. The report is published in the Federal Gazette.

The annual financial statements of AIXTRON SE have been prepared in accordance with the German Commercial Code (HGB) and the German Stock Corporation Act (AktG). The individual financial statements generally serve to determine the balance sheet profit and thus the possible distribution amount.

The combined management report comprises all legally required information regarding AIXTRON SE. In addition to the reporting on the AIXTRON Group we explain the development of AIXTRON SE.

AIXTRON SE is the parent company of the AIXTRON Group and has its headquarters in Herzogenrath, Germany. The AIXTRON SE Management is responsible for key management functions for the Group, such as corporate strategy, risk management, investment management, executive and financial management, and communication with key target groups of the Group. AIXTRON SE generates the majority of its consolidated revenues through its operating activities of the development, production, sale and maintenance of equipment for the deposition of semiconductor materials. In addition to eight directly or indirectly wholly owned subsidiaries, which are primarily responsible for the worldwide distribution of AIXTRON's products, AIXTRON SE currently holds an 87% interest in the APEVA Group. AIXTRON SE is not managed separately using its own performance indicators because the Company is integrated into the Group management. We refer here to the respective explanations provided for the Group. The economic framework conditions of AIXTRON SE are essentially the same as those of the AIXTRON Group and are described in detail in the chapter “Report on Economic Position”.

Income Statement of AIXTRON SE according to HGB

in EUR million	2022	2021	2022 vs. 2021
Revenues	**432.1**	**396.2**	**35.9**
Changes in inventories	41.0	15.4	25.6
Other own work capitalized	0.7	0.5	0.2
Total output	**473.8**	**412.1**	**61.7**
Other operating income	15.2	12.9	2.3
Cost of materials	235.3	204.4	30.9
Personnel expenses	65.3	52.7	12.6
Depreciation	6.5	7.6	-1.1
Other operating expenses	88.6	61.0	27.6
Operating result	**93.3**	**99.3**	**-6.0**
Result from investments	5.3	4.3	1.0
Net interest income	-1.0	-0.9	-0.1
Financial result	**4.3**	**3.4**	**0.9**
Profit before tax	**97.6**	**102.7**	**-5.1**
Taxes on income and earnings	12.8	12.9	-0.1
Profit after tax	84.8	89.9	-5.1
Other taxes	0.2	0.2	0.0
Net profit for the year	**84.6**	**89.7**	**-5.1**
Profit carried forward	50.9	18.4	32.5
Dividend payment	-33.7	-12.3	-21.4
Transfer to retained earnings	-42.3	-44.8	2.5
Net retained profit	**59.5**	**50.9**	**8.6**

Results of Operations of AIXTRON SE According to HGB

AIXTRON SE's **revenues** amounted to EUR 432.1 million in fiscal year 2022 and thus increased by EUR 35.9 million, or 9%, compared with the previous year (2021: EUR 396.2 million). Revenues were influenced by continued high demand for MOCVD systems in the fields of GaN- and SiC-power electronics, wireless and optical data communication as well as LED applications. The other revenues are attributable to intra-group charges.

Revenues by category

	2022		2021		2022 vs. 2021	
	in EUR million	%	in EUR million	%	in EUR million	%
Equipment revenues	350.1	81	332.3	84	17.8	5
Service and spare parts	76.4	18	57.1	14	19.3	34
Other revenues	5.6	1	6.7	2	-1.1	-16
Total	**432.1**	**100**	**396.2**	**100**	**35.9**	**9**

Revenues by region

	2022		2021		2022 vs. 2021	
	in EUR million	%	in EUR million	%	in EUR million	%
Asian	299.2	69	277.7	70	21.5	8
Europe	63.5	15	87.5	22	-23.9	-27
Americas	69.4	16	31.0	8	38.4	124
Total	**432.1**	**100**	**396.2**	**100**	**35.9**	**9**

At 69%, demand from customers based in Asia still accounted for the largest share of total revenues in 2022.

At EUR 84.6 million (2021: EUR 89.7 million), the **net result for the year** was slightly lower than in the previous year. The following factors contributed to this development:

At 50%, the **cost of materials ratio** (cost of materials in relation to total output) was unchanged (2021: 50 %).

The annual average number of employees at AIXTRON SE rose from 477 in the previous year to 542 in the fiscal year 2022. As result of the increased number of employees and variable remuneration components, **personnel expenses** increased from EUR 52.7 million in the previous year to EUR 65.3 million in fiscal year 2022.

Despite the increase in capital expenditures, **depreciation and amortization** decreased by EUR 1.1 million from EUR 7.6 million in 2021 to EUR 6.5 million in 2022. This is mainly due to the fact that significant investments are recorded as assets under construction and therefore no depreciation is incurred yet.

Other operating expenses were higher at EUR 88.6 million compared to EUR 61.0 million in fiscal year 2021. The main drivers were higher variable expenses for shipped systems. losses from currency translation and increased development costs.

In comparison to 2021, **other operating income** increased from EUR 12.9 million to EUR 15.2 million in the 2022 fiscal year. This is mainly due to income from foreign currency translation and exchange rate gains.

In addition, **a result from investments** of EUR 5.3 million (2021: EUR 4.3 million) was generated in fiscal year 2022. The result from investments in the fiscal year consists exclusively of dividend payments from subsidiaries. The previous year´s result includes dividend income from subsidiaries in the amount of EUR 8.3 million as well as an impairment loss on the investment in APEVA Holdings Ltd. in the amount of EUR 4.0 million.

Net interest income totaled EUR -1.0 million in fiscal year 2022 compared to EUR -0.9 million in 2021. This is mainly attributable to expenses from the fair value accounting of fund investments.

Net Result AIXTRON SE – Use of Result

The net result of AIXTRON SE amounted to EUR 84.6 million. An amount of EUR 42.3 million was transferred to retained earnings. Combined with the carried forward profit from the previous year in the amount of EUR 50.9 million and the dividend payment in May 2022 in the amount of EUR 33.7 million, this results in a new accumulated profit of EUR 59.5 million as of December 31, 2022 (December 31, 2021: EUR 50.9 million). The Executive Board and Supervisory Board will propose to the Annual General Meeting that a dividend of EUR 0.31 per dividend-entitled share (2021: EUR 0.30) be paid for 2022.

Assets and Liabilities and Financial Position of AIXTRON SE

At EUR 757.8 million, total assets at AIXTRON SE at the end of 2022 were about 23% higher than the previous year's figure (2021: EUR 615.6 million). This was due in particular to advance payments received from customers and the positive net result for the year.

Balance Sheet of AIXTRON SE (HGB)

in EUR million	31.12.2022	31.12.2021
Assets		
Intangible assets	3.3	2.2
Property, plant and equipment	85.7	63.8
Financial assets	46.9	46.4
Non-current assets	**135.9**	**112.4**
Inventories	204.7	104.7
Trade receivables	83.6	66.1
Receivables from associates	36.1	15.8
Other assets	10.5	6.6
Securities	220.3	141.6
Cash and credit balances at banks	65.7	167.7
Current assets	**620.9**	**502.5**
Deferred expenses and accrued income	1.0	0.7
Total assets	**757.8**	**615.6**

in EUR million	31.12.2022	31.12.2021
Equity and liabilities		
Subscribed capital	*113.3*	*113.3*
Treasury stock	*-1.0*	*-1.1*
Issued capital	112.4	112.2
Capital reserve	287.0	280.8
Retained earnings	87.2	44.8
Accumulated deficit	59.5	50.9
Equity	**546.1**	**488.7**
Provisions	**47.7**	**46.1**
Prepayments received on order	120.3	62.0
Trade payables	29.1	12.9
Liabilities from associates	11.9	2.9
Other liabilities	2.7	3.1
Liabilities	**164.0**	**80.8**
Total equity and liabilities	**757.8**	**615.6**

Assets

Property, plant and equipment increased from EUR 63.8 million in 2021 to EUR 85.7 million in fiscal year 2022 due to increased capital expenditures, mainly for laboratory plant and equipment.

Financial assets increased to EUR 46.9 million (2021: EUR 46.4 million) due to the opening of a new subsidiary in Malaysia.

The increase in **inventories** from EUR 104.7 million as of December 31, 2021 to EUR 204.7 million as of December 31, 2022 mainly reflects the high expected sale of systems in the following quarters and the high order backlog.

Trade receivables increased from EUR 66.1 million to EUR 83.6 million due to a high number of deliveries at the end of the 2022 fiscal year.

Liabilities

The **subscribed capital** of AIXTRON SE was at EUR 113.3 million as of December 31, 2022 (December 31, 2021: EUR 113.3 million). **Issued capital** was EUR 112.4 million (2021: EUR 112.2 million). A total of 56,400 shares were issued as part of stock option programs in the fiscal year 2022.

As a result of the exercise of the stock options as well as the recognition of share-based payments expenses, the **capital reserve** increased from EUR 280.8 million as of December 31, 2021, to EUR 287.0 million as of December 31, 2022. Due to the higher balance sheet total, the **equity ratio** decreased to 72% in the fiscal year compared to 79% in the previous year, despite the increased total equity.

To secure **prepayments received on orders**, AIXTRON SE had guarantee facilities of EUR 97.5 million as of December 31, 2022 (2021: EUR 57.5 million), of which EUR 47.3 million had been utilized as of the balance sheet date (2021: EUR 23.9 million).

Trade payables increased to EUR 29.1 million due to reporting date factors and a higher procurement volume (2021: EUR 12.9 million).

As of December 31, 2022, AIXTRON did not have any **bank borrowings**, as was the case on the prior-year balance sheet dates.

Investments

Along with AIXTRON's growth, capital expenditures in property, plant, equipment, other intangible assets and financial assets at AIXTRON SE totaled EUR 30.0 million in fiscal year 2022 (2021: EUR 12.2 million).

Thereof EUR 27.2 million in 2022 were for property, plant and equipment (2021: EUR 10.9 million). As in the previous year, this capital expenditure was mainly for laboratory equipment, test and demonstration equipment and expansion of production areas.

Furthermore, AIXTRON SE invested EUR 2.3 million in intangible assets for licenses and software (2021: EUR 1.1 million).

Investments of EUR 0.5 million (2021: EUR 0.3 million) were made in financial assets in fiscal year 2022. These related to the foundation of a new subsidiary.

Liquidity

Cash Flow Statement of AIXTRON SE (HGB)

in EUR million	2022	2021
Cashflow		
Cash flow from operating activities	34.1	61.3
Cash flow from investing activities	-104.4	-86.5
Cash flow from financing activities	-31.7	-7.9
Change in cash and cash equivalents	**-102.0**	**-33.1**
Cash and cash equivalents at the beginning of the period	167.7	200.8
Cash and cash equivalents at the end of the period	**65.7**	**167.7**

Development of Financial Position (Cash Flow)

Cash and cash equivalents decreased by EUR 102.0 million from EUR 167.7 million to EUR 65.7 million in the fiscal year, mainly due to cash and cash equivalents being invested in fund assets. Adjusted for this effect, liquidity would have decreased by EUR 23.3 million.

Cash flow from operating activities decreased from EUR 61.3 million in 2021 to EUR 34.1 million in the fiscal year 2022 mainly as a result of the the high level of receivables and increased inventories as of the reporting date, which has not yet been fully reflected in cash flow.

Cash flow from investing activities amounted to EUR -104.4 million in fiscal year 2022 (2021: EUR -86.5 million) mainly due to additional investments in fund assets of EUR -78.7 million (2021: EUR -79.2 million) and in property, plant and equipment of EUR 13.7 million.

Cash flow from financing activities amounted to EUR -31.7 million in fiscal year 2022 (2021: EUR -7.9 million). The main driver of this development was the dividend payment of EUR -31.7 million (2021: EUR -12.3 million).

There are no restrictions on access to the Company's cash and cash equivalents.

Opportunities and Risks

The business development of AIXTRON SE is subject to substantially the same risks and opportunities as the AIXTRON Group. AIXTRON SE generally participates in the risks of its subsidiaries in proportion to its respective ownership interest. As a result of the centralized financial management of the AIXTRON Group, all financing transactions are conducted through AIXTRON SE. As the parent company of the AIXTRON Group, AIXTRON SE is integrated into the Group-wide risk management system. For further information, please refer to the Opportunities and Risks Report.

Outlook

The outlook for the AIXTRON Group largely reflects the expectations of AIXTRON SE. The earnings development of AIXTRON SE should continue to be in line with that of the Group in the future, as the results of the subsidiaries are reflected in the income from investments of the Group's parent company. Management by means of performance indicators is carried out exclusively at Group level. The comments on the expected results of operations and financial position therefore also apply to AIXTRON SE (see in the following section "Expected Developments").

Report on Expected Developments, Opportunities and Risks

Expected Developments

Future Market Environment

In its "World Economic Outlook Update" (January 2023), the IMF forecasts global economic growth of 2.9% for 2023. Central bank interest rate hikes to combat inflation and Russia's war in Ukraine continue to weigh on economic activity. The rapid spread of COVID-19 in China dampened growth in 2022, but the recent opening-up has paved the way for a faster-than-expected recovery. Global inflation is expected to decline in 2023 to 6.6% in 2023, still above pre-pandemic (2017-19) levels of around 3.5%. At this point in time, AIXTRON does not expect the general global economic environment to have any significant impact on business development. The industry and sector-specific conditions for the demand for AIXTRON systems are still intact, although an impact from negative macroeconomic developments cannot be ruled out.

Market observers see the development of production systems in the semiconductor industry as positive in the coming years. According to a study by the leading global industry association SEMI from December 2022, the overall market for investments in so-called wafer fab systems, which also include AIXTRON's deposition systems, will grow from an all-time high of around USD 95 billion in 2022 to around Contract USD 79 billion in 2023, to increase again to c. USD 92 billion in 2024. A large part of the market is still in Korea, Taiwan and China. According to SEMI, the market for wafer fab equipment is currently burdened by difficult macroeconomic conditions and conditions in the semiconductor industry. However, emerging applications in numerous markets are expected to ensure significant growth in the semiconductor industry again this decade, which should necessitate further investments to expand production capacities.

Regardless of the market development of the entire semiconductor industry, the market segments on which AIXTRON focuses are determined by megatrends, the development of which will be decisive for the future development and size of AIXTRON's markets.

The sale of GaN power semiconductors is largely driven by the need to increase energy efficiency in the global IT infrastructure and in data centers in order to slow down the rapid increase in energy consumption. The electric mobility of the future is expected to lead to an increased use of SiC components in the drive train and in the charging infrastructure in order to be able to better meet the requirements for range and efficiency.

The increasing demand for lasers manufactured on AIXTRON systems is due to the rapidly growing need for fast and energy-efficient optical data communication (cloud computing, video streaming, etc.). Likewise, 3D sensor technology in consumer electronics (smartphone, TV) and in the areas of access control, as well as the progress of industrial digitization and a growing number of vehicles that use 3D sensor technology, contribute to an increased demand for lasers.

Finally, additional new markets for AIXTRON are determined by the spread of new types of displays in smartwatches, TVs, smartphones and notebooks: Micro LED displays, whose self-luminous LED pixels can be produced on AIXTRON's MOCVD systems, are aimed at replacing today's LCD or OLED display technology through innovative, energy-saving alternatives with better luminosity, contrast, color fidelity and resolution. Commercial dissemination of these innovative display technologies will significantly determine the size of these additional new sales markets for AIXTRON.

Expected Financial and Earnings Position

For the 2023 fiscal year, the Group again expects revenue growth compared to the previous year. Customer demand continues to span all areas of technology. The Executive Board is optimistic about both the short- and long-term positive prospects, both for the demand for MOCVD systems for the production of lasers, in particular for optical data transmission, as well as for Micro LED-based display applications and GaN power devices. With regard to the demand for systems for the production of SiC power components, the Executive Board expects an increasing contribution to revenues in the 2023 fiscal year compared to 2022.

Based on the current group structure, an estimate of the order situation and the budget exchange rate of 1.15 USD/EUR (2022: 1.20 USD/EUR), the Executive Board expects for the 2023 fiscal year order intake on group level in a range between EUR 600 million and EUR 680 million With revenues in a range between EUR 580 million and EUR 640 million, the Executive Board expects to achieve a gross margin of around 45% and an EBIT margin of around 25% - 27% in the 2023 fiscal year.

As in previous years, the Executive Board assumes that AIXTRON will not need any external bank financing in the 2023 fiscal year either. In addition, it is assumed that the Group will be able to maintain a solid equity base for the foreseeable future.

Overall Statement on the Future Development

AIXTRON's systems enable the production of power semiconductors for highly efficient energy conversion in the area of power supply for data centers or consumer electronics or electric vehicles and their charging infrastructure (GaN and SiC components). Lasers manufactured with the help of AIXTRON systems are key components in fast optical data transmission (cloud computing, Internet of Things), in 3D sensors and increasingly in complex vehicle assistance systems. AIXTRON technology also enables the production of high-frequency chips for 5G mobile networks and key components for the production of the latest generation of displays (fine pitch displays, mini and micro LED displays).

Due to AIXTRON's proven ability to develop, manufacture and market innovative deposition systems in a flexible number for several customer markets, the Executive Board is convinced of the positive future prospects for the group and its target markets.

As of December 31, 2022, AIXTRON did not have any legally binding agreements on financial investments or the acquisition or sale of parts of the company.

Risk Report

Risk Management System

AIXTRON's risk management system is controlled centrally and includes all of AIXTRON's key organizational units in the process. The Corporate Governance & Compliance department, headed by the responsible CFO of AIXTRON SE, is responsible for setting up a risk management system and informs the entire Executive Board and the Supervisory Board of AIXTRON SE at regular intervals or ad hoc if necessary.

The primary goals of the risk management system support the achievement of strategic business goals and early detection of potential risks compared to the applicable corporate planning that could negatively affect the achievement of strategic business goals and business activities. The risk management system supports the Executive Board in the systematic, effective and efficient management of identified risks by defining, prioritizing and tracking risk-reducing measures. In order to meet the extended requirements of IDW PS 340, the conformity and meaningfulness of AIXTRON's risk management system were examined and essential instruments were further optimized in terms of presentation and meaningfulness. The subject of this consideration was the further development of the framework specifications for the risk management system, the risk assessment scheme, the risk-bearing capacity and the resulting overall risk position in the AIXTRON Group. The results and resulting adjustments were integrated into the risk management process and risk reporting, used in the quarterly risk inventory and documented in the Group-wide risk management system manual. In order to further optimize the risk management system, new software for the risk management system was introduced in the fourth quarter of 2022.

All members of the senior management team and other key employees have been trained in the use of the new risk management software.

The regular, quarterly risk inventory is initiated, carried out and monitored by the central risk manager. All risk managers from the operational and administrative areas, all general managers of the AIXTRON subsidiaries and the Executive Board are asked about the current developments in already documented risks and measures to reduce them, as well as possible new risks. The results are collated at central level and discussed in a risk committee before the Supervisory Board is informed.

AIXTRON uses risk management software to support the risk management process. All risk owners have access to the software. This ensures that abrupt changes in the risk situation or newly identified risks are reported by the risk managers and integrated into the risk portfolio and reported promptly.

At AIXTRON, all individual risks and risk aggregates are evaluated and classified according to a defined scheme. The assessment of the probability of occurrence can be specified in four levels or as a fixed value. The possible extent of damage if the risk occurs can also be recorded in four stages or as a three-point analysis. The amount of damage relates to the impact on the operating result (EBIT) of the AIXTRON Group. If the risk is significant for relevant risks, a possible outflow of cash is also used as the amount of damage.

The four levels for the probability of occurrence of the risks, in addition to the possibility of a fixed value, are divided into:

- Very unlikely = <5%
- Unlikely = 5% – 10%
- Likely = >10% – 50%
- Very likely = > 50% – 100%

The potential net loss (measured as a percentage of equity) is used as a criterion for evaluating the possible financial impact of a risk on the earnings (EBIT) of the AIXTRON Group. The four possible levels in addition to the three-point view were calculated as follows:

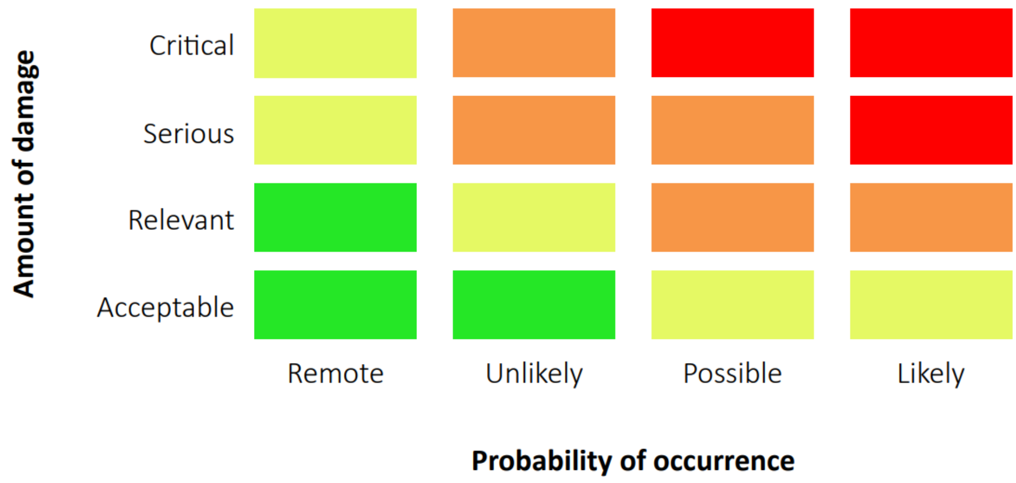
- Negligible = <0,4%
- Moderate = 0,4% – 2%
- Significant = > 2% – 4%
- Severe = > 4%

The risk effects are presented both in terms of possible gross/net effects and in different observation periods (up to 12 months, 13 – 24 months and longer than 24 months). The gross loss represents the loss potential in the event of a risk occurring without taking into account other effects such as risk reduction measures. The net loss describes the loss potential in the event of a risk occurring taking into account the effects resulting from the risk reduction measures such as insurance, provisions, budget- and forecast recording of risks. A risk matrix is derived from this assessment, which divides the risks of the AIXTRON Group into the following four risk classes (see chart for color scale):

- Acceptable risk (green)
- Moderate risk (yellow)
- Significant risk (orange)
- Substantial risk (red)

The risks classified as substantial are the main risks in relation to a threat to the continued existence of the AIXTRON Group within the meaning of the German Accounting Standard (DRS 20).

Risk Map



Internal Control System (ICS)

The internal control system (ICS) is part of the corporate governance organization. The aim of the ICS is to ensure that business activities are carried out properly, that financial reporting is reliable and that legal, regulatory and internal requirements are met. To achieve this goal, potential operational, financial and compliance risks are identified, assessed and internal controls implemented when deemed necessary. The effectiveness of the control measures is checked at regular intervals by the Corporate Governance and Compliance department. To ensure functional and disciplinary independence, the ICS reports to the Chief Compliance Officer. The ICS has no direct operational responsibility and/or authority for the processes within the ICS.

Internal Control System (ICS) in the Accounting Process

The internal control system in the accounting process of the AIXTRON Group includes both the accounting process of AIXTRON SE and the group accounting process. It defines controls and monitoring activities, which are measures aimed at ensuring the proper handling of business activities, reliable financial reporting and compliance with laws and guidelines. A control system that is appropriate for the size of the group and business activities is the prerequisite for effectively controlling operational, financial and other risks.

In the accounting process, controls are defined at risk points that help ensure that the annual financial statements and the consolidated financial statements are prepared in accordance with the regulations. A separation of functions that is adequate for the size of the group and the application of the four-eyes principle reduce the risk of fraudulent activities.

A global IT system is used to prepare the annual financial statements, the consolidated financial statements and the consolidation, which ensures a uniform and consistent approach and data security. Central system backups are regularly carried out for the relevant IT systems in order to avoid data loss. In addition, defined authorizations and access restrictions are part of the security concept.

The corporate function Finance of the AIXTRON Group is technically and organizationally responsible for the preparation of the annual financial statements and the consolidated financial statements. In the decentralized units, local employees are responsible for preparing the local financial statements. Uniform group accounting is ensured by group-wide specifications in terms of content and deadlines, as well as accounting guidelines and valuation principles. The Compliance department regularly checks compliance and effectiveness of the controls and is therefore involved in the overall process.

In the opinion of the Executive Board, these coordinated processes, systems and controls ensure that the Group accounting process is in accordance with IFRS and the annual financial statements are in accordance with HGB and other accounting-related regulations and laws and are reliable.

Internal Audit

The internal audit is part of the corporate governance organization and is set up by the audit committee of AIXTRON SE on behalf of the Supervisory Board of AIXTRON SE. Internal Auditing reports directly to the Audit Committee and the Executive Board. Internal Audit's annual plan is discussed with and approved by the Audit Committee and the Board of Directors. Internal Audit aims to provide independent and objective auditing and consulting services to improve the organization and add value. Internal Audit follows a systematic and disciplined approach to assessing the effectiveness and efficiency of organizational processes and tools. The follow-up to internal audit findings and progress is regularly discussed with the Audit Committee and the Board.

In addition, the annual internal audit plans are prepared on the basis of a risk-based methodology, which takes into account findings and risks in the area of compliance risk management and the internal control systems. Based on the risks and findings, a recommendation for the annual internal audit plan is submitted to the Audit Committee for review and approval. In addition, the findings and risks are reviewed on an ongoing basis and, if necessary, ad hoc reviews are recommended to the Audit Committee.

Overall Statement on the Effectiveness of the Risk Management and Internal Control System

The design of the risk management and internal control system described is based on the legal framework and international standards – such as the German Stock Corporation Act, the German Corporate Governance Code or the auditing standard "IDW PS 340 n.F." issued by the Institute of Public Auditors. Based on the information made available to the Executive Board of AIXTRON SE, it is not aware of any circumstances that could impair the appropriateness and effectiveness of the risk management system (RMS) or the internal control system (ICS).[1]

[1] The information in this paragraph (overall statement on the effectiveness of the risk management and internal control system) was made in accordance with the new requirements of the German Corporate Governance Code 2022. They are to be classified as "not related to the management report" because they go beyond the legal requirements and are therefore not part of the substantive audit by the auditor.

Risks Factors

The following risks could possibly have a significant negative impact on AIXTRON's results of operations, net assets and financial position, net assets, liquidity and the stock market price of the shares as well as on the actual outcome of matters to which the forward-looking statements contained in this combined management report are based relate. The risks explained below are not the only ones faced by the AIXTRON Group. There may be other risks that AIXTRON is currently unaware of, as well as general corporate risks such as political risks, the risk of force majeure and other unforeseeable events. In addition, there may be risks that AIXTRON currently considers immaterial, but which ultimately could also have a material negative impact on the AIXTRON Group. Please refer to the “Forward-Looking Statements” section for more information on forward-looking statements.

In terms of the German Accounting Standard (DRS 20), the following risks were considered material as of December 31, 2022:

Market and Competition-Related Risks

AIXTRON's target markets are distributed worldwide, with a regional focus on Asia, Europe and the USA. AIXTRON is therefore subject to global economic cycles and geopolitical risks such as the trade conflict between the USA and China, which could adversely affect the business of the AIXTRON Group. Such risks cannot be influenced by AIXTRON.

The markets addressed by AIXTRON are cyclical and can therefore be volatile. The timing, length and intensity of these industry cycles are difficult to predict and influence through AIXTRON. In order to spread market-related risks, AIXTRON therefore diversifies and offers products in different target markets.

In each of these markets, AIXTRON is in competition with other companies. It is possible that new competitors will appear on the market or that established competitors will adopt strategies or launch products that may negatively impact market expectations overall or of individual key customers of AIXTRON.

Market developments are continuously observed and assessed by AIXTRON. In order to reduce the risk of dependence on individual markets and their fluctuations, AIXTRON has implemented a management system designed to ensure that market developments are identified early and used optimally.

AIXTRON's market and competition risks are classified as significant risks, since the extent of damage in the event of a risk occurring would have a significant impact on the Group's high revenue and profit expectations in the medium to long term.

Technological Risks

Some of the technologies that AIXTRON offers enable new, disruptive application options. This often means long development and qualification cycles for AIXTRON products, since demanding technical and/or other customer specifications have to be met (sometimes for the first time) before a business deal is concluded.

Due to the predominantly long development and qualification cycles of AIXTRON's products, there is a possibility that AIXTRON's technologies and products are developed for markets or application areas in which the framework conditions of the end markets or the strategic planning of potential customers change fundamentally in the course of the development cycle.

The ongoing focus on research and development activities in the past fiscal year and the intensive involvement of external technology partners are still considered by AIXTRON SE’s Executive Board to be suitable measures to reduce this risk.

AIXTRON's technology risks are classified as significant risks, since the extent of damage in the event of a risk occurring would have a significant impact on the Group's high revenues and profit expectations in both medium and longer term.

If it turns out that a technology risk has materialized and the introduction of a new technology cannot be implemented as planned, this can result in the planned and forecasted revenues being exposed to the risk of being postponed or omitted, and thus development activities being refinanced later than planned or not not at all.

In AIXTRON's risk management system, the following risks are not considered significant for the Group:

- Currency and Financial Risks
- Production and related risks
- Legal Risks
- Risks related to patents and intellectual property
- COVID-19 Pandemic

AIXTRON defines IT and information security risks as breaches of integrity, confidentiality and liability.

The Group has invested in extensive technical and organizational measures to increase information security and protect information from unauthorized access, unwanted modification or deletion. The information security measures taken are subject to regular monitoring and continuous improvement and are supported by targeted awareness and training concepts. Accordingly, the overall risk classification could be reduced.

As part of the risk management system, the effects, measures and prospects in relation to the current COVID-19 pandemic situation and possible resulting effects on global material availability and supply chains are recorded, discussed, evaluated and reported in our regular quarterly risk inventory.

Overall Statement on the Risk Situation of AIXTRON SE

Compared to the 2021 fiscal year, the overall risk situation remains unchanged for the 2022 fiscal year, with the exception of the changes described above in the AIXTRON Group. The further focusing of research and development activities with a focus on the renewal and expansion of the product portfolio tightens the risk portfolio and thus improves the use of opportunities and the avoidance of risks in AIXTRON's target markets.

Neither in the 2022 fiscal year nor at the time of writing of this management report has the Executive Board of AIXTRON SE identified any risks for the company that could threaten its continued existence as of December 31, 2022.

Opportunities Report

AIXTRON's core competence is the development of the latest technologies for the precise deposition of complex semiconductor structures and other functional materials. Here the group has developed a leading competitive position worldwide. In order to maintain or expand these positions, AIXTRON continuously invests in corresponding research and development projects, e.g. for MOCVD systems for the production of semiconductors for applications such as micro LEDs, lasers or power electronics. The Executive Board will maintain the focus on AIXTRON's core competence in order to successfully work on existing as well as to successfully open up new markets.

Important market segments for power electronics based on wide-band gap materials such as gallium nitride (GaN) and silicon carbide (SiC) are the automotive industry, energy industry, telecommunications and consumer electronics. The development of energy-efficient solutions for AC/DC converters and inverters as well as high-frequency power amplifiers is becoming increasingly important. The trend towards the electrification of vehicles and their charging infrastructure using SiC-based components plays an important role here. GaN-based components, e.g. for fast charging of mobile devices, are becoming increasingly popular. The demand for energy-saving GaN-based power supply in IT, such as data centers or servers, is currently increasing rapidly and is expected to continue to increase over the coming years through the development of additional market segments. GaAs or GaN-based high-frequency components, which are used for signal transmission in 5G networks or for the WLAN 6 standard, also make a contribution to revenues.

Important market segments in optoelectronics are consumer electronics, data communication and display technology. The trend towards optical data transmission over shorter distances, e.g. in data centers or when connecting households to a fiber optic network, as well as the worldwide expansion of fiber optic networks for fast data transmission, is causing increasing demand for systems for the production of edge and surface emitting lasers (EEL and VCSEL). AIXTRON expects demand to increase over the coming years, especially when demand for 3D sensors increases due to virtual reality applications or LiDAR in the automotive sector. Demand for equipment manufacturing red, amber and yellow (ROY) LEDs is currently subdued, also impacted by weaker consumer demand. Further growth potential lies in the increasing commercialization of micro LED displays, which would be accompanied by additional significant demand for systems for these demanding applications. These display technologies have high potential in various consumer electronics end-use applications.

AIXTRON expects that the following market trends and opportunities in the relevant end-user markets can have a positive impact on further business development:

Short Term:

- Increasing use of wide-band-gap GaN or SiC-based components for energy-efficient power electronics in electric vehicles, consumer electronics, mobile devices and IT infrastructure

- Increasing use of GaN-based components in the field of 5G network infrastructure
- Increasing use of GaAs-based components in mobile devices (e.g. smartphones) for 5G mobile communications or WLAN 6 technology
- Further increasing demand for lasers for high-volume optical data transmission, e.g. for video streaming and Internet-of-Things (IoT) applications
- Increasing use of compound semiconductor-based lasers for 3D sensing in mobile devices and in infrastructure applications
- Increasing use of LEDs and special LEDs (especially red-orange-yellow, UV or IR) in display and other applications
- Increasing commercialization of Micro LED displays

Medium to Long Term:

- Development of new applications based on wide-band gap materials such as high-frequency chips or system-on-chip architectures with integrated energy management
- Development of alternative LED applications, such as visible light communication technology
- Increasing application of compound semiconductor-based laser sensors for autonomous driving
- Use of GaN-based components in mobile devices (e.g. smartphones) for the millimeter wave range of 5G and 6G mobile communications
- Increased development activities for high-performance solar cells made from compound semiconductors

Overall Picture of Opportunities

As part of the assessment of our business opportunities, investment opportunities or development projects are reviewed and prioritized in terms of their potential value proposition to ensure an effective allocation of resources. We focus specifically on growth markets that are positively influenced by global megatrends such as increasing electromobility, electrification, energy efficiency, digitization and networking, in order to make the best possible use of the opportunities that arise for the Group's ecologically and economically sustainable business development.

If identified opportunities are deemed likely to materialize, they are incorporated into business plans and short-term forecasts. Trends or events going beyond this, which could lead to a positive development for the net assets, financial position and results of operations, are observed and can have a positive effect on our medium to long-term prospects.

Legal Disclosures

Group Declaration of Corporate Governance pursuant to Section 289f in conjunction with Section 315d German Commercial Code (HGB)

The Declaration of Corporate Governance pursuant to Section 289f HGB has been combined with the Group Declaration of Corporate Governance pursuant to Section 315d HGB. This combined declaration including a Corporate Governance Report is available on the homepage of AIXTRON SE at Declaration of Corporate Governance (www.aixtron.com/investoren/corporate-governance/en/corporate-governance-statement/2022_Declaration_Corporate-Governance_EN.pdf) and is part of this annual report.[1]

Information Concerning Section 289a in conjunction with Section 315a of the German Commercial Code (HGB) on Takeovers

The share capital of AIXTRON SE as of December 31, 2022, amounted to EUR 113,348,420 (December 31, 2021: EUR 113,292,020) divided into EUR 113,348,420 registered shares with a proportional interest in the share capital of EUR 1.00 per no-par value registered share. Each no-par value share represents the proportionate share in AIXTRON's stated share capital and carries one vote at the Company's annual shareholders' meeting. All registered shares are fully paid in.

As of December 31, 2022, AIXTRON SE held 965,224 treasury shares, which accounted for a share capital in the amount of EUR 965,224 (2021: 1,084,105). The treasury shares correspond to 1% of the share capital (previous year: 1%).

AIXTRON SE has issued a share certificate representing multiples of shares (global share). Shareholders do not have the right to the issue of a share certificate representing their share(s). There are no voting or transfer restrictions on AIXTRON's registered shares that are related to the Company's Articles of Association. There are no classes of securities endowed with special control rights, nor are there any provisions for control of voting rights, if employees participate in the share capital without directly exercising their voting rights.

[1] *The information in the Corporate Governance Declaration was made in accordance with the requirements of the German Corporate Governance Code 2022. They are to be classified as "not related to the Management Report" because they go beyond the legal requirements and are therefore not part of the substantive audit by the auditor.*

Additional funding needs could be covered by the following additional capital as authorized by the annual shareholders' meeting:

Funding Sources

(EUR or number of shares)

	31.12.22	Approved since	Expiration date	31.12.21	31.12.22 vs. 31.12.21
Issued shares	113,348,420	0	0	113,292,020	56,400
Authorised capital 2017 - cash capital increase with subscription rights for existing hareholders	0	09.05.17	25.05.22	10,518,147	-10,518,147
Authorised capital 2018 - Capital increase in cash or in kind with or without subscription rights for existing shareholders	0	16.05.18	25.05.22	45,944,218	-45,944,218
Authorised capital 2022 - Capital increase in cash or in kind with or without subscription rights for existing shareholders	41,450,000	25.05.22	24.05.27	0	41,450,000
Conditional Capital II 2007 - Stock Option Program 2007	0	22.05.07	21.05.12	2,678,523	-2,678,523
Conditional Capital II 2012 - Stock Option Program 2012	128,600	16.05.12	15.05.17	3,852,026	-3,723,426
Conditional Capital 2018 - Authorisation to issue bonds with warrants and/or convertible bonds, profit-sharing rights and/or income bonds (or combinations of these instruments) with or without subscription rights for existing shareholders	0	16.05.18	25.05.22	25,000,000	-25,000,000
Conditional Capital 2022 - Authorisation to issue bonds with warrants and/or convertible bonds, profit-sharing rights and/or income bonds (or combinations of these instruments) with or without subscription rights for existing shareholders	15,000,000	25.05.22	24.05.27	0	15,000,000

In accordance with Section 71 (1) no. 8 German Corporations Act, AktG, the Company is authorized until May 24, 2027, with the approval of the Supervisory Board, to purchase its own shares representing an amount of up to 10% of the share capital existing at the time of the resolution or – if this value is lower – at the time of the exercise of the authorization. This authorization may not be used by the Company for the purpose of trading in own shares. The authorization may be exercised in full, or in part, once, or on several occasions by the Company, by companies dependent on the Company or in which the Company directly or indirectly holds a majority interest, or by third parties appointed by the Company. The shares may be purchased (1) on the stock market or (2) by way of a public offer to all shareholders made by the Company or (3) by way of a public invitation to submit offers for sale.

Any amendment to the Articles of Association related to capital measures requires a 75% majority of the share capital represented at the Annual General Meeting (Article 59 SE Regulation, SE-VO; Section 179 German Corporations Act, AktG). Other amendments to the Articles of Association require a majority of two thirds of the votes cast or, if at least one half of the share capital is represented, a simple majority of the votes cast.

As of December 31, 2022, approximately 18% of AIXTRON's shares were held by private individuals, most of whom are based in Germany. Approximately 82% of the outstanding AIXTRON shares are held by institutional investors. At the end of fiscal year 2022, the four largest shareholders, each holding more than 3% of AIXTRON shares in their portfolios, were Baillie Gifford & Co. with 4.9%, Bank of America Corp. with 4.8%, Invesco International Mutual Funds with 4.3%, and Norges Bank with 3.7%. 99% of the shares were in free float as defined by Deutsche Börse.

Members of the Executive Board are appointed and dismissed by the Company's Supervisory Board. The individual members of the Executive Board are appointed for a maximum period of six years and can then be re-appointed.

In the event of a “change of control”, the individual members of the Executive Board are entitled to terminate their employment with three months’ notice to the end of the month and to resign from office with effect from the date of termination. Upon termination of employment due to a so-called “change of control” event, all members of the Executive Board receive a severance payment in the amount of the fixed and variable remuneration expected to be owed by the Company for the remaining term of the employment contract, up to a maximum of two years’ remuneration. A “change of control” as defined above exists if a third party or a group of third parties, who contractually combine their shares to act as a third party, directly or indirectly holds more than 50% of the Company’s share capital. Apart from the aforementioned, there are no other “change of control” clauses.

Non-financial Reporting in acc. with Sections 315b et seq. HGB

The AIXTRON Group's Sustainability Report is available on our website under Publications. The Group's non-financial report in accordance with sections 315b ff. HGB is integrated into this Sustainability Report and all text sections, tables and graphs, and all text sections, tables and graphics that are assigned to the non-financial report are marked accordingly.

GROUP CONSOLIDATED FINANCIAL STATEMENTS

Consolidated Income Statement

in EUR thousands	Note	2022	2021
Revenues	3	463,167	428,954
Cost of sales		267,896	247,475
Gross profit		**195,271**	**181,479**
Selling expenses		11,223	10,005
General administration expenses		29,216	25,382
Research and development costs	4	57,726	56,809
Other operating income	5	10,177	11,469
Other operating expenses	6	2,587	1,774
Operating result		**104,696**	**98,978**
Finance income		803	232
Finance expense		356	279
Net finance income	8	**447**	**-47**
Profit before taxes		**105,143**	**98,931**
Taxes on income	9	4,671	4,092
Profit for the year		**100,472**	**94,839**
Attributable to:			
Owners of AIXTRON SE		100,437	95,660
Non-controlling interests		35	-821
Basic earnings or loss per share (EUR)	20	0.89	0.85
Diluted earnings or loss per share (EUR)	20	0.89	0.85

See accompanying notes to consolidated financial statements.

Consolidated Statement of Other Comprehensive Income

in EUR thousands	Note	2022	2021
Profit for the year		**100,472**	**94,839**
Items that will not be reclassified subsequently to profit or loss (after taxes):			
Remeasurement of defined benefit obligation		85	112
Items that may be subsequently reclassified to profit or loss (after taxes):			
Currency translation adjustment	19	-926	4,487
Other comprehensive income		**-841**	**4,599**
Total comprehensive income for the year		**99,631**	**99,438**
Attributable to:			
Owners of AIXTRON SE		99,599	100,257
Non-controlling interests		32	-819

See accompanying notes to consolidated financial statements.

Consolidated Statement of Financial Position

in EUR thousands	Note	31.12.22	31.12.21
Assets			
Property, plant and equipment, and leased assets	11	98,980	74,013
Goodwill	12	72,452	72,319
Other intangible assets	12	3,267	2,246
Other non-current financial assets	13	705	703
Deferred tax assets	14	34,266	24,735
Total non-current assets		**209,670**	**174,016**
Inventories	15	223,594	120,629
Trade receivables	16	119,696	80,962
Current tax receivables	10	2,804	2,363
Other current assets	16	21,652	10,238
Other financial assets	17	220,410	201,625
Cash and cash equivalents	18	104,751	150,863
Total current assets		**692,907**	**566,680**
Total assets		**902,577**	**740,696**
Liabilities and equity			
Issued Capital	19	112,383	112,208
Additional paid-in capital		389,694	384,687
Retained earnings incl. profit for the year		155,231	88,372
Currency translation reserve		5,804	6,726
Equity attributable to the owners of AIXTRON SE		**663,112**	**591,993**
Non-controlling interests		205	173
Total equity		**663,317**	**592,166**
Non-current liabilities	27	5,975	3,296
Other non-current provisions	23	3,190	4,521
Deferred tax liabilities	14	827	654
Total non-current liabilities		**9,992**	**8,471**
Trade payables	24	46,098	19,585
Contract liabilities for advance payments	26	141,237	77,041
Other current provisions	23	32,913	27,271
Other current liabilities	24	6,581	6,433
Current tax payables	10	2,439	9,729
Total current liabilities		**229,268**	**140,059**
Total liabilities		**239,260**	**148,530**
Total liabilities and equity		**902,577**	**740,696**

See accompanying notes to consolidated financial statements.

Consolidated Statement of Cash Flow

in EUR thousands	Note	2022	2021*
Profit for the year		100,472	94,839
Adjustments to reconcile net profit to net cash from operating activities			
Expense from share-based payments		4,441	3,860
Depreciation, amortization and impairment expense	11, 12	8,867	9,829
Net result from disposal of property, plant and equipment	5, 6	-8	83
Adjustments for fair value valuation of financial assets at fair value through profit or loss	6	770	659
Deferred taxes	9	-9,222	-9,569
Interest and lease repayments shown under investing or financing activities	8, 27	911	906
Change in			
Inventories		-103,633	-39,756
Trade receivables		-39,987	-39,415
Other assets		-12,156	-3,802
Trade payables		27,102	8,067
Provisions and other liabilities		-2,162	16,713
Non-current liabilities		-3,306	-452
Advance payments from customers		65,050	24,404
Net cash provided by operating activities		**37,139**	**66,366**
Capital expenditures in property, plant and equipment	11	-27,353	-16,388
Capital expenditures in intangible assets	12	-2,309	-1,060
Proceeds from disposal of fixed assets		186	40
Interest received	8, 27	760	169
Repayment of bank deposits with a maturity of more than 90 days	17	60,000	0
Investments in other financial assets	2(S)	-79,555	-80,112
Net cash provided by (used in) investing activities		**-48,271**	**-97,351**
Proceeds from the issue of equity shares		741	4,793
Interest paid	8, 27	-175	-111
Repayment of lease liabilities	27	-1,496	-964
Dividend paid		-33,662	-12,303
Net cash provided by (used in) financing activities		**-34,592**	**-8,585**
Effect of changes in exchange rates on cash and cash equivalents		-388	3,174
Net change in cash and cash equivalents		-46,112	-36,396
Cash and cash equivalents at the beginning of the period		150,863	187,259
Cash and cash equivalents at the end of the period	18	**104,751**	**150,863**
Net cash provided by operating activities includes:			
Income taxes paid		-23,575	-7,651
Income taxes received		1,418	99

**changed disclosure compared to prior year, see note 2(S).*

See accompanying notes to consolidated financial statements.

Consolidated Statement of Changes in Equity

in EUR thousands	Issued capital	Additional paid-in capital	Retained Earnings	Currency translation reserve	Equity attri-butable to the owners of AIXTRON SE	Non-controlling interests	Total
Balance January 1, 2021	**111,843**	**376,399**	**4,903**	**2,241**	**495,386**	**992**	**496,378**
Dividends			-12,303		**-12,303**		**-12,303**
Share-based payments		3,860			**3,860**		**3,860**
Issue of shares	365	4,428			**4,793**		**4,793**
Profit for the year			95,660		**95,660**	-821	**94,839**
Other comprehensive income			112	4,485	**4,597**	2	**4,599**
Total comprehensive income for the year			95,772	4,485	**100,257**	-819	**99,438**
Balance December 31, 2021 and January 1, 2022	**112,208**	**384,687**	**88,372**	**6,726**	**591,993**	**173**	**592,166**
Dividends			-33,662		**-33,662**		**-33,662**
Share-based payments		4,441			**4,441**		**4,441**
Issue of shares	175	566			**741**		**741**
Profit for the period			100,437		**100,437**	35	**100,472**
Other comprehensive income			85	-922	**-838**	-3	**-841**
Total comprehensive income for the year			100,521	-922	**99,599**	32	**99,631**
Balance December 31,2022	**112,383**	**389,694**	**155,231**	**5,804**	**663,112**	**205**	**663,317**

See accompanying notes to consolidated financial statements.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1. General Principles

AIXTRON SE ("Company") is incorporated as a European Company (Societas Europaea) under the laws of the Federal Republic of Germany. The Company is domiciled at Dornkaulstraße 2, 52134 Herzogenrath, Germany. AIXTRON SE is registered in the commercial register of the District Court ("Amtsgericht") of Aachen under HRB 16590.

The consolidated financial statements of AIXTRON SE and its subsidiaries ("AIXTRON" or "Group") have been prepared in accordance with, and fully comply with

- International Financial Reporting Standards (IFRS) as adopted for use in the European Union; and
- the requirements of Section 315e of HGB (German Commercial Law).

AIXTRON is a leading provider of deposition equipment to the semiconductor industry. The Group's technology solutions are used by a diverse range of customers worldwide to build advanced components for electronic and opto-electronic applications based on compound, silicon, or organic semiconductor materials. Such components are used in fiber optic communication systems, wireless and mobile telephony applications, optical and electronic storage devices, computing, signaling, and lighting, displays, as well as a range of other leading-edge technologies.

These consolidated financial statements have been prepared by the Executive Board and have been submitted to the Supervisory Board at its meeting held on February 27, 2023 for approval and publication.

2. Significant Accounting Policies

(A) Companies Included in Consolidation

Companies included in consolidation are AIXTRON SE, and companies controlled by AIXTRON SE. The balance sheet date of all consolidated companies is December 31. A list of all consolidated companies is shown in note 32.

(B) Basis of Accounting

The consolidated financial statements are presented in Euro (EUR). The amounts are rounded to the nearest thousand Euro (EUR thousand).

The financial statements have been prepared on the historical cost basis, except for the revaluation of certain financial instruments.

The preparation of financial statements in conformity with IFRS, as they are to be applied in the EU, requires management to make estimates and judgements that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the balance sheet date and the reported amounts of income and expenses during the reported period. Actual results may differ from these estimates.

The estimates and judgements are reviewed on an ongoing basis. Revisions to accounting estimates and judgements are recognized in the period in which the estimate is revised if this revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods. Estimates and judgments which have a significant effect on the Group's financial statements are described in note 37.

The accounting policies set out below have been applied consistently to all periods presented in these consolidated financial statements.

The accounting policies have been applied consistently by each consolidated company.

(C) Bases of Consolidation

(I) Subsidiaries

The consolidated financial statements incorporate the financial statements of the Company and entities controlled by the Company (its subsidiaries) made up to 31 December each year. Control is achieved when the Company:

- has the power over the investee;
- is exposed, or has rights, to variable returns from its involvement with the investee; and
- has the ability to use its power to affects its returns.

The Company reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control listed above.

Entities over which AIXTRON SE has control are treated as subsidiaries (see note 32). The results of subsidiaries are included in the consolidated financial statements from the date that control commences until the date that control ceases.

(II) Transactions Eliminated on Consolidation

All intercompany income and expenses, transactions and balances have been eliminated in the consolidation.

(D) Foreign Currency

The consolidated financial statements have been prepared in Euro (EUR). In the translation of financial statements of subsidiaries outside the Euro-Zone the local currencies are also the functional currencies of those companies. Assets and liabilities of those companies are translated to EUR at the exchange rate as of the balance sheet date. Income and expenses are translated to EUR at average exchange rates for the year or at average exchange rates for the period between their inclusion in the consolidated financial statements and the balance sheet date. Net equity is translated at historical rates. The differences arising on translation are disclosed in the consolidated statement of changes in equity.

Exchange gains and losses resulting from fluctuations in exchange rates in the case of foreign currency transactions are recognized in the income statement in „other operating income“ or „other operating expenses“.

(E) Property, Plant and Equipment

(I) Acquisition or Manufacturing Cost

Items of property, plant and equipment are stated at cost, plus ancillary charges such as installation and delivery costs, less accumulated depreciation (see below) and impairment losses (see accounting policy (J)).

Costs of internally generated assets include not only costs of material and personnel, but also a share of directly attributable overhead costs, such as employee benefits, delivery costs, installation, and professional fees.

Where parts of an item of property, plant and equipment have different useful lives, they are depreciated as separate items of property, plant and equipment.

(II) Subsequent Recognition of Costs

AIXTRON recognizes in the carrying amount of an item of property, plant and equipment the cost of replacing components or enhancement of such an item when that cost is incurred if it is probable that the future economic benefits embodied in the item will flow to the Group and the cost of the item can be measured reliably. All other costs such as repairs and maintenance are expensed as incurred.

(III) Government Grants

Government grants related to the acquisition or manufacture of owned assets are deducted from original cost at the date of capitalization.

(IV) Depreciation

Depreciation is charged on a straight-line basis over the estimated useful lives of each part of an item of property, plant and equipment. Useful lives, depreciation method and residual values of property, plant and equipment are reviewed at the year-end date or more frequently if circumstances arise which are indicative of a change. The estimated useful lives are as follows:

- Buildings 25 - 45 years
- Machinery and equipment 3 - 19 years
- Other plant, factory and office equipment 2 - 20 years

The useful lives of leased assets do not exceed the expected lease periods.

(V) Leased Assets

The Group only has contracts in which it is the lessee.

AIXTRON assesses whether a contract is, or contains, a lease, at inception of the contract. The Group recognizes a lease asset and a corresponding lease liability with respect to all lease arrangements in which it is the lessee, except for short-term leases (defined as leases with a lease term of 12 months or less) and leases of low value assets (such as tablets and personal computers, small items of office furniture and telephones). For these leases, the Group recognizes the lease payments as an operating expense on a straight-line basis over the term of the lease unless another systematic basis is more representative of the time pattern in which economic benefits from the leased assets are consumed.

AIXTRON recognizes a leased asset and a lease liability at the lease commencement date. The leased asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.

The leased asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the asset or the expected end of the lease term. The estimated useful lives of leased assets are determined on the same bases as those of property, plant and equipment. In addition, the leased asset is periodically tested and reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

The right-of-use assets are presented in property, plant and equipment, and leased assets in the consolidated statement of financial position.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the company's incremental borrowing rate.

Lease payments included in the measurement of the lease liability comprise fixed payments, less any lease incentives and variable lease payments that depend on an index or rate, initially measured using the index or rate at the commencement date.

The lease liabilities are included in other non-current payables and other current liabilities in the consolidated statement of financial position.

The lease liability is measured at amortized cost using the effective interest method. It is remeasured when there is a change in future lease payments arising from a change in index or rate, or if the company changes its assessment of whether it will exercise a purchase, extension or termination option. When the lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the leased asset, or is recorded in profit or loss if the carrying amount of the leased asset has been reduced to zero.

The Group did not make any such adjustments during the periods presented.

(F) Intangible Assets

(I) Goodwill

Business combinations are accounted for by applying the purchase method.

Goodwill is stated at cost less any accumulated impairment loss. Goodwill is allocated to cash-generating units and is tested at least once per year for impairment (see accounting policy (J)).

(II) Research and Development

Expenditure on research activities, undertaken with the prospect of gaining new technical knowledge and understanding using scientific methods, is recognized as an expense as incurred.

Expenditure on development comprises costs incurred with the purpose of using scientific knowledge technically and commercially. As not all criteria of IAS 38 are met AIXTRON does not capitalize such costs.

(III) Other Intangible Assets

Other intangible assets that are acquired are stated at cost less accumulated amortization (see below) and impairment losses (see accounting policy (J)).

Intangible assets acquired through business combinations are stated at their fair value at the date of purchase.

Expenditure on internally generated goodwill, trademarks and patents is expensed as incurred.

(IV) Subsequent Expenditure

Subsequent expenditure on capitalized intangible assets is capitalized only when it increases the future economic benefits embodied in the specific asset to which it relates. All other expenditure is expensed as incurred.

(V) Amortization

Amortization is charged on a straight-line basis over the estimated useful lives of intangible assets, except for goodwill. Goodwill has a useful life which is indefinite and is tested annually in respect of its recoverable amount. Other intangible assets are amortized from the date they are available for use. Useful lives and residual values of intangible assets are reviewed at the year-end date or more frequently if circumstances arise which are indicative of a change.

The estimated useful lives are as follows:

• Software	2 - 5 years
• Patents and similar rights	4 - 18 years
• Customer base and product and technology know how	6 - 10 years

(G) Financial Instruments

(I) Financial Assets

Financial assets are classified into the following specific categories:

- financial assets ‘at fair value through profit or loss’ (FVTPL),
- ‘at fair value through other comprehensive income (FVTOCI), and
- ‘at amortized cost’.

The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition.

(II) Financial Assets at FVTOCI

AIXTRON did not have any financial assets in this category during the periods covered by this report.

(III) Financial Assets at Amortized Cost

Financial assets are measured at amortized cost as they are held within a business model to collect contractual cash flows and these cash flows consist solely of payments of principal and interest on the principal amount outstanding.

(IV) Financial Assets at FVTPL

All financial assets not classified as measured at amortized cost or FVTOCI under IFRS 9 are measured at fair value through profit and loss (FVTPL).

Financial assets at FVTPL are measured at fair value at the end of each reporting period, with any fair value gains or losses recognized in profit or loss. The gain or loss including dividends earned on financial asset and is included in profit and loss account and in note 5 or 6 respectively. Fair value is determined in accordance with IFRS 13.

(V) Trade Receivables

Trade receivables and other receivables are measured at amortized cost as they are held within a business model to collect contractual cash flows and these cash flows consist solely of payments of principal and interest on the principal amount outstanding.

(VI) Impairment of Financial Assets

The Group recognizes a loss allowance for expected credit losses (ECL) on trade receivables and contract assets. The amount of expected credit losses is updated at each reporting date to reflect changes in credit risk since initial recognition of the respective financial instrument. The Group always recognizes lifetime ECL for trade receivables, and contract assets. The expected credit losses on these financial assets are estimated using a provision matrix based on the Group’s historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current as well as the forecast direction of conditions at the reporting date, including time value of money where appropriate.

For all other financial instruments, the Group recognizes lifetime ECL when there has been a significant increase in credit risk since initial recognition. However, if the credit risk on the financial instrument has not increased significantly since initial recognition, the Group measures the loss allowance for that financial instrument at an amount equal to 12-month ECL. Lifetime ECL represents the expected credit losses that will result from all possible default events over the expected life of a financial instrument. In contrast, 12-month ECL represents the portion of lifetime ECL that is expected to result from default events on a financial instrument that are possible within 12 months after the reporting date.

(VII) Cash and Cash Equivalents

Cash and cash equivalents comprise cash on hand and deposits with banks with a maturity of less than three months at inception.

(VIII) Equity Instruments

Equity instruments, including share capital, issued by the Group are recorded at the proceeds received, net of direct issue costs.

(IX) Financial Liabilities

Financial liabilities are classified as either financial liabilities “at FVTPL” or "at amortized cost".

(X) Financial Liabilities at FVTPL

AIXTRON did not have any financial liabilities in this category during the periods covered by this report.

(XI) Financial Liabilities at Amortized Cost

Other financial liabilities, including trade payables, are measured at amortized cost.

(XII) Derivative Financial Instruments and Hedge Accounting

The Group's activities expose it to the financial risks of changes in foreign exchange currency rates (see note 25). AIXTRON may use foreign exchange forward contracts to hedge these exposures. AIXTRON does not use derivative financial instruments for speculative purposes. The use of financial derivatives is governed by policies approved by the Executive Board, which provide written principles on the use of financial derivatives.

AIXTRON did not have any derivative financial instruments in the periods covered by this report.

(H) Inventories

Inventories are stated at the lower of cost and net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less the estimated cost of completion and selling expenses. Cost is determined using weighted average cost.

The cost includes expenditures incurred in acquiring the inventories and bringing them to their existing location and condition. In the case of work in progress and finished goods, cost includes direct material and production cost, as well as an appropriate share of overheads based on normal operating capacity. Scrap and other wasted costs are expensed on a periodic basis either as cost of sales or, in the case of beta tools as research and development expense.

Allowance for slow moving, excess and obsolete, and otherwise unsaleable inventory is recorded based primarily on either the estimated forecast of product demand and production requirement or historical usage. When the estimated future demand is less than the inventory, AIXTRON writes down such inventories.

(I) Operating Result

Operating result is stated before finance income, finance expense and tax.

(J) Impairment of Property, Plant and Equipment and Intangible Assets

Goodwill purchased as part of a business acquisition is tested at least annually for impairment, irrespective of whether there is any indication of impairment. For impairment test purposes, the goodwill is allocated to cash-generating units. Impairment losses are recognized to the extent that the carrying amount exceeds the higher of fair value less costs of disposal or value in use of the cash-generating unit. Details of impairment test are shown in note 12.

Property, plant and equipment as well as other intangible assets are tested for impairment, where there is any indication that the asset may be impaired. The Group assesses at the end of each period whether there is an indication that an asset may be impaired. Impairment losses on such assets are recognized, to the extent that the carrying amount exceeds both the fair value that would be obtainable from a disposal in an arm's length transaction, and the value in use.

In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments and the risks associated with the asset.

Impairment losses are reversed if there has been a change in the estimates used to determine the recoverable amount. Reversals are made only to the extent that the carrying amount of the asset does not exceed the carrying amount that would have been determined if no impairment loss had been recognized.

An impairment loss in respect of goodwill is not reversed.

(K) Earnings Per Share

Basic earnings per share are computed by dividing net income (loss) by the weighted average number of issued common shares for the year. Diluted earnings per share reflect the potential dilution that could occur if options issued under the Company's stock option plans were exercised unless such exercises had an anti-dilutive effect.

(L) Employee Benefits

(I) Defined Contribution Plans

Obligations for contributions to defined contribution pension plans are recognized as an expense in the income statement as incurred.

(II) Share-based Payment Transactions

Stock Option Programs

The stock option programs from 2007 and 2012 allow members of the Executive Board, management, and employees of the Group to acquire shares of AIXTRON SE. The contractual terms of these share programs are presented in note 22. These stock option programs are accounted for according to IFRS 2 for equity-settled share-based payment transactions. The fair value of options granted is recognized as personnel expense with a corresponding increase in additional paid-in capital. The fair value is calculated at grant date and spread over the period during which the employees become unconditionally entitled to the options. The fair value of the options granted is measured using a mathematical model, taking into account the terms and conditions upon which the options were granted. The vesting conditions relate to a service condition and a market condition in relation to the share price of AIXTRON SE. In the calculation of the personnel expense options forfeited during the performance period are taken into account.

Long-term Incentive of the Board of Directors (LTI)

Executive Board remuneration system at AIXTRON SE consists long-term variable remuneration incentives (LTI) granted in shares of AIXTRON SE. These equity-settled share-based payments are measured at fair value of the equity instruments at the grant date. The fair value of the shares granted is measured using a mathematical model, taking into account the terms and conditions upon which the shares were granted. Further details regarding the equity-settled share-based transactions are set out in note 22 and 31.

The fair value determined at the grant date of the equity-settled share-based payments is expensed on a straight-line basis over the performance period, based on the Group's estimate of the number of equity instruments expected to vest. For non-market-based vesting conditions, the Group reviews its estimate of number of equity instruments at each reporting date during vesting period. The impact of the revision of the original estimates, if any, is recognized in profit or loss and a corresponding adjustment is recognized to equity.

(M) Provisions

A provision is recognized when the Group has a present legal or constructive obligation as a result of a past event, and it is probable that an outflow of economic benefits will be required to settle this obligation. If the effect is material, provisions are determined by discounting the expected future cash flows at a pre-tax interest rate that reflects current market assessments of the time value of money and, where appropriate, the risks associated with the liability.

(I) Warranties

The Group normally offers one- or two-year warranties on all of its products. Warranty expenses generally include cost of labor, material and related overhead necessary to repair a product free of charge during the warranty period. The specific terms and conditions of those warranties may vary depending on the equipment sold, the terms of the contract and the locations from which they are sold. The Group establishes the costs that may be incurred under its warranty obligations and records a liability in the amount of such costs at the time revenue is recognized.

Factors affecting the warranty obligation include the historical and expected number of warranty claims and the estimated cost per warranty claim.

The Group accrues warranty cost for systems shipped based upon historical experience. The Group periodically assesses the adequacy of its recorded warranty provisions and adjusts the amounts as necessary.

Extended warranties, beyond the normal warranty periods, are treated as maintenance services in accordance with note 2(N) below.

(II) Onerous Contracts

A provision for onerous contracts is recognized when the expected economic benefits to be derived by the Group from a contract are lower than the unavoidable cost of meeting its obligations under the contract. The amount recognized as a provision is determined as the excess of the unavoidable costs of meeting the obligations under the contract over the economic benefits expected to be received. Before making that provision any impairment loss that has occurred on assets dedicated to that contract are recognized. The provision is discounted to present value if the adjustment is material.

(III) Restructuring

A restructuring provision is recognized when the Group has developed a detailed formal plan for the restructuring and the parties concerned have been informed. The measurement of restructuring provision includes only the direct expenditures arising from the restructuring, which are those amounts that are both necessarily entailed by the restructuring and not associated with the ongoing activities of the entity.

(N) Revenue

AIXTRON enters contracts with customers for goods and services, including combinations of goods and services. Contracts are usually for fixed prices and do not offer any unilateral right of return to the customer.

Revenue is generated from the following major sources:

- sale of equipment
- installation of equipment
- sale and installation of customer specific equipment
- spare parts
- services

Revenue is recognized when the Group satisfies a performance obligation in contracts with its customers by transferring control of promised goods or services to the customer and it is probable that the economic benefits associated with the transaction will flow to the entity.

The sale of equipment involves acceptance tests at AIXTRON´s production facility. After successful completion of this test, the equipment is dismantled and packaged for shipment.

Revenues from the sale of products that have been demonstrated to meet product specification requirements are recognized at a point in time upon shipment to the customer if full acceptance tests have been successfully completed at the AIXTRON production facility and control has passed to the customer and the customer can benefit from the product either on its own or with other resources that are readily available.

Upon arrival at the customer site the equipment is reassembled and installed, which is a service generally performed by AIXTRON engineers. Revenue relating to the installation of the equipment is recognized at the point in time when AIXTRON has fulfilled its performance obligations under the contract and control of the goods has passed to the customer.

Revenue related to equipment where meeting the product specification requirements has not yet been demonstrated or the customer cannot benefit from the product either on its own or with other resources that are readily available, or where specific rights of return have been negotiated, is recognized only at the point in time when the customer finally accepts the equipment and has control.

Revenue related to spares is recognized at the point in time at which the customer obtains control of the goods, generally at the point of delivery.

Revenue related to services such as repair works is recognized at the point in time as the customers accepts the equipment at this point.

Revenue for services such as extended warranty, is recognized over time during the period in which it is provided. No revenue was generated from extended warranty in the fiscal year.

As part of the payment terms, AIXTRON does not grant any general right of return, cash discount, credit notes or other sales incentives. Generally, payment terms for advance payments and customer invoices are short-term and contracts do not include a financing component.

The consideration from contracts which include combinations of different performance obligations such as equipment, spares and services is allocated to each performance obligation in an amount that depicts the amount of consideration to which the Group expects to be entitled in exchange for transferring the goods or services to the customer. Discounts from list price are proportionately allocated to each performance obligation. The transaction price is allocated to each performance obligation based on a relative stand-alone selling price basis. As the stand-alone selling prices are usually not directly observable, AIXTRON uses the expected cost plus a margin approach to estimate the stand-alone selling price.

The portion of equipment revenue related to installation services is determined based on either the method described above or, if the Group determines that there may be a risk that the economic benefits of installation services may not flow to the Group, the portion of the contract amount that is due and payable upon completion of the installation.

Contract assets may arise for contracts with different performance obligations if the revenue recognized exceed the amounts for received advance payments and customer invoices (see note 16).

(O) Expenses

(I) Cost of Sales

Cost of sales includes such direct costs as materials, labor, and related production overheads.

(II) Research and Development

Research and development costs are expensed as incurred. Costs of beta tools which do not qualify to be recognized as an asset are expensed as research and development costs.

Project funding received from governments (e.g. state funding) is recorded in other operating income, if the research and development costs are incurred and provided that the conditions for the funding have been met.

(III) Lease Payments

Payments made under leases for assets which have not been capitalized are recognized as expense on a straight-line basis over the term of the lease.

(P) Government Grants

Government grants awarded for project funding are recorded in other operating income if the research and development costs are incurred and provided that the conditions for the funding have been met. Government grants awarded to support continued employment where work is not allowed are recorded as a reduction in the related expense, as this presents the underlying reason for the grant better.

(Q) Income Tax

The tax expense represents the sum of the current and deferred tax.

A deferred tax asset is recognized only to the extent that it is probable that future taxable profits can be set off against timing differences and tax losses carried forward or taxable temporary differences exist. Deferred tax assets are reduced to the extent that it is no longer probable that the related tax benefit can be realized. The recoverability of deferred tax assets is reviewed at least annually.

Deferred tax assets and liabilities are recorded for temporary differences between tax and commercial balance sheets and for losses brought forward for tax purposes as well as for tax credits of the companies included in consolidation. Deferred tax assets and liabilities shall be measured at the tax rates that are expected to apply to the period when the asset is realized or the liability is settled, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

Current income taxes for the current and prior periods are recognized as a liability to the extent that they have not yet been paid. If the amount attributable to the current and prior periods and already paid exceeds the amount due for those periods, the difference is recognized as an asset. The amount of the expected tax liability or tax receivable reflects the best estimate of the amount, considering tax uncertainties, when applicable.

The Group evaluates income tax uncertain treatments on a regular basis. In making this assessment, the Group assumes that a tax authority will review the matter in question and that it has all the relevant information to do so. If it is probable that an uncertain tax treatment will not be accepted by the tax authorities, the best estimate (expected value or most likely value of the tax uncertainty) is used to determine the impact and a tax liability is recognized or, in the case of existing loss carryforwards, the deferred tax attributable to them is reduced accordingly.

(R) Segment Reporting

An operating segment is a component of the Group that is engaged in business activities and whose operating results are reviewed regularly by the Chief Operating Decision Maker, which AIXTRON considers to be its Executive Board, to make decisions about resources to be allocated to the segment and assess its performance and for which discrete financial information is available. AIXTRON has only one reportable segment.

Accounting standards applied in segment reporting are in accordance with the general accounting policies as explained in this section.

(S) Cash Flow Statement

Cash flows from operating activities are determined using the indirect method.

Cash flows from taxes are allocated to operating activities.

Cash flows from other financial assets (fund investments) are presented in cash flow from investing activities as the assets are not traded for trading purposes. As the assets are not traded for trading purposes, it is more appropriate to present them in the cash flow from investing activities as this gives a better insight into the financial position. In the previous year, cash flows from fund investments were reported under cash flow from operating activities. For 2021, EUR 79,862 thousand was reclassified from cash flow from operating activities to cash flow from investing activities.

(T) Adoption of New and Revised Accounting Standards

New and Amended IFRS Standards Effective for the Current Year

In the current year, the Group has applied the below amendments to IFRS standards and interpretations issued by the International Accounting Standards Board (IASB) that are effective for an annual period that begins on or after 1 January 2022. Their adoption has not had any material impact on the disclosures or on the amounts reported in these consolidated financial statements.

Amendments to IFRS 3	Reference to the Conceptual Framework
Amendments to IAS 16	Property, Plant and Equipment – Proceeds before Intended Use
Amendments to IAS 37	Onerous Contracts – Cost of fulfilling a contract
Annual Improvements to IFRS Standards	2018-2020 Cycle
Initial application of COVID-19-Related Rent Concessions beyond June 30, 2021 - Amendment to IFRS 16	The application of the practical expedient for lease concession accounting, which the IASB granted with the amendment to IFRS 16 in 2021 as a direct result of the COVID-19 pandemic, was extended to reduced lease payments originally due on or before June 30, 2022. The Company did not receive any COVID-19 related lease incentives and therefore these amendments had no impact on the consolidated results.

At the date of authorization of these consolidated financial statements, the Group has not applied following new and revised standards and interpretations which have been issued but are not yet effective. AIXTRON does not expect that the adoption of these standards will have a material impact on the financial statements of the Group in future periods.

IFRS 17	Insurance Contracts1)
IFRS 10 and IAS 28 (amendments)	Sale or contribution of assets between an Investor and its Associate or Joint Venture3),4)
Amendments to IAS 1	Classification of liabilities as current or non-current2),4)
Amendments to IAS 1 and IFRS Practice Statement 2	Disclosure of Accounting Policies1)
Amendments to IAS 8	Definition of Accounting Estimates1)
Amendments to IAS 12	Deferred Tax related to assets and liabilities arising from a single transaction1)
Amendments to IFRS 16	Lease liability in a Sale and Leaseback transaction2)

1) Initial application to annual reporting periods beginning on or after 1 January 2023.
2) Initial application to annual reporting periods beginning on or after 1 January 2024
3) The effective date of the amendments has yet to be set by the Board.
4) EU endorsement is still pending.

3. Segment Reporting and Revenues

IFRS 8 requires operating segments to be identified on the basis of internal reports about components of the Group that are regularly reviewed by the Executive Board, as chief operating decision maker, in order to allocate resources to the segments and to assess their performance.

In the period 2021 to 2022 the Executive Board regularly reviewed financial information to allocate resources and assess performance only on a consolidated Group basis since the various activities of the Group are largely integrated from an operational perspective. In accordance with IFRS, AIXTRON has only one reportable segment.

The Group's reportable segment is based around the category of goods and services provided to the semiconductor industry

Revenues are recognized as disclosed in note 2 (N).

Segment revenues and results

in EUR thousands	Note	2022	2021
Equipment revenues		380,410	366,512
Spares revenues		76,319	57,599
Services revenues		6,438	4,843
Revenue from external customers		**463,167**	**428,954**
Inventories recognized as an expense	15	186,438	177,983
Reversals of inventory provisions	15	-3,329	-585
Obsolescence and valuation allowance expense for inventories	15	1,893	2,851
Personnel expense	7	91,133	79,285
Depreciation and impairment	11	7,674	8,198
Amortization	12	1,193	1,631
Other expenses		85,142	71,278
Foreign exchange (gains)/losses	5	-1,496	804
Other operating income	5	10,177	11,469
Segment profit		**104,696**	**98,978**
Finance income	8	803	232
Finance expense	8	-356	-279
Profit before tax		**105,143**	**98,931**

Reversals of impairment allowances are included in other operating income as described in note 5.

The accounting policies of the reportable segment are identical to the Group's accounting policies as described in note 2. Segment profit represents the profit earned by the segment without the allocation of investment revenue, finance costs and income tax expense. This is the measure reported to the Executive Board for the purpose of resource allocation and assessment of performance.

The transaction price allocated to (partially) unsatisfied performance obligations at 31 December 2022 is EUR 351.8 million (31 December 2021: EUR 214.6 million). Management expects that approximately 87% of the transaction price allocated to the unsatisfied contracts as of the year ended 2022 will be recognized as revenue during 2023. The remaining amount will be recognized during the next fiscal year.

Segment assets and liabilities

in EUR thousands	31.12.22	31.12.21
Semi-conductor equipment segment assets	540,347	361,110
Unallocated assets	362,230	379,586
Total Group assets	**902,577**	**740,696**

in EUR thousands	31.12.22	31.12.21
Semi-conductor equipment segment liabilities	235,994	138,147
Unallocated liabilities	3,266	10,383
Total Group liabilities	**239,260**	**148,530**

For the purpose of monitoring segment performance and allocating resources all assets other than tax assets, cash and cash equivalents and other financial assets are treated as allocated to the reportable segment. All liabilities are allocated to the reportable segment apart from tax liabilities and post-employment benefit liabilities.

Additions and changes to property, plant and equipment, to goodwill and to intangible assets, and the depreciation and amortization expenses are given in notes 11 and 12. Other non-current financial assets were unchanged during 2022 compared to previous year (decreased by EUR 59,8 million during 2021).

Information concerning other material items of income and expense for personnel expenses and R&D expenses can be found in notes 7 and 4.

Geographical Information

The Group’s revenue from continuing operations from external customers and information about its non-current assets by geographical location are detailed below. Revenues from external customers are attributed to individual countries based on the country in which it is expected that the products will be used.

in EUR thousands	2022	2021
Asia	316,133	299,853
Americas	83,554	43,190
Europe	63,480	85,911
Total	**463,167**	**428,954**

Sales from external customers attributed to Germany, AIXTRON’s country of domicile, and to other countries which are of material significance are as follows:

in EUR thousands	2022	2021
China	150,761	211,820
USA	83,127	43,090
Taiwan	77,460	66,056
Korea	40,840	4,737
Germany	19,261	37,110

Revenues from all countries outside Germany were EUR 443.906 thousand and EUR 391.844 thousand for the years 2022 and 2021 respectively.

In 2022 no customer accounted for more than 10% of Group revenue. During 2021 sales to one customer represented 12.1% of Group revenue, with no other customer exceeding 10%.

in EUR thousands	31.12.22	31.12.21
Germany	144,956	118,793
Europe excluding Germany	17,218	18,123
Asia	1,186	1,373
USA	11,448	10,289
Total Group non-current assets	**174,808**	**148,578**

Non-current assets exclude deferred tax assets, financial instruments, post-employment benefit assets and rights arising under insurance contracts.

4. Research and Development

Research and development costs, before deducting project funding received which is included in other operating income, were EUR 57.726 thousand and EUR 56.809 thousand for the years ended December 31, 2022 and 2021 respectively.

After deducting project funding received and not repayable, net expenses for research and development were EUR 52.424 thousand and EUR 47.876 thousand for the years ended December 31, 2022 and 2021 respectively.

The project funding received amounting to EUR 5.303 thousand (2021: EUR 8.933 thousand) are government grants.

In addition, EUR 15 thousand (2021: EUR 638 thousand) government grants were deducted from the carrying amount of an asset in property, plant and equipment. The reduced depreciation is attributable to research and development.

5. Other Operating Income

in EUR thousands	2022	2021
Research and development funding	5,303	8,933
Foreign exchange gains	4,290	1,964
Other	353	542
Compensation received	209	10
Gain on disposal of assets	22	20
Other Operating Income	**10,177**	**11,469**

in EUR thousands	2022	2021
Foreign exchange gains	4,290	1,964
Foreign exchange losses (see note 6)	-1,496	-804
Net foreign exchange gains	**2,794**	**1,160**

The amounts for research and development funding are government grants.

In 2022 exchange gains of EUR 2,794 thousand were recognized in profit or loss (2021: gain EUR 1,160 thousand) (see also note 6).

Compensation received in 2022 of EUR 209 thousand (2021: EUR 10 thousand) is an insurance claim for damages incurred during shipment of goods.

In 2022 the gain on disposal of assets amounted to EUR 22 thousand (2021: EUR 20 thousand).

6. Other Operating Expenses

in EUR thousands	2022	2021
Foreign exchange losses	1,496	804
Losses from financial assets at FVTPL	1,047	708
Other	30	159
Losses from the disposal of fixed assets	14	103
Other Operating Expense	**2,587**	**1,774**

The net loss of EUR 1,047 thousand in 2022 arose on financial assets required to be measured at FVTPL (2021: loss EUR 708 thousand). The amount includes realized losses of EUR 277 thousand (2021: EUR 49 thousand) and unrealized losses of EUR 770 thousand (2021: EUR 659 thousand)

7. Personnel Expense

in EUR thousands	2022	2021
Payroll	75,794	65,966
Social insurance contributions	9,645	8,310
Expense for defined contribution plans	1,253	1,149
Share-based payments	4,441	3,860
Total	**91,133**	**79,285**

8. Net Finance Income

in EUR thousands	2022	2021
Finance income		
Interest income on bank deposits	803	232
On financial assets measured at amortised cost	803	232
Finance expense		
Interest expense on bank overdrafts and balances	-217	-172
Interest expense on lease liabilities	-139	-107
On financial liabilities not at fair value through profit or loss and on financial assets	-356	-279
Net finance income	**447**	**-47**

9. Income Tax Expense / Benefit

The following table shows income tax expenses and income recognized in the consolidated income statement:

in EUR thousands	2022	2021
Current tax expense (+)/current tax income (-)		
for current year	13,810	13,810
for prior years	68	-175
Total current tax expense	**13,878**	**13,635**
Deferred tax expense (+)/deferred tax income (-)		
- from temporary differences	247	-37
- from changes in local tax rate	61	16
- from reversals and write-downs	-9,515	-9,522
Total deferred tax income	**-9,207**	**-9,543**
Income tax expense	**4,671**	**4,092**

The income/loss before income taxes and income tax expense and income relate to the following regions:

in EUR thousands	2022	2021
Income/loss before income taxes		
Germany	98,966	100,981
Outside Germany	6,177	-2,050
Total	**105,143**	**98,931**
Income tax expense/income		
Germany	5,128	4,218
Outside Germany	-457	-126
Total	**4,671**	**4,092**

The Group’s effective tax rate is different from the German statutory tax rate of 32.80% (2021: 32.80%) which is based on the German corporate income tax rate (incl. solidarity surcharge) and trade tax.

The following table shows the reconciliation from the expected to the reported tax expense:

in EUR thousands	2022	2021
Net result before taxes	**105,143**	**98,931**
Income tax expense (German tax rate)	34,487	32,449
Effect from differences to foreign tax rates	-693	-302
Non-deductible expenses	205	251
Tax losses not recognized as assets	2	1,685
Recognition of deferred tax assets	-30,215	-30,248
Effect from changes in local tax rate	-10	0
Effect of permanent differences	2	27
Other	892	230
Income tax expense	**4,671**	**4,092**
Effective tax rate	**4.4%**	**4.1%**

In addition to the amount charged to profit or loss, the following amounts relating to tax have been recognized in other comprehensive income (OCI):

in EUR thousands	2022	2021
Deferred tax from remeasurement of defined benefit obligation	41	26
Deferred tax related to items recognized in other comprehensive income	**41**	**26**

10. Current Tax Receivable and Payable

As of December 31, 2022 the current tax receivable and payable, arising because the amount of tax paid in the current or in prior periods was either too high or too low, are EUR 2,804 thousand (2021: EUR 2,363 thousand) and EUR 2,439 thousand (2021: EUR 9,729 thousand) respectively.

11. Property, Plant and Equipment and Leased Assets

in EUR thousands	Land and buildings	Technical equipment	Other equipment	Assets under construction and prepayments	Leased land and buildings	Leased equipment	Total
Cost							
Balance at January 1, 2021	65,006	76,441	16,995	4,221	3,583	757	167,003
Additions	83	3,661	1,438	11,207	1,916	37	18,342
Disposals	281	1,853	351	0	644	80	3,209
Transfers	0	2,837	422	-3,259	0	0	0
Effect of movements in exchange rates	175	293	148	150	276	3	1,045
Balance at December 31,2021	**64,983**	**81,379**	**18,652**	**12,319**	**5,131**	**717**	**183,181**
Balance at January 1, 2022	64,983	81,379	18,652	12,319	5,131	717	183,181
Additions	0	8,440	4,564	14,349	5,700	69	33,122
Disposals	2	378	1,128	6	290	0	1,804
Transfers	0	4,681	1,110	-5,791	0	0	0
Effect of movements in exchange rates	-139	-319	-97	-107	-208	-2	-872
Balance at December 31,2022	**64,842**	**93,803**	**23,101**	**20,764**	**10,333**	**784**	**213,627**
Depreciation and impairment losses							
Balance at January 1, 2021	29,087	59,239	13,807	7	1,320	74	103,534
Depreciation charge for the year	1,334	4,093	1,317	0	908	191	7,843
Impairments	0	355	0	0	0	0	355
Disposals	282	1,809	352	0	644	51	3,138
Effect of movements in exchange rates	168	199	118	1	86	2	574
Balance at December 31,2021	**30,307**	**62,077**	**14,890**	**8**	**1,670**	**216**	**109,168**
Balance at January 1, 2022	30,307	62,077	14,890	8	1,670	216	109,168
Depreciation charge for the year	1,297	3,322	1,588	0	1,281	186	7,674
Disposals	2	290	1,033	0	395	0	1,720
Effect of movements in exchange rates	-135	-181	-79	1	-79	-2	-475
Balance at December 31,2022	**31,467**	**64,928**	**15,366**	**9**	**2,477**	**400**	**114,647**
Carrying amounts							
At January 1, 2021	35,919	17,202	3,188	4,214	2,263	683	63,469
At December 31, 2021	**34,676**	**19,302**	**3,762**	**12,311**	**3,461**	**501**	**74,013**
At January 1, 2022	34,676	19,302	3,762	12,311	3,461	501	74,013
At December 31, 2022	**33,375**	**28,875**	**7,735**	**20,755**	**7,856**	**384**	**98,980**

Depreciation

Depreciation expense amounted to EUR 7,674 thousand for 2022 and EUR 7,843 thousand for 2021 respectively.

During each fiscal year, asset useful lives and residual values are reviewed in accordance with IFRS. In 2022 the effect of the changes in asset useful lives and residual values has been to decrease the depreciation expense by EUR 933 thousand compared with the depreciation which would have occurred had the asset useful lives and residual values remained unchanged.

There was no significant adjustment of asset useful lives and residual values in 2021.

Impairments

No impairment expense was incurred in the fiscal year 2022.

In 2021 AIXTRON reviewed the valuation of its property, plant and equipment and wrote down (EUR 355 thousand) the value of some specific laboratory equipment that no longer had any economic value.

Assets Under Construction and Prepayments

Assets under construction relates mainly to self-built systems for development laboratories and advanced payments made for the expansion of production and development areas in 2022 and 2021. Prepayments made amount to EUR 6,853 thousand in 2022 (2021:EUR 2,786 thousand).

Leased Assets

Disclosures in respect of the underlying leases are shown in note 27.

12. Intangible Assets

in EUR thousands	Goodwill	Other intangible assets	Total
Cost			
Balance at January 1, 2021	87,892	45,688	133,580
Additions	0	1,060	1,060
Disposals	0	1,168	1,168
Effect of movements in exchange rates	1,582	1,722	3,304
Balance at December 31, 2021	**89,474**	**47,302**	**136,776**
Balance at January 1, 2022	89,474	47,302	136,776
Additions	0	2,309	2,309
Disposals	0	1,233	1,233
Effect of movements in exchange rates	-71	1,341	1,270
Balance at December 31, 2022	**89,403**	**49,719**	**139,122**
Amortisation and impairment losses			
Balance at January 1, 2021	16,915	42,812	59,727
Amortisation charge for the year	0	1,175	1,175
Impairments	0	456	456
Disposals	0	1,116	1,116
Effect of movements in exchange rates	240	1,729	1,969
Balance at December 31, 2021	**17,155**	**45,056**	**62,211**
Balance at January 1, 2022	17,155	45,056	62,211
Amortisation charge for the year	0	1,193	1,193
Disposals	0	1,140	1,140
Effect of movements in exchange rates	-204	1,343	1,139
Balance at December 31, 2022	**16,951**	**46,452**	**63,403**
Carrying amounts			
At January 1, 2021	70,977	2,876	73,853
At December 31, 2021	**72,319**	**2,246**	**74,565**
At January 1, 2022	72,319	2,246	74,565
At December 31, 2022	**72,452**	**3,267**	**75,719**

Other intangible assets include patents, other rights and software.

Amortization and Impairment Expenses for Other Intangible Assets

Amortization and impairment expenses for other intangible assets are recognized in the income statement as follows:

in EUR thousands	2022 Amortization	2021 Amortization	2022 Impairment	2021 Impairment
Cost of sales	396	368	0	0
General administration expenses	745	724	0	0
Research and development costs	52	83	0	456
Total	**1,193**	**1,175**	**0**	**456**

In 2022 an impairment expense of EUR 0 thousand was incurred (2021: EUR 456 thousand). In 2021 impairments were recognized for one IT project that no longer had any economic value and intangible assets in scope of the restructuring of APEVA Group (see also note 28). No reversal of impairment were recognized in fiscal years 2022 and 2021.

Impairment of Goodwill

At the end of 2022 the Group assessed the recoverable amount of goodwill and determined that as in 2021 no impairment loss had to be recognized.

As at the end of 2022 the cash generating unit, to which the goodwill has been allocated, is the AIXTRON Group Semiconductor Equipment segment.

The recoverable amount of the cash-generating unit is determined through a fair value less cost to sell calculation. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. As AIXTRON has only one cash generating unit (CGU), market capitalization of AIXTRON, adjusted for a control premium, has been used to determine the fair value less cost to sell of the cash generating unit. This is level 2 in the hierarchy of fair value measures set out in IFRS 13.

As at December 31, 2022 the market capitalization of AIXTRON was EUR 3,031 million, based on a share price of EUR 26.97 and issued shares (excluding Treasury Shares) of 112,383,196.

In an orderly selling process costs are incurred. AIXTRON has used 1.5% to account for the costs to sell.

A control premium typically in the range 20% - 40% is incurred in the acquisition of a company. A 20% premium has been applied in this test to adjust the market capitalization to the fair value. Market capitalization was also adjusted for net debt and tax assets prior to comparing it to the carrying amount of the CGU. The analysis shows that the fair value less costs to sell of the CGU AIXTRON exceeds its carrying amount and that Goodwill is not impaired.

Euro millions, except share price	Impairment Test 2022	Impairment Test 2021
Share price - Euros	26.97	17.87
Market capitalization as of December 31	3,031.0	2,005.2
Costs to sell in percentage	1.5%	1.5%
Costs to sell	-45.5	-30.1
Market capitalization less cost to sell	2,985.5	1,975.1
Control premium in percentage	20%	20%
Control premium	597.1	395.0
Market capitalization and control premium less cost to sell	3,582.6	2,370.1
Net debt	-325.2	-352.5
Tax assets	-33.8	-16.7
Fair value less costs to sell of CGU	3,223.6	2,000.9
Carrying amount of the CGU	304.4	223.0
Surplus of fair value less cost to sell over carrying amount	2,919.2	1,778.0
Surplus of fair value less cost to sell over carrying amount as a percentage	959%	797%

The fair value less costs to sell, which is the recoverable amount, exceeds the carrying amount of the CGU by 959% (2021: 797%).

13. Other Non-Current Financial Assets

Other non-current financial assets amounting to EUR 705 thousand (2021: EUR 703 thousand) mainly relate to security deposits for buildings.

14. Deferred Tax Assets and Deferred Tax Liabilities

Recognized Deferred Tax Assets and Deferred Tax Liabilities

Deferred tax assets and liabilities are attributable to the following items:

	Deferred tax assets		Deferred tax liabilities		Total	
in EUR thousands	2022	2021	2022	2021	2022	2021
Property, plant and equipment	22	22	-1,386	-742	-1,364	-720
Trade receivables	161	14	0	-48	161	-34
Inventories	758	905	-146	-68	612	837
Employee benefits	162	127	-15	0	147	127
Provisions and other liabilities	2,133	102	-1,474	0	659	102
Advance payments	9	57	0	0	9	57
Other	0	63	15	0	15	63
Tax losses	33,200	23,649	0	0	33,200	23,649
Netting amount	-2,179	-204	2,179	204	0	0
Total	**34,266**	**24,735**	**-827**	**-654**	**33,439**	**24,081**

Deferred tax assets are recognized at the level of individual consolidated companies in which a loss was realized in the current or preceding fiscal year, only to the extent that there is convincing evidence that sufficient taxable profit will be available against which the deferred tax assets can be used. The nature of the evidence used in assessing the probability of realization includes forecasts, budgets and the recent profitability of the relevant entity. In fiscal year 2022, deferred tax assets in the amount of EUR 255 thousand (2021: EUR 427 thousand) were recognized, which were attributable to companies that reported a loss in fiscal year 2022 or in the previous fiscal year.

In addition as of December 31, 2022, tax loss carryforwards, temporary differences and tax credits in the amount of EUR 283,072 thousand (2021: EUR 376,931 thousand) existed for which no deferred taxes were recognized.

Of the unrecognized loss carryforwards, temporary differences and tax credits, EUR 233,056 thousand are non-forfeited (2021: EUR 304,134 thousand), EUR 0 thousand expire by 2027 (2021: EUR 0 thousand by 2026) and EUR 50,016 thousand expire after 2027 (2021: EUR 72,797 thousand after 2026).

No deferred tax liabilities were recognized on temporary differences in relation to investments in subsidiaries amounting to EUR 15,470 thousand (2021: EUR 14,144 thousand).

The following table shows the development of deferred tax assets and liabilities during the fiscal year:

in EUR thousands	Balance at January 1, 2022	Recognized in income statement	Directly recognized in other comprehen	Balance at December 31, 2022
Property, plant and equipment	-720	-683	0	-1,364
Trade receivables	-34	195	0	161
Inventories	836	-186	0	612
Employee benefits	127	12	41	147
Currency translation	0	0	110	0
Provisions and other liabilities	102	467	0	659
Advance payments	57	-48	0	9
Other	64	-28	0	15
Tax losses	23,649	9,478	0	33,200
Total	**24,081**	**9,207**	**151**	**33,439**

in EUR thousands	Balance at January 1, 2021	Recognized in income statement	Directly recognized in other comprehen	Balance at December 31, 2021
Property, plant and equipment	-322	-367	0	-720
Trade receivables	0	-105	0	-34
Inventories	527	299	0	836
Employee benefits	134	-31	26	127
Currency translation	0	0	97	0
Provisions and other liabilities	197	-94	0	102
Advance payments	-142	199	0	57
Other	31	99	0	64
Tax losses	13,918	9,543	0	23,649
Total	**14,415**	**9,543**	**123**	**24,081**

15. Inventories

in EUR thousands	2022	2021
Raw materials and supplies	115,123	55,738
Work in process	94,056	57,222
Customer-specific work in process	3,909	3,413
Inventories at customers' locations	10,506	4,256
Inventories	**223,594**	**120,629**

in EUR thousands	Note	2022	2021
Inventories recognized as an expense during the period	3	186,438	177,983
Reversals of write-downs recognized during the year	3	-3,329	-585
Total		**183,109**	**177,398**
Write-down of inventories during the year	3	1,893	2,851
Inventories measured at net realisable value		1,666	953

The reversal of write-downs recognized during the year in both 2022 and 2021 mainly relates to inventories which had been written down to their net realizable value and subsequently were sold.

Customer-specific work in process relates to work performed at the customers' site, typically to install equipment or to upgrade customers' existing equipment. Completion of installation is the final contractual deliverable in most customer contracts which typically allows any remaining payments to be received from the customer.

16. Trade Receivables and Other Current Assets

in EUR thousands	2022	2021
Trade receivables	103,542	77,383
Contract assets receivable	16,154	3,579
Allowances for doubtful accounts	0	0
Trade receivables - net	**119,696**	**80,962**
Prepaid expenses	1,723	1,536
Reimbursement of research and development costs	1,757	1,318
Advance payments to suppliers	8,605	1,196
VAT recoverable	9,058	5,534
Other assets	509	654
Other current assets	**21,652**	**10,238**
Total trade receivables and other current assets	**141,348**	**91,200**

Additions to allowances against trade receivables are included in other operating expenses, releases of allowances are included in other operating income. Allowances against receivables developed as follows:

in EUR thousands	2022	2021
Allowance at January 1	0	26
Translation adjustments	0	0
Impairment losses recognized	0	0
Used	0	-5
Impairment losses reversed	0	-21
Allowance at December 31	**0**	**0**

Ageing of past due but not impaired receivables:

in EUR thousands	2022	2021
1-90 days past due	17,699	2,510
More than 90 days past due	238	134

Due to the worldwide spread of risks, there is a diversification of the credit risk for trade receivables. Generally, the Group demands no securities for financial assets. In accordance with usual business practice for capital equipment however, the Group mitigates its exposure to credit risk by requiring payment by irrevocable letters of credit and substantial payments in advance from most customers as conditions of contracts for sale of major items of equipment.

In 2022 two customers accounted for 11% and 10% of net trade receivables respectively. In 2021 three customers accounted for 28%, 12% and 12% of net trade receivables respectively. In determining concentrations of credit risk, the Group defines counterparties as having similar characteristics if they are part of the same external group of entities.

Included in the Group's trade receivable balance are debtors with a carrying amount of EUR 17,937 thousand (2021: EUR 2,644 thousand) which are past due at the reporting date for which the Group has not provided. As there has not been a significant change in credit quality, and although the Group has no collateral, the amounts are considered recoverable.

The Group measures the loss allowance for trade receivables at an amount equal to the lifetime expected credit loss. Based on its experience, the Group uses a negligible risk of default for lifetime, adjusted for factors which are specific to the debtors, general economic conditions, and an assessment of both the current as well as the forecast direction of conditions at the reporting date.

In determining receivables which may be individually impaired the Group has taken into account the likelihood of recoverability based on the past due nature of certain receivables, and our assessment of the ability of all counterparties to perform their obligations.

17. Other Financial Assets

In 2022 other financial assets comprise fund investments. In 2021 other financial assets comprise fund investments as well as bank deposits with maturities with less than 12 months.

The composition of the other financial assets and the maturities at inception of the deposits were as below:

in EUR thousands	2022	2021
Financial assets measured at FVTPL	220,410	141,625
Bank deposits with maturities less than 12 months	0	60,000
Other Financial Assets	**220,410**	**201,625**

The fair value of fund investments is determined using the quoted prices in active markets at reporting date which is level one of the fair value hierarchy.

18. Cash and Cash Equivalents

in EUR thousands	2022	2021
Cash-in-hand	2	2
Bank balances	104,749	150,861
Cash and Cash equivalents	**104,751**	**150,863**

Cash and cash equivalents comprise short-term bank deposits with an original maturity of 3 months or less and financial assets that are convertible to cash at any time and are subject to only minor fluctuations in value. The carrying amount and fair value are the same.

No bank balances were given as security either as of the balance sheet date of the fiscal year or in the previous year.

19. Shareholders' Equity

Share Capital

in EUR	2022	2021
Share capital as of January 1	113,292,020	112,927,320
Shares issued	56,400	364,700
Share capital fully paid as of December 31	**113,348,420**	**113,292,020**
Treasury shares	-965,224	-1,084,105
Issued capital	**112,383,196**	**112,207,915**

The share capital of AIXTRON SE consists of no-par value shares and was fully paid-up during 2022 and 2021. Each share represents a portion of the share capital in the amount of EUR 1.00.

Authorized Share Capital

Authorized share capital, including issued capital, amounted to EUR 169,927,020 (2021: EUR 201,284,934).

Additional Paid-In Capital

Additional paid-in capital mainly includes the premium on increases of subscribed capital as well as cumulative expense for share-based payments.

In 2022 56,400 new shares were issued within the scope of AIXTRON stock option plans (2021: 364,700 shares). 118,881 treasury shares were transferred in 2022 as part of the share-based payments scheme (2021: 0 shares).

A dividend of EUR 0.30 per share was paid in May 2022. Total dividend amount of EUR 33,662 thousand was paid to shareholders of AIXTRON SE (2021: EUR 12,303 thousand).

The Group regards its shareholders' equity as capital for the purpose of managing capital. In order to ensure the sustainable development of the AIXTRON Group and to maintain the confidence of investors and stake holders, AIXTRON's capital management aims to maintain a strong capital base. This is also taken into account when determining dividend distributions. The Group considers its capital resources to be adequate.

Income and Expenses Recognized in Other Comprehensive Income

Income and expenses recognized in other comprehensive income are shown in the statement of other comprehensive income.

The foreign currency translation adjustment comprises all foreign exchange differences arising from the translation of the financial statements of foreign subsidiaries whose functional currency is not the Euro.

During 2022 an income of EUR 85 thousand (2021: expense EUR 112 thousand) was recorded from the remeasurement of defined benefit obligations in other comprehensive income.

20. Earnings Per Share

Basic Earnings Per Share

The calculation of the basic earnings per share is based on the weighted-average number of common shares outstanding during the reporting period.

Diluted Earnings Per Share

The calculation of the diluted earnings per share is based on the weighted-average number of outstanding common shares and of common shares with a possible dilutive effect resulting from share options being exercised under the share option plan.

	2022	2021
Earnings per share		
Net profit attributable to the shareholders of AIXTRON SE in EUR thousand	100,437	95,660
Weighted average number of common shares for the purpose of earnings per share	112,297,083	112,056,282
Basic earnings per share (EUR)	**0.89**	**0.85**
Earnings per share (diluted)		
Net profit attributable to the shareholders of AIXTRON SE in EUR thousand	100,437	95,660
Weighted average number of common shares for the purpose of earnings per share	112,297,083	112,056,282
Dilutive effect of share options	57,314	48,041
Weighted average number of common shares for the purpose of earnings per share (diluted)	112,354,397	112,104,323
Diluted earnings per share (EUR)	**0.89**	**0.85**

In 2022 and 2021 no share options existed that would be anti-dilutive.

Amounts recognized as distributions to shareholders during the fiscal year and the proposed dividend for the year ended December 31, 2022 are set out in the table below:

in EUR thousands	2022	2021
Final dividend payment for the financial year 2021: EUR 0.30 per share (2020: EUR 0.11 per share)	33,662	12,303
Proposed dividend for the financial year 2022: EUR 0.31 per share (2021: EUR 0.30 per share)	34,839	33,662

21. Employee Benefits

Defined Contribution Plan

The Group grants retirement benefits to qualified employees through various defined contribution pension plans. In 2022 the expense recognized for defined contribution plans amounted to EUR 1,253 thousand (2021: EUR 1,149 thousand).

In addition to the Group's retirement benefit plans, the Group is required to make contributions to state retirement benefit schemes in the countries in which it operates. AIXTRON is required to contribute a specified percentage of payroll costs to the retirement schemes in order to fund the benefits. The only obligation of the Group is to make the required contributions.

Defined Benefit Plan

Provisions for defined benefit pension plans in the amount of EUR 115 thousand (2021: EUR 200 thousand) are reported under other non-current provisions.

22. Share-Based Payment

The Company has different fixed option plans which reserve shares of common stock for issuance to members of the Executive Board, management, and employees of the Group. The Executive Board remuneration system at AIXTRON SE also consists long-term variable remuneration components (long-term incentive, LTI) that are granted in shares of AIXTRON SE.

The fair value of services received in return for shares or stock options granted is measured by reference to the fair value of the equity instruments or stock options granted which are determined using mathematical valuation models.

AIXTRON Stock Option Plans

The fair value of the shares and stock options is determined on the basis of a mathematical model. There were no expenses recognized for the existing program in 2022 and 2021.

AIXTRON Stock Option Plan 2012

In May 2012, options were authorized to purchase shares of common stock. The granted options may be exercised after a waiting period of not less than four years. The options expire 10 years after they have been granted. Under the terms of the 2012 plan, options are granted at prices equal to the average closing price over the last 20 trading days on the Frankfurt Stock Exchange before the grant date, plus 30%. Options to purchase 112,100 common shares were outstanding under this plan as of December 31, 2022.

Summary of Stock Option Programs

AIXTRON-share options	Number of share options 2022	Average exercise price EUR 2022	Number of share options 2021	Average exercise price EUR 2021
Balance at January 1	182,500	13.14	601,600	13.15
Exercised during the year	56,400	13.14	364,700	13.14
Forfeited during the year	14,000	13.14	54,400	13.14
Outstanding at December 31	**112,100**	**13.14**	**182,500**	**13.16**
Exercisable at December 31	**112,100**	**13.14**	**182,500**	**13.16**

AIXTRON Stock Options as of December 31, 2022

Year of emission	Exercise price per share EUR	Underlying shares represented by outstanding options	Average option life (in years)
2014	14.01	5,000	2.0
2014	13.14	107,100	2.0
		112,100	

Long-Term Incentive of the Board of Directors (LTI)

The amount of long-term performance-related remuneration (LTI) is geared to the performance of the Group over a 3-year reference period and is granted entirely in AIXTRON shares. Executive Board members may first dispose of these shares following a four-year holding period calculated from the start of the reference period. Before the start of a fiscal year, the Supervisory Board determines the long-term targets for each Executive Board member for the forthcoming reference period. Each Executive Board member receives forfeitable stock awards in the amount of the target LTI as a percentage of the consolidated net income for the year pursuant to the budget adopted for the fiscal year. The number of forfeitable stock awards is calculated based on the average of the closing prices on all stock market trading days in the final quarter of the previous year.

LTI target achievement is determined using the indicators consolidated net income for the year and total shareholder return (TSR), as well as sustainability targets. The TSR is defined as the total shareholder return over the reference period and is calculated as the ratio of the share price development including dividends paid at the end of the reference period to the value at the beginning of the reference period.

In this regard, the relative weighting of the targets amounts to 50% for consolidated net income for the year, 40% for TSR, and 10% for sustainability targets. After the expiry of the three-year reference period, the degree of LTI target achievement is determined by the Supervisory Board. Depending on the degree of target achievement, the forfeitable stock awards are then converted into vested stock awards or otherwise lapse. The maximum number of vested stock awards that may be granted in connection with LTI is capped at 250% of the number of forfeitable stock awards granted at the start of the reference period.

The shares are transferred to the Executive Board member after the four-year restriction period.

The fair value of equity-settled share-based payment transactions is recognized as an expense over the vesting period and a corresponding adjustment is made to equity. The fair value of the shares granted is measured based on a valuation model taking into account the vesting conditions at which the shares are granted. The calculation takes into account estimates for future dividends. The TSR ratio is used as a market condition in estimating the fair value at the valuation date. For the other non-market-based vesting conditions, the Group reviews its estimate of the number of equity instruments during the vesting period. Adjustments in the original estimates, if any, are recognized in profit or loss and a corresponding adjustment is made to equity.

The following table shows the main parameters of the valuation model (Monte Carlo simulation) for the long-term variable remuneration of the Executive Board (LTI) for the LTI Tranche 2022 and 2021:

	LTI Tranche 2022	LTI Tranche 2021	
	I	I	II
Grant date	15.12.21	09.12.20	21.12.20
Share price at grant date	16.77€	12.95€	13.64€
Risk-free interest rate	-0.66%	-0.82%	-0.79%
Volatility AIXTRON	52.08%	52.47%	52.70%
Volatility Peer Group	30.41%	33.64%	33.73%
Correlation AIXTRON/Index	0.53	0.41	0.41
Fair Value TSR	19.47€	18.81€	20.77€
Fair Value Plain-Tranche	15.93€	12.95€	13.68€

In 2021 there were two grant dates each, due to a later entry date of an Executive Board member. Assumptions regarding volatility and correlation between the AIXTRON share and the Peer Group were determined based on historical share price developments.

Within the scope of the LTI Tranche 2022 224,941 forfeitable share awards were granted with the weighted average fair value of EUR 17.35 per award on grant date (LTI Tranche 2021: 177,930 forfeitable share awards with the weighted average fair value of EUR 15,54 per award). At the end of the reference period, the forfeitable share awards of LTI Tranche 2022 or 2021 are converted into vested stock awards or partially forfeited.

In 2022, the personnel expenses from share-based payments, all of which were equity settled share-based payments, were EUR 4,441 thousand (2021: EUR 3,860 thousand). Share-based payments include the expense of long-term incentive of the Executive Board which is paid in shares (see note 31).

23. Provisions

Development and breakdown of provisions:

in EUR thousands	01.01.2022	Exchange rate	Usage	Reversal	Addition	31.12.2022	Current	Non-current
Personnel expenses	14,530	-129	12,799	156	15,685	**17,131**	16,950	181
Warranties	9,348	-27	4,584	2,007	5,643	**8,373**	6,152	2,221
Onerous contracts	41	-2	0	0	0	**39**	39	0
Other	7,873	-41	5,351	173	8,252	**10,560**	9,772	788
Total	**31,792**	**-199**	**22,734**	**2,336**	**29,580**	**36,103**	**32,913**	**3,190**

Personnel Expenses

These include mainly provisions for holiday pay, payroll, severance payments and other variable element of pay, which are financial liabilities.

Provisions for Onerous Contracts

These include provisions associated with contracts where the unavoidable costs of meeting the contract obligations exceed the economic benefits expected to be received. These mainly relate to supply contracts for materials which are excess to the forecast future requirements.

Warranties

Warranty provisions are the estimated unavoidable costs of providing parts and service to customers during the normal warranty periods.

Other Provisions

Other provisions consist mainly of the estimated cost of services received and also include pension provisions.

For provisions existing at both December 31, 2022 and December 31, 2021, the economic outflows resulting from the obligations that are provided for are expected to be settled within one year of the respective balance sheet date for current provisions and within two years of the respective balance sheet date, but more than one year, for the main non-current provisions (excluding pension provisions).

24. Trade Payables and Other Current Liabilities

The liabilities consist of the following:

in EUR thousands	2022	2021
Trade payables	**46,098**	**19,585**
Liabilities from grants	2,551	3,629
Short-term lease liabilities	2,088	979
Payroll taxes and social security contributions	1,093	1,070
VAT and similar taxes	248	305
Other liabilities	601	450
Other current liabilities	**6,581**	**6,433**
Trade payables and other current liabilities	**52,679**	**26,018**

The carrying amount of trade payables and other current liabilities approximates their fair value. Trade payables, grant liabilities, taxes and other liabilities fall due for payment within 34 days of receipt of the relevant goods or services.

Short-term lease liabilities are explained in note 25.

25. Financial Instruments

Details of the significant accounting policies and methods, the basis of measurement that are used in preparing the financial statements and the other accounting policies that are relevant to an understanding of the financial statement are disclosed in note 2 to the financial statements.

Financial Risk Management Objectives

The Group seeks to minimize the effects of any risk that may occur from any financial transaction. Key aspects are the exposures to liquidity risk, credit risk, interest rate risk and currency risk arising in the normal course of the Group's business.

The AIXTRON Group's central management coordinates access to domestic and international financial institutions and monitors and manages the financial risks relating to the operations of the Group through internal risk reports which analyze exposure to risk by likelihood and magnitude. These risks cover all aspects of the business, including financial risks.

Liquidity Risks

Liquidity risk is the risk that the Group is unable to meet its existing or future obligations due to insufficient availability of cash or cash equivalents. Managing liquidity risk is one of the central tasks of AIXTRON SE. In order to be able to ensure the Group's solvency and flexibility at all times cash and cash equivalents are projected on the basis of regular financial and liquidity planning.

As of December 31, 2022 the Group did not have any borrowings (2021: nil). Financial liabilities, all due within one year, of EUR 52,679 thousand (2021: EUR 26,018 thousand) consisting of trade payables and other liabilities and are shown in note 24, together with an analysis of their maturity. Non-current payables consist of lease liabilities and other payables. Long term lease liabilities of EUR 5,874 thousand (2021: EUR 3,052 thousand) are shown with an analysis of their maturity in note 27. Other non-current payables of EUR 101 thousand (2021: EUR 244 thousand) are due after more than one year.

As of December 31, 2022 the Group had EUR 325,411 thousand (2021: EUR 352,694 thousand) of bank deposits and investments as described in notes 13, 17 and 18.

Credit Risks

Financial assets generally exposed to a credit risk are trade receivables, financial investments, and cash and cash equivalents.

The Group's cash and cash equivalents and financial investments are kept with financial institutions that have a good credit standing. Central management of the Group assesses the counter-party risk of each financial institution dealt with and sets limits to the Group's exposure to those institutions. These credit limits are reviewed from time to time so as to minimize the default risk as far as possible and to ensure that concentrations of risk are managed.

The maximum exposure of the Group to credit risk is the total amount of receivables, financial assets and bank deposits as described in notes 13, 16, 17 and 18.

For contract assets measured at fair value, the maximum amount of the exposure to credit risk is the amount of contract assets measured at fair value as disclosed in note 25. There are no credit derivatives or similar instruments which mitigate the maximum exposure to credit risk and there has been no change during the period or cumulatively in the fair value of such receivables that is attributable to changes in the credit risk.

Market Risks

The Group's activities expose it to the financial risks of changes in foreign currency exchange rates and interest rate risks. Interest rate risks are not material as the Group only receives a minor amount of interest income. The Group does not use derivative financial instruments to manage its exposure to interest rate risk. Cash deposits are made with the Group's bankers at the market rates prevailing at inception of the deposit for the period and currency concerned. The Group's financial investments are made into funds bases in the European Union and are exposed to changes in the market value of those funds. There has been no change to the Group's exposure to market risk or the manner in which it manages and measures the risk.

Foreign Currency Risk

The Group can enter into a variety of derivative financial instruments to manage its exposure to foreign currency risk, including forward exchange contracts to hedge the exchange rate risk arising on the export of equipment. The main exchange rates giving rise to the risk are those between the US Dollar, GB Pound, Chinese Renminbi and Euro. No forward exchange contracts were entered into in the fiscal year or in the previous year.

The carrying amounts of the Group's foreign currency denominated monetary assets and monetary liabilities at the reporting date are as follows:

	Assets		Liabilities	
in EUR thousands	**2022**	**2021**	**2022**	**2021**
US Dollars	65,057	83,157	51,305	46,041
GB Pounds	6,079	10,827	4,175	2,198
Chinese Renminbi	25,303	18,726	8,891	3,666

Exposures are reviewed on a regular basis and are managed by the Group through sensitivity analysis.

Foreign Currency Sensitivity Analysis

The Group's global operations expose it primarily to foreign exchange risks by the US Dollar, GB Pound and Chinese Renminbi.

The following table details the Group's sensitivity to a 10% change in the value of the Euro against the US Dollar, GB Pound and Chinese Renminbi. A positive number indicates an increase in profit, a negative number indicates a reduction in profit.

	USD Currency Effect		GBP Currency Effect		RMB Currency Effect	
Increase in value of Euro by 10%						
in EUR thousands	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**
Profit or loss	543	-2,400	108	-188	-751	-845

	USD Currency Effect		GBP Currency Effect		RMB Currency Effect	
Decrease in value of Euro by 10%						
in EUR thousands	**2022**	**2021**	**2022**	**2021**	**2022**	**2021**
Profit or loss	-543	2,400	-108	188	751	845

The sensitivity analysis represents the foreign exchange risk at the year-end date only. It is calculated by revaluing the Group's financial assets and liabilities, existing at 31 December, denominated in US Dollars, GB Pounds or Chinese Renminbi by 10%. It does not represent the effect of a 10% change in exchange rates sustained over the whole of the fiscal year, only the effect of a different rate occurring on the last day of the year.

Fair Values and Contract Assets

Cash and cash equivalents, receivables are stated at amortized cost. Other financial assets in 2022 and 2021 comprise financial assets measured at FVTPL. Contract assets are outside the scope of IFRS 9.

Trade Receivables / Payables

For trade receivables/payables due within less than one year, measured at amortized cost, the fair value is equivalent to the carrying amount.

Financial Assets 2022

in EUR thousands	At amortized cost*	At fair value	Total carrying amount and fair value
Cash and cash equivalents	104,751	0	104,751
Other financial assets	0	220,410	220,410
Other non-current financial assets	455	250	705
Trade receivables (excluding contract assets)	103,542	0	103,542
Contract assets included in trade receivables (not in scope of IFRS 9)	16,154	0	16,154
Total	**224,902**	**220,660**	**445,562**

Financial Liabilities 2022

in EUR thousands	At amortized cost*	At fair value	Total carrying amount and fair value
Trade payables	46,098	0	46,098
Non-current lease liabilities and other liabilities	5,975	0	5,975
Short-term lease liabilities	2,088	0	2,088
Total	**54,161**	**0**	**54,161**

Financial Assets 2021

in EUR thousands	At amortized cost*	At fair value	Total carrying amount and fair value
Cash and cash equivalents	150,863	0	150,863
Other financial assets	0	201,625	201,625
Other non-current financial assets	453	250	703
Trade receivables (excluding contract assets)	77,383	0	77,383
Contract assets included in trade receivables (not in scope of IFRS 9)	3,579	0	3,579
Total	**232,278**	**201,875**	**434,153**

Financial Liabilities 2021

in EUR thousands	At amortized cost*	At fair value	Total carrying amount and fair value
Trade payables	19,585	0	19,585
Non-current lease liabilities and other liabilities	3,296	0	3,296
Short-term lease liabilities	979	0	979
Total	**23,860**	**0**	**23,860**

* For the financial assets and financial liabilities at amortized cost the carrying amount is a reasonable approximation of fair value.

26. Advance Payments – Contract Liabilities

Contract liabilities for advance payments from customers occur when a contract requires the customer to pay a deposit to the Group and the deposit has actually been paid, typically near the commencement of the contract, or if it reflects an unconditional payment claim. Usually, advance payments are up to 50% of the total contract price.

The Group records the liability as the advance payment is received and eliminates the liability at the same time and up to the same amount as it records revenue until the liability is fully extinguished. Changes in contract liabilities for advance payments in the year reflect the changing level of outstanding customer orders.

Revenues of EUR 60,821 thousand were realized in 2022 from the EUR 77,041 thousand of contract liabilities for advance payments outstanding at the end of 2021. Revenues of EUR 40,728 thousand were realized in 2021 from the EUR 50,824 thousand of contract liabilities for advance payments outstanding at the end of 2020. In 2022 no revenue was recognized from performance obligations that were settled in prior years.

27. Leases

Leases as Lessee

The undiscounted lease liabilities are payable as follows:

in EUR thousands	2022	2021
Not later than one year	2,212	1,147
Later than one year and not later than five years	5,745	2,283
Later than five years	606	899
Total	**8,563**	**4,329**

Note 11 includes the disclosures required by IFRS 16 concerning the depreciation charge for leased assets by underlying class of asset, additions to leased assets and the carrying value of leased assets at the end of the reporting period.

in EUR thousands	2022	2021
Expenses for:		
Short-term and low-value leases	439	268
Payments made in respect of:		
Short-term and low-value leases	439	268
Lease liabilities	1,496	964
Interest on lease liabilities	139	107
Total cash outflow for leases	**2,074**	**1,339**

The Group has applied paragraph 6 of IFRS 16 when accounting for short-term leases and low-value leases and has expensed these on a straight-line basis. A similar portfolio of short-term leases exists at the reporting date.

The Group leases certain buildings, equipment and vehicles under various leases. Under most of the lease commitments for buildings the Group has options to renew the leasing contracts. The leases typically run for a period between one and ten years. None of the leases include contingent rentals.

28. Restructuring Costs

No restructuring costs had to be incurred in the fiscal year 2022.

In the previous year, the restructuring of the Group's OLED activities resulted in expenses of EUR 3,888 thousand. These mainly related to compensation payments, other personnel-related expenses, and impairment losses.

Expenses incurred in the following areas:

in EUR thousands	2022	2021
Cost of sales	0	42
General administration expenses	0	704
Research and development cost	0	3,142
Total	**0**	**3,888**

29. Capital Commitments

in EUR thousands	2022	2021
Capital expenditures for property, plant & equipment	6,590	3,305
Other expenditures	449,565	184,875
Capital Commitments	**456,155**	**188,180**

30. Contingencies

AIXTRON is occasionally involved in legal proceedings or can be exposed to a threat of legal proceedings in the normal course of business. The Executive Board regularly analyses these matters, considering any possibilities of avoiding legal proceedings or of covering potential damages under insurance contracts and has recognized, where required, appropriate provisions. It is not expected that such matters will have a material effect on the Group’s net assets, results of operations and financial position.

31. Related Parties

The related parties of AIXTRON SE are the fully consolidated subsidiaries according to note 32.

Related parties of the Group are members of the Executive Board and members of the Supervisory Board and their close relatives.

SBG Beteiligung GmbH is also a related party because the company is controlled by a related person of AIXTRON SE. There were no transactions with AIXTRON in the fiscal year or in the previous year.

The disclosures of key management personnel compensation are as follows:

in EUR thousands	2022	2021
Executive Board:		
Short-term employee benefits	5,543	4,586
Share-based payments	4,441	3,851
	9,984	**8,437**
Supervisory Board:		
Short-term benefits from fixed remuneration	510	470
	510	**470**
Total	**10,494**	**8,907**

Share-based payments refer to the fair value of share options at grant date and includes that portion of bonus agreements which is settled in shares.

The target expense for the share-based payments of the Executive Board planned at the grant date amounted to EUR 3,902 thousand for the fiscal year (2021: EUR 2,766 thousand) (which corresponds to the remuneration granted).

Individual amounts and further details regarding the remuneration of the members of the Executive Board and Supervisory Board are disclosed in the Remuneration Report.

32. Consolidated Entities

AIXTRON SE controls the following subsidiaries:

Wholly owned subsidiaries	Place of incorporation and operation	Percentage control 31 December 2022	Percentage control 31 December 2021
AIXTRON Ltd.	Great Britain	100%	100%
AIXTRON Korea Co. Ltd.	South Korea	100%	100%
AIXTRON K.K.	Japan	100%	100%
AIXTRON China Ltd.	China	100%	100%
AIXTRON Taiwan Co. Ltd.	Taiwan	100%	100%
AIXTRON Inc.	USA	100%	100%
AIXinno Ltd.	Great Britain	100%	100%
AIXTRON Malaysia Sdn. Bhd.	Malaysia	100%	n.a.

Non-wholly owned subsidiaries of APEVA Group	Place of incorporation and operation	Percentage control 31 December 2022	Percentage control 31 December 2021
APEVA Holdings Ltd.	Great Britain	87%	87%
APEVA SE *	Germany	87%	87%
APEVA Co. Ltd.	South Korea	87%	87%

* In liquidation since January 1, 2023

Proportion of voting rights and ownership interests held by non-controlling interests	Profit allocated to non-controlling interests 2022 EUR thousands	Loss allocated to non-controlling interests 2021 EUR thousands	Accumulated non-controlling interests 2022 EUR thousands	Accumulated non-controlling interests 2021 EUR thousands
APEVA GROUP				
13%	35	-821	205	173

All companies in the Group are engaged in the supply of equipment to the semiconductor industry or development facilities. Design and manufacture of equipment takes place at the entities in Germany and Great Britain. Service and distribution take place at all locations.

33. Events After the Reporting Period

There are no events which have occurred after the balance sheet date, of which the directors have knowledge, which would result in a different assessment of the Group's net assets, results of operation and financial position.

34. Auditors' Fees

Fees expensed in the income statement for the services of the Group auditor, KPMG AG Wirtschaftsprüfungsgesellschaft, Essen (2021: Deloitte GmbH Wirtschaftsprüfungsgesellschaft, Düsseldorf) are as follows:

in EUR thousands	2022	2021
for audit	343	447
for other confirmation services	20	101
for tax advisory services	0	4
for other services	0	0
Total	**363**	**552**

The fees for other confirmation services include fees for audits of the non-financial Group report (2021: fees for audits in accordance with EEG, KWKG and the non-financial Group report).

35. Employees

Compared to last year, the average number of employees during the current year was as follows:

	2022	2021
Sales	55	53
Research and Development	241	238
Manufacturing and Service	398	317
Administration	94	83
Employees	**788**	**691**
Executive board members	3	3
	791	**694**
Apprentices	11	15
Total employees	**802**	**709**

36. Supervisory Board and Executive Board

Supervisory Board

- **Kim Schindelhauer**
  Chairman of the Supervisory Board since 2002 until February 28, 2017 and since September 1, 2017
  Entrepreneur

- **Frits van Hout**
  Vice Chairman of the Supervisory Board since 2019
  Entrepreneur

  Membership of Supervisory Boards and Controlling Bodies:
  - Bambi Belt Holding BV, Eindhoven/Netherlands (Member of the Supervisory Board)
  - Kendrion NV, Amsterdam/Netherlands (Chairman of the Supervisory Board)
  - SmartPhotonics BV, Eindhoven/Netherlands (Member of the Supervisory Board)
  - Deep Tech Fund (InvestNL), Amsterdam/Netherlands, (Chairman of the Investment Commitee, since March 01, 2022)

- **Prof. Dr. Andreas Biagosch**
  Member of the Supervisory Board since 2013
  Entrepreneur

  Membership of Supervisory Boards and Controlling Bodies:
  - Wacker Chemie AG, Munich (Member of the Supervisory Board)
  - Ashok Leyland Limited, Chennai/India (Non-Executive Director)
  - ATHOS Service GmbH, Munich (Chairman of the Advisory Board)

- **Prof. Dr. Petra Denk**
  Member of the Supervisory Board since 2011
  Professor of Energy Economics

  Membership of Supervisory Boards and Controlling Bodies:
  - Pfisterer Holding AG, Winterbach (Member of the Supervisory Board)
  - BKW AG, Bern/Switzerland (Member of the Advisory Board)

- **Prof. Dr. Anna Weber**
  Member of the Supervisory Board since 2019
  Professor for Economics esp. External Financial Accounting
  German Public Auditor (Wirtschaftsprueferin), German Tax Advisor (Steuerberaterin)

  Membership of Supervisory Boards and Controlling Bodies:
  - Wacker Chemie AG, München (Member of the Supervisory Board)

- **Dr. Stephan Traeger**
  Member of the Supervisory Board since May 25, 2022
  Chairman of Executive Board, JENOPTIK AG

  Membership of Supervisory Boards and Controlling Bodies:
  - Group-internal mandates, JENOPTIK Group, Jena, Germany

Executive Board

The composition of the Company's Executive Board in 2022 is:

- **Dr. Felix Grawert**
  Aachen, Chairman of the Executive Board and Chief Executive Officer (CEO), member of the Executive Board since 2017

- **Dr. Christian Danninger**
  Cologne, member of the Executive Board and Chief Financial Officer (CFO), member of the Executive Board since 2021

- **Dr. Jochen Linck**
  Aachen, member of the Executive Board and Chief Operating Officer (COO), member of the Executive Board since 2020

37. Critical Accounting Judgements and Key Sources of Estimation and Uncertainty

The preparation of AIXTRON's Consolidated Financial Statements requires management to make certain estimates, judgments, and assumptions that the Group believes are reasonable based upon the information available. These estimates and assumptions affect the reported amounts and related disclosures and are made in order to fairly present the Group's financial position and results of operations. The following accounting policies are significantly impacted by these estimates and judgments that AIXTRON believes are the most critical to aid in fully understanding and evaluating its reported financial results:

Revenue Recognition

Revenue for the supply of most equipment to customers is generally recognized in two stages, partly on delivery and partly on final installation and acceptance (see note 2 (N)). When allocating the transaction price to the two performance obligations, delivery of the tool and installation of the tool, assumptions are made regarding individual margins as part of the cost-plus method. The Group believes, based on past experience, that this method of recognizing revenue fairly states the revenues of the Group. For the reporting periods 2022 and 2021, 10% of the installation revenue was allocated to installation performance.

The judgements made by management include an assessment of the point at which control has passed to the customer.

Valuation of Inventories

Inventories are stated at the lower of cost and net realizable value. This requires the Group to make judgments concerning obsolescence of materials. This evaluation requires estimates, including both forecasted product demand and pricing environment, both of which may be susceptible to significant change. The carrying amount of inventories and details on impairment losses and reversals of impairment losses in the fiscal year are disclosed in notes 3 and 15. In future periods, impairment losses may be necessary due to various factors such as decreasing product demand or technological obsolescence. These factors could result in adjustment to the valuation of inventory in future periods, and significantly impact the Group's future operating results.

Income Taxes

At each balance sheet date, the Group assesses whether the realization of future tax benefits is sufficiently probable to recognize deferred tax assets. This assessment requires the exercise of judgement on the part of management with respect to future taxable income. The parent company AIXTRON SE does generally not exceed a planning horizon of twelve months. The recorded amount of total deferred tax assets could be reduced or increased if estimates of projected future taxable income are lowered or increased, or if changes in current tax regulations are enacted that impose restrictions on the timing or extent of the Group's ability to utilize future tax benefits. The carrying amount of deferred tax assets is disclosed in note 14.

Provisions

Provisions are liabilities of uncertain timing or amount. At each balance sheet date, the Group assesses the valuation of the liabilities which have been recorded as provisions and adjusts them if necessary. Because of the uncertain nature of the timing or amounts of provisions, judgement has to be exercised by the Group with respect to their valuation. Actual liabilities may differ from the estimated amounts. Details of provisions are shown in note 23.

Legal proceedings

In the normal course of business, the Group is subject to various legal proceedings and claims. The Company, based upon advice from legal counsel, believes that the matters the Group is aware of are not likely to have a material adverse effect on its financial condition or results of operations. The Group is not aware of any unasserted claims that may have a material adverse effect on its financial condition or results of operation.

Significant external influences

The global impact of the Corona pandemic and the Russia/Ukraine conflict on business operations is explained in the combined management report. The impact on the 2022 consolidated financial statements is immaterial and it is also expected that the impact on fiscal year 2023 will be immaterial. Climate risks also did not have a material impact on the business operations of AIXTRON.

38. Disclosures according to Section 161 German Stock Corporation Act ("Aktiengesetz")

The current Declaration of Conformity according to section 161 German Stock Corporation Act ("Aktiengesetz"), which was adopted by the Executive Board and the Supervisory Board in February 2023, is permanently available on AIXTRON's website under Investors/Corporate Governance.

Herzogenrath, February 27, 2023

AIXTRON SE

Executive Board

Dr. Felix Grawert	**Dr. Christian Danninger**	**Dr. Jochen Linck**
Chairman	Member	Member

FURTHER INFORMATION

Responsibility Statement by the Executive Board

Responsibility Statement required by Sections 297(2) sentence 4 and 315 (1) sentence 5 of the Handelsgesetzbuch (HGB – German Commercial Code) for the Consolidated Financial Statements:

“To the best of our knowledge, and in accordance with the applicable reporting principles, the Consolidated Financial Statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the Group Management Report includes a fair review of the development and performance of the business and the position of the Group, together with a description of the material opportunities and risks associated with the expected development of the Group.”

Herzogenrath, February 27, 2023

AIXTRON SE

The Executive Board

Dr. Felix Grawert Chairman	**Dr. Christian Danninger** Member	**Dr. Jochen Linck** Member

Independent Auditor's Report

To AIXTRON SE, Herzogenrath/Germany

Report on the Audit of the Consolidated Financial Statements and of the Combined Management Report

Opinions

We have audited the consolidated financial statements of AIXTRON SE, Herzogenrath, and its subsidiaries (the Group), which comprise the consolidated statement of financial position as of December 31, 2022, the consolidated income statement, the consolidated statement of other comprehensive income, consolidated statement of cash flow and consolidated statement of changes in equity for the financial year from January 1 to December 31, 2022, and notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the combined management report of AIXTRON SE for the financial year from January 1 to December 31, 2022.

In accordance with German legal requirements, we have not audited the content of those components of the combined management report specified in the "Other Information" section of our auditor's report.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Section 315e (1) HGB [Handelsgesetzbuch: German Commercial Code] and, in compliance with these requirements, give a true and fair view of the assets, liabilities, and financial position of the Group as of December 31, 2022, and of its financial performance for the financial year from January 1 to December 31, 2022, and

- the accompanying combined management report as a whole provides an appropriate view of the Group's position. In all material respects, this combined management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our opinion on the combined management report does not cover the content of those components of the combined management report specified in the "Other Information" section of the auditor's report.

Pursuant to Section 322 (3) sentence 1 HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the combined management report.

Basis for the Opinions

We conducted our audit of the consolidated financial statements and of the combined management report in accordance with Section 317 HGB and the EU Audit Regulation No 537/2014 (referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Combined Management Report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10 (2)(f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5 (1) of the EU Audit Regulation. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the consolidated financial statements and on the combined management report.

Key Audit Matters in the Audit of the Consolidated Financial Statements

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements for the financial year from January 1 to December 31, 2022. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, we do not provide a separate opinion on these matters.

Existence of revenues and revenue recognition cut-off for spare parts

Please refer to Note 2 (N) of the notes to the consolidated financial statements for further information on the accounting policies applied and the assumptions used. For a breakdown of revenues, please refer to Note 3 of the notes to the consolidated financial statements.

THE FINANCIAL STATEMENT RISK

The Company generated revenues from spare parts of EUR 76 million in the financial year from January 1 to December 31, 2022.

AIXTRON recognizes revenues when (or as) it fulfils a performance obligation through the transfer of a promised asset to a customer. An asset is transferred when (or as) the customer obtains control of that asset. Revenues from spare parts are recognized solely at a point in time.

Revenues from spare parts are based on a large number of business transactions. Revenues are one of the Group's most important indicators of target achievement and additionally form a significant basis for decisions for the users of financial statements. There is the risk for the consolidated financial statements that revenues from spare parts are recognized without actual performance having been rendered. Further, there is the risk that revenues from spare parts are not recognized on an accrual basis.

OUR AUDIT APPROACH

In order to examine the recognition of revenues from spare parts, we assessed the design, setup and effectiveness of internal controls relating to order acceptance, outgoing goods and invoicing, in particular the determination and verification of the actual transfer of control.

In addition, on the basis of a mathematical and statistical procedure we selected revenue transactions in spare parts that were recorded in financial year 2022 and evaluated these by reconciling them with the underlying invoices, related orders, contracts and external delivery records.

In order to evaluate revenues on an accrual basis, we assessed the applicable point in time and the amount of revenues recognized by reconciling invoices to the related orders, external delivery records and payments received. The basis for this were revenues that were selected using a mathematical and statistical procedure and were recognized in a set period before the year-end closing date. Based on risk, we examined the credits issued for a certain period after the closing date and evaluated whether these required further evaluation in respect of the matching principle.

OUR OBSERVATIONS

The procedure used for the recognition of revenues and the revenue recognition cut-off for spare parts is appropriate.

Other Information

Management and/or the Supervisory Board are/is responsible for the other information. The other information comprises the following components of the combined management report, whose content was not audited:

- the Group's separate non-financial statement, which is referred to in the combined management report,
- the combined corporate governance statement for the Company and the Group referred to in the combined management report, and
- information extraneous to combined management reports and marked as unaudited.

The other information also includes the remaining parts of the annual report. The other information does not include the consolidated financial statements, the combined management report information audited for content and our auditor's report thereon.

Our opinions on the consolidated financial statements and on the combined management report do not cover the other information, and consequently we do not express an opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the combined management report information audited for content or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Management and the Supervisory Board for the Consolidated Financial Statements and the Combined Management Report

Management is responsible for the preparation of consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) HGB and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position, and financial performance of the Group. In addition, management is responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud (i.e., fraudulent financial reporting and misappropriation of assets) or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, management is responsible for the preparation of the combined management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, management is responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a combined management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the combined management report.

The Supervisory Board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the combined management report.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements and of the Combined Management Report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the combined management report as a whole provides an appropriate view of the Group’s position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor’s report that includes our opinions on the consolidated financial statements and on the combined management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Section 317 HGB and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this combined management report.

We exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the combined management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than the risk of not detecting a material misstatement resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal controls.

- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the combined management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.

- Evaluate the appropriateness of accounting policies used by management and the reasonableness of estimates made by management and related disclosures.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the combined management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) HGB.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the combined management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our opinions.

- Evaluate the consistency of the combined management report with the consolidated financial statements, its conformity with [German] law, and the view of the Group's position it provides.

- Perform audit procedures on the prospective information presented by management in the combined management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by management as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, the actions taken or safeguards applied to eliminate independence threats.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

Other Legal and Regulatory Requirements

Report on the Assurance on the Electronic Rendering of the Consolidated Financial Statements and the Combined Management Report Prepared for Publication Purposes in Accordance with Section 317 (3a) HGB

We have performed assurance work in accordance with Section 317 (3a) HGB to obtain reasonable assurance about whether the rendering of the consolidated financial statements and the combined management report (hereinafter the "ESEF documents") contained in the electronic file “aix-2022-12-31-de.zip” (SHA256-Hashwert:1772e9329d8490353d52df330ed73e1463517c1493725542d7493f784fbf3760) made available and prepared for publication purposes complies in all material respects with the requirements of Section 328 (1) HGB for the electronic reporting format ("ESEF format"). In accordance with German legal requirements, this assurance work extends only to the conversion of the information contained in the consolidated financial statements and the combined management report into the ESEF format and therefore relates neither to the information contained in these renderings nor to any other information contained in the file identified above.

In our opinion, the rendering of the consolidated financial statements and the combined management report contained in the electronic file made available, identified above and prepared for publication purposes complies in all material respects with the requirements of Section 328 (1) HGB for the electronic reporting format. Beyond this assurance opinion and our audit opinion on the accompanying consolidated financial statements and the accompanying combined management report for the financial year from January 1 to December 31, 2022 contained in the "Report on the Audit of the Consolidated Financial Statements and the Combined Management Report" above, we do not express any assurance opinion on the information contained within these renderings or on the other information contained in the file identified above.

We conducted our assurance work on the rendering of the consolidated financial statements and the combined management report contained in the file made available and identified above in accordance with Section 317 (3a) HGB and the IDW Assurance Standard: Assurance Work on the Electronic Rendering of Financial Statements and Management Reports Prepared for Publication Purposes in Accordance with Section 317 (3a) HGB (IDW AsS 410 (06.2022)). Our responsibility in accordance therewith is further described below. Our audit firm applies the IDW Standard on Quality Management 1: Requirements for Quality Management in Audit Firms (IDW QS 1).

The Company’s management is responsible for the preparation of the ESEF documents including the electronic rendering of the consolidated financial statements and the combined management report in accordance with Section 328 (1) sentence 4 item 1 HGB and for the tagging of the consolidated financial statements in accordance with Section 328 (1) sentence 4 item 2 HGB.

In addition, the Company's management is responsible for such internal control that they have considered necessary to enable the preparation of ESEF documents that are free from material intentional or unintentional non-compliance with the requirements of Section 328 (1) HGB for the electronic reporting format.

The Supervisory Board is responsible for overseeing the process of preparing the ESEF documents as part of the financial reporting process.

Our objective is to obtain reasonable assurance about whether the ESEF documents are free from material intentional or unintentional non-compliance with the requirements of Section 328 (1) HGB. We exercise professional judgment and maintain professional skepticism throughout the assurance work. We also:

- Identify and assess the risks of material intentional or unintentional non-compliance with the requirements of Section 328 (1) HGB, design and perform assurance procedures responsive to those risks, and obtain assurance evidence that is sufficient and appropriate to provide a basis for our assurance opinion.
- Obtain an understanding of internal control relevant to the assurance on the ESEF documents in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing an assurance opinion on the effectiveness of these controls.
- Evaluate the technical validity of the ESEF documents, i.e. whether the file made available containing the ESEF documents meets the requirements of the Commission Delegated Regulation (EU) 2019/815, as amended as of the reporting date, on the technical specification for this electronic file.
- Evaluate whether the ESEF documents provide an XHTML rendering with content equivalent to the audited consolidated financial statements and the audited combined management report.
- Evaluate whether the tagging of the ESEF documents with Inline XBRL technology (iXBRL) in accordance with the requirements of Articles 4 and 6 of the Commission Delegated Regulation (EU) 2019/815, as amended as of the reporting date, enables an appropriate and complete machine-readable XBRL copy of the XHTML rendering.

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor at the Annual General Meeting on May 25, 2022. We were engaged by the Supervisory Board on October 28, 2022. We have been the group auditor of AIXTRON SE without interruption since financial year 2022.

We declare that the opinions expressed in this auditor's report are consistent with the additional report to the Audit Committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

Other Matter – Use of the Auditor's Report

Our auditor's report must always be read together with the audited consolidated financial statements and the audited combined management report as well as the examined ESEF documents. The consolidated financial statements and combined management report converted to the ESEF format – including the versions to be entered in the company register – are merely electronic renderings of the audited consolidated financial statements and the audited combined management report and do not take their place. In particular, the ESEF report and our assurance opinion contained therein are to be used solely together with the examined ESEF documents made available in electronic form.

German Public Auditor Responsible for the Engagement

The German Public Auditor responsible for the engagement is Dr. Kathryn Ackermann.

Essen, February 27, 2023

KPMG AG
Wirtschaftsprüfungsgesellschaft
[Original German version signed by:]

Dr. Ackermann	Dr. Ohmen
Wirtschaftsprüferin	Wirtschaftsprüfer
[German Public Auditor]	[German Public Auditor]

Financial Calendar

April 27, 2023	Publication of the results for the 1st quarter of 2023
May 17, 2023	Annual General Meeting 2023, Aachen
July 27, 2023	Publication of the results for the 1st half of 2023
October 26, 2023	Publication of the results for the 3rd quarter of 2023

Imprint

Publisher: AIXTRON-Gruppe, Herzogenrath, Germany

Editor: AIXTRON-Gruppe, Deutschland
Investor Relations & Corporate Communications
invest@aixtron.com

Auditor: KPMG AG Wirtschaftsprüfungsgesellschaft, Essen, Germany

Forward-Looking Statements

This document may contain forward-looking statements regarding the business, results of operations, financial condition and earnings outlook of AIXTRON. These statements may be identified by words such as “may”, “will”, “expect”, “anticipate”, “contemplate”, “intend”, “plan”, “believe”, “continue” and “estimate” and variations of such words or similar expressions. These forward-looking statements are based on the current assessments, expectations and assumptions of the executive board of AIXTRON, of which many are beyond control of AIXTRON, based on information available at the date hereof and subject to risks and uncertainties. You should not place undue reliance on these forward-looking statements. Should these risks or uncertainties materialize or should underlying expectations not occur or assumptions prove incorrect, actual results, performance or achievements of AIXTRON may materially vary from those described explicitly or implicitly in the relevant forward-looking statement. This could result from a variety of factors, such as those discussed by AIXTRON in public reports and statements, including but not limited those reported in the chapter “Risk Report”. AIXTRON undertakes no obligation to revise or update any forward-looking statements as a result of new information, future events or otherwise, unless expressly required to do so by law.

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

AIXTRON

Contact for investors and analysts: invest@aixtron.com

Contact for journalists: communications@aixtron.com

As a contribution to environmental protection, AIXTRON does not routinely print or mail annual reports.

This Annual Report is available on the AIXTRON website under www.aixtron.com/en/investors/publications at any time.

AIXTRON SE | Dornkaulstr. 2 | 52134 Herzogenrath | Germany