Annual Report 2020

We are shaping the future.
With innovation and precision.

AIXTRON

CONTENT

AIXTRON GROUP

2020 at a Glance

301.4 m€
Order intake
previous year 231.9 m€

269.2 m€
Revenues
previous year 259.6 m€

40 %
Gross margin
previous year 42 %

34.8 m€
EBIT
previous year 39.0 m€

0.31 €
Earnings per share
previous year 0.29 €

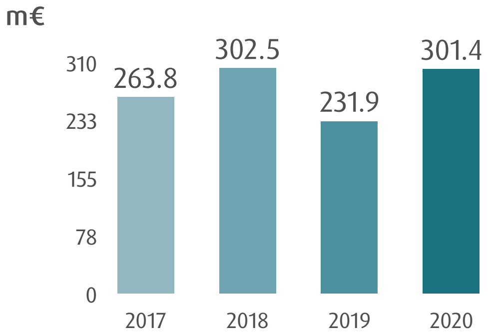
14.0 m€
Free cash flow
previous year 35.1 m€

58.4 m€
R&D expenditure
previous year 55.0 m€

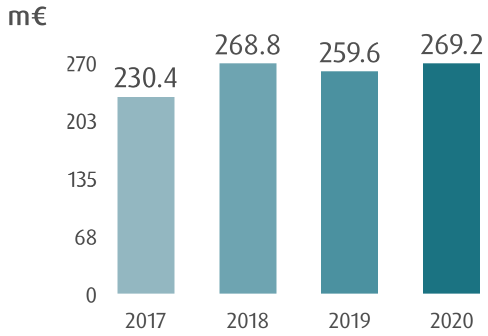
728
Employees at year-end
previous year 688

Key Figures

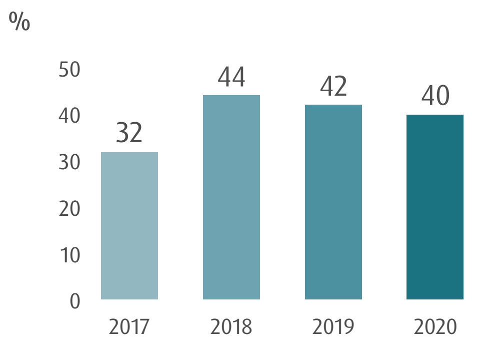
Order intake



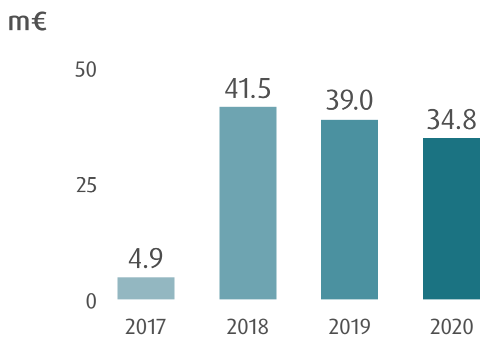
Revenues



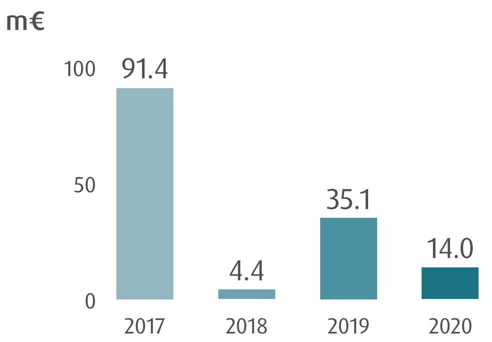
Gross margin



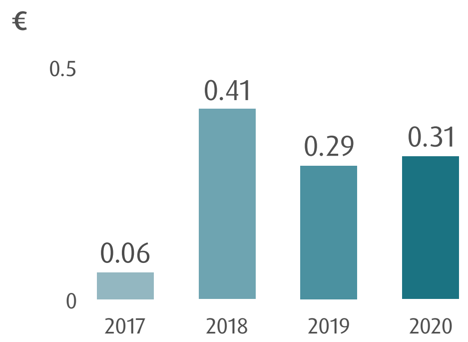
Operating result (EBIT)



Free cash flow



Earnings per share



Company Profile

AIXTRON SE is a leading provider of deposition equipment to the semiconductor industry. The Company was founded in 1983 and is headquartered in Herzogenrath (near Aachen), Germany, with subsidiaries and sales offices in Asia, United States and in Europe. AIXTRON's technology solutions are used by a diverse range of customers worldwide to build advanced components for electronic and optoelectronic applications based on compound semiconductor or organic semiconductor materials. Such components are used in a broad range of innovative applications, technologies and industries. These include laser, LED and display technologies, data transmission, SiC and GaN based energy management and conversion, communications, signaling and lighting technology as well as many other leading-edge applications.

Our registered trademarks: AIXACT®, AIXTRON®, APEVA®; Atomic Level SolutionS®, Close Coupled Showerhead®, CRIUS®, EXP®, EPISON®, Gas Foil Rotation®, Optacap™, OVPD®, Planetary Reactor®, PVPD®, STExS®, TriJet®

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

Letter to Shareholders

Dear Shareholders,
Ladies and Gentlemen,

AIXTRON has remained on track during the COVID-19 pandemic. We further strengthened our position as market and technology leader for MOCVD equipment and its applications, and met our full-year guidance for 2020. Order intake at EUR 301 million exceeded the previous year's figure by 30%, revenues at EUR 269 million improved by 4%, and we achieved an operating profit of EUR 35 million with an EBIT margin of 13%. Together with a gross margin of 40%, this demonstrates our strong profitability. The consistently high equity ratio of 84% and our total cash of EUR 310 million (both as of December 31, 2020) underline our financial strength. For the consistent further development of our cutting-edge technology and our product portfolio, we have invested more than one in five euros (22%) of sales in research and development (R&D), at EUR 58 million, even in the challenging year 2020.

We have focused on the development of next-generation MOCVD systems for our target markets. In this way, we are consistently aligning our product portfolio to the requirements of our customers' fast-growing markets of the future in order to support them in their growth as an innovative and reliable partner.

In 2020, demand for our equipment to produce gallium nitride (GaN) semiconductors for power and high-frequency applications grew strongly. These devices allow a significant reduction in energy consumption and size of power supplies for servers, smartphones and notebooks, thus enabling a reduction in the carbon footprint. They have also become an important component of 5G networks. With this, we expect the beginning of a demand trend that will continue in the coming years. To further expand the appeal of the GaN material system, we have strongly pushed the development of the successor generation of our AIX G5+ product series in 2020.

Our fully automated deposition system for silicon carbide (SiC), which we launched in 2019, has convinced further customers in 2020. It is consistently aligned to the e-mobility megatrend, for which the SiC material system with its high energy efficiency enables an increase in vehicle range and thus a reduction in the carbon footprint. Here, too, we expect further growth in the coming years.

The display business has shown strength in 2020, which we expect to continue in the near future. Customers are continuously expanding their capacities for the production of Mini LEDs and are working intensively on the development and qualification of Micro LEDs for the next generation of displays for smartwatches, smartphones and TV sets. In order to better meet the requirements of these growth markets in the future as well, we also further developed our new MOCVD system generation for red LEDs and lasers in 2020. It will be delivered to the first customers in the course of 2021.

In the field of OLED deposition technologies, our subsidiary APEVA has received final acceptance of the Gen 2 OVPD® deposition system from the customer. This phase of the qualification project on the way to commercialization of APEVA's proprietary technology has been completed. APEVA is currently in talks with customers about a final qualification project for series production.

Overall, AIXTRON has sustainably strengthened its market position in numerous growth markets during 2020, especially in the IT infrastructure, electro mobility and consumer electronics sectors. We have had a large number of successes in our cooperation with customers. We also increased our research and development targeted to strengthen our positioning in the diverse growth markets.

The COVID-19 pandemic, the dominant global event in 2020, also presented us with challenges. We implemented a comprehensive hygiene concept at an early stage and made even greater use of the opportunities offered by digitization, including our Annual General Meeting, which was held virtually for the first time. As a result, the infection rate has remained at a very low level at AIXTRON, enabling us to avoid any meaningful productivity bottlenecks.

In 2020, we have again made great steps forward in successfully placing our technologies in the growth markets we address and positioning ourselves accordingly with a strong competitive edge. In 2021, we will accelerate our pace even further - despite all challenges we will have to face in 2021.

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

Our employees are crucial to our success. Without their commitment, their dedication and also their responsible behavior during the pandemic, this success would not have been possible. We would like to expressly thank our employees for this! We would also like to thank our Supervisory Board for its trusting cooperation in the strategic development and support in the management of the company.

Unfortunately, the news reached us in January of this year that our company founder, long-time Managing Director and Chairman of the Board, Deputy Chairman of the Supervisory Board and Honorary Chairman of the Supervisory Board Dr. Holger Jürgensen passed away at the age of 63. We mourn the passing of a visionary who, with his pioneering technological spirit and entrepreneurial vision, laid the foundations for today's world-leading Group.

We thank our shareholders for their trust. With your support, we can continue to develop AIXTRON as a sustainably successful and profitable company with great growth potential in the semiconductor industry.

Dr. Jochen Linck **Dr. Bernd Schulte** **Dr. Felix Grawert**

Supervisory Board Report

In fiscal year 2020, the employees of the AIXTRON Group showed extraordinary performance. Thanks to the great common commitment, all targets set for the year were achieved, despite the difficult environment caused by the COVID-19 pandemic. As a result, AIXTRON showed a robust development of its operating business in this challenging year.

Demand for AIXTRON equipment today and in the future is strongly influenced by global trends such as increasing electromobility and its efficiency, expansion of renewable energies, digitalization, and networking. Efficient power semiconductors as components for electric vehicles, compact power supplies, data centers, or power generation from renewable sources are driving demand for our equipment. Further growth is also expected in the optoelectronics sector due to the increasing proliferation of optical sensors and rising demand for optical data transmission. In all these markets, AIXTRON has established an excellent position thanks to leading technologies. AIXTRON will systematically exploit the resulting opportunities.

APEVA's joint OLED project with a major customer reached an important milestone in Q4 2020: With the final acceptance of the Gen2 deposition system commissioned in the previous year by the customer, this phase of the qualification project on the way to commercialization of APEVA's proprietary technology has been completed. APEVA is currently in talks with customers about a final qualification project for series production.

Sustainability plays a central role in AIXTRON's mindset and actions. Since 2019, AIXTRON has been a climate-neutral Company, and further measures to reduce CO2 emissions were implemented in fiscal year 2020.

In fiscal year 2020, the Supervisory Board appointed Dr. Jochen Linck to the Executive Board of AIXTRON SE as Chief Operating Officer (COO) and resolved to expand the Executive Board by a Chief Financial Officer to three permanent members. With the appointment of Dr. Christian Danninger to the position of Chief Financial Officer (CFO) as of July 1, 2021, AIXTRON SE's Executive Board succession process was successfully completed in December 2020.

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.

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. Based on the Executive Board's reports, business developments and 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 (§ 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.

As Chairman of the Supervisory Board, I was 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 questions of strategic realignment.

Focus of the Discussion in Plenary Sessions

In 2020, the Supervisory Board held **four ordinary meetings** on February 26, May 19, September 21, and December 9, at all but two of which all acting Supervisory Board members were present. Frits van Hout was unable to attend the February 26 meeting in person but was connected by telephone for the resolutions. At the May 19 meeting, the Supervisory Board members, with the exception of Chairman Kim Schindelhauer, participated by audio and video conference to avoid COVID-19 infection risks. Prof. Dr. Biagosch was unable to attend the December 9 meeting for personal reasons. He explicitly agreed to all resolutions made in the follow-up.

Prior to these 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 notifications. These are made available via an encrypted digital platform specially set up for the Supervisory Board. The Supervisory Board obtained a reasonable 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, marketshares). Deviations in the course of business from the planned budgets were explained and justified in detail.

In view of the Act Implementing the Second Shareholders' Rights Directive (ARUG II), which came into force at the beginning of 2020, and the associated introduction of the revised German Corporate Governance Code 2020 (DCGK 2020), a Remuneration Committee was formed within the Supervisory Board to deal with the revision of the Executive Board remuneration system. In addition, the wording of the Rules of Procedure for the Executive Board was amended to reflect the regulation on transactions requiring approval.

In addition, the Supervisory Board was intensively involved in the development progress of new equipment generations, in order to optimally seize the opportunities arising from the imminent growth in the future markets addressed by AIXTRON in a targeted manner to ensure the sustainable and profitable business development of the Company.

On April 20 and December 9, **extraordinary Supervisory Board meetings** were held to discuss the appointment and remuneration of the newly created COO and CFO positions.

Supervisory Board Meetings in 2020

The meeting on **February 26, 2020** focused on the annual and consolidated financial statements and the combined management report for fiscal year 2019 and the corresponding discussions and resolutions. We also discussed the draft agenda for the 2020 Annual General Meeting, which we approved after clarification of outstanding items. The agenda for the 2020 Annual General Meeting included for the first time a resolution on the approval of a new remuneration system for Executive Board members in accordance with the requirements of the EU Shareholder Rights Directive (ARUG II). Furthermore, the Supervisory Board discussed and approved the proposed Corporate Governance Report. The non-financial report of AIXTRON SE and the Group (CSR report) for fiscal year 2019 to be prepared by AIXTRON and reviewed by the auditor was reviewed, discussed, and approved. In addition, the Supervisory Board resolved to extend the Executive Board service contract with Dr. Felix Grawert by five years based on the new remuneration system, which would be presented to the General Meeting for approval.

In the meeting on **May 19, 2020**, the Executive Board explained the business development for the current year and reported on the measures implemented to deal with the COVID-19 pandemic. In addition, the Supervisory Board discussed in detail the strategy and roadmap of the AIXTRON Group in view of the realignment and continuous development of the technology portfolio. In particular, the addressable markets for MOCVD technologies for GaN- and SiC-based power electronics applications, as well as the development in the optoelectronics market, including the opportunities for Micro LED Displays, were subject to in-depth discussion. It was noted that the GaN-based power electronics market is currently in transition from an R&D market to an application market, with the first end-use applications, such as for wireless charging, already entering volume production. Regarding SiC-based power electronics, it was pointed out that electromobility will become a major driver of demand when the second generation of pure e-vehicles enters volume production. Furthermore, possible approaches to use AIXTRON's know-how for the development of new business areas were discussed. This was followed by a report on the status of the OLED project of the subsidiary APEVA.

During the ordinary meeting on **September 21, 2020**, the Executive Board reported on the business development in the first half of the year and provided an outlook for the full year 2020. We received an update on the corporate strategy and the development planning of various applications and uses in the optoelectronics technology area. In addition, the Executive Board reported on the status of APEVA's business activities and informed us about the status in some strategy projects. The Supervisory Board adopted the updated Rules of Procedure for the Supervisory Board, which came into force at the end of the meeting.

On **December 9, 2020**, the Supervisory Board of AIXTRON SE met for its last ordinary meeting of the year. The budget for 2021 presented by the Executive Board was discussed in detail and approved. The 2021 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 19, 2021. Finally, each member of the Supervisory Board underwent a self-evaluation of their Supervisory Board activities, with the result that the Supervisory Board and its committees work efficiently. In addition, I informed the Supervisory Board that I had approved Dr. Schulte's acceptance of the Supervisory Board mandate at SUSS MicroTec SE.

Committees

The Supervisory Board has formed four committees, an Audit Committee, a Capital Markets Committee, a Nomination Committee, and a Remuneration Committee. They 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 and the audit of the financial statements. The Chairwoman of the Audit Committee, Prof. Dr. Anna Gersbacher, as a member of the Supervisory Board, has expertise in the areas of accounting and auditing (§ 107 (4), § 100 (5) of the German Stock Corporation Act (AktG)) as well as special knowledge and experience in the application of internal control procedures.

In the year under review, the Supervisory Board commissioned Deloitte GmbH Wirtschaftsprüfungsgesellschaft, as proposed by the Audit Committee, with the audit of the annual and consolidated financial statements as well as the combined management report of AIXTRON SE as of December 31, 2020, the audit of the Company's early risk detection system within the meaning of § 91 (2) AktG, the preparation of a „Management Letter", the findings pursuant to Section 7.2.3 of the German Corporate Governance Code and, pursuant to § 111 (2) AktG, with the content review of the separate Group non-financial report to be prepared for 2020. In addition, the key audit matters (KAM) to be mentioned in the auditor's report on the AIXTRON Annual and Consolidated Financial Statements 2020 were discussed with the auditor.

The Audit Committee met four times in 2020 (February 26, May 19, September 21, December 8). All members of the Audit Committee attended the meetings in person or by video link. For the quarterly financial statements as of March 31, 2020, June 30, 2020, and September 30, 2020, 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 auditor independence
- Group non-financial report (sustainability report)
- Compliance training plan for 2020
- Internal audits 2020 and audit plan for the following year
- Information security - status and focus topics in 2020
- Internal (accounting-related) control system
- Extension of risk management and compliance to APEVA Group incl. JV partners
- Tax audits, particularly 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 two members. No meetings were held in 2020.

The **Nomination Committee** consists of three members and 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 defined for the first time in 2010 and renewed in the reporting year.

In 2020, the Nomination Committee met eight times, on March 12, April 2, April 9, April 20, August 18, September 2, September 20, and December 9. These meetings, the majority of which were held by telephone, were attended by all members of the Nomination Committee and invited guests. These meetings were all related to the election of candidates to be appointed for the new Executive Board positions of COO and CFO.

In the past fiscal year, issues relating to the **Remuneration Committee** were addressed at the meetings of the Nomination Committee. This was considered reasonable as the members of both committees are identical, and the main issues concerned the remuneration of the new members of the Executive Board.

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. We will continue to support the Executive Board in its efforts to fully comply with the recommendations of the German Corporate Governance Code.

In the current **Declaration of Conformity** pursuant to § 161 of the German Stock Corporation Act (AktG) dated February 4, 2020, full compliance with the recommendations of the German Corporate Governance Code is declared, except for the deviations explained.

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

Audit and Annual Financial Statements

Pursuant to the resolution of the general shareholders meeting on May 20, 2020, the Supervisory Board commissioned Deloitte GmbH Wirtschaftsprüfungsgesellschaft, Düsseldorf, 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 2020.

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, as well as the lawful, proper, and appropriate reporting of non-financial information in the Sustainability Report for 2020. 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 § 161 of the German Stock Corporation Act (AktG). As in previous years, such a determination was not necessary for the 2020 fiscal year.

The annual financial statements and the management report of AIXTRON SE as of December 31, 2020 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, 2020 were prepared in accordance with § 315e HGB on the basis of the International Financial Reporting Standards IFRS. The independent auditing Company Deloitte GmbH Wirtschaftsprüfungsgesellschaft audited both the annual financial statements and the consolidated financial statements and combined management report prepared by AIXTRON SE for fiscal year 2020 and reviewed the separate Group non-financial report. Both the financial statements and the non-financial consolidated report were issued with an unqualified auditor's report or opinion. 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 audit of the financial statements of AIXTRON SE in fiscal year 2020 by Deloitte GmbH Wirtschaftsprüfungsgesellschaft was performed by the audit team with the lead auditor Mr. André Bedenbecker.

The financial statement documents (annual financial statements of AIXTRON SE and consolidated financial statements as of December 31, 2020 as well as the combined management report of AIXTRON SE and the Group), 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 us. In the meeting of the Audit Committee and the full Supervisory Board on February 22, 2021, 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 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 report of the Company for fiscal year 2020, by resolution dated February 24, 2021. The annual financial statements of AIXTRON SE are 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 worldwide for their extraordinary dedication in fiscal 2020, which was marked by the COVID-19 pandemic. The entire Supervisory Board would also like to thank the employee representatives for their constructive cooperation with the corporate bodies of the Company in this challenging year.

Herzogenrath, February 2021
AIXTRON SE

Kim Schindelhauer
Chairman of the Supervisory Board

THE AIXTRON SHARE

The AIXTRON share is listed in the Prime Standard of the Frankfurt Stock Exchange and is included in the two benchmark indices MDAX and TecDAX of Deutsche Börse AG. According to the index ranking of Deutsche Börse the AIXTRON share is ranked 57th in the MDAX, which comprises 60 stocks, in terms of market capitalization as of December 31, 2020 (December 2019: 22nd place in the SDAX) and 49th in terms of transaction volume in 2020 (2019: 3rd place in the SDAX). Among the 30 TecDAX members, AIXTRON's shares ranked 22nd (2019: 26th) in terms of market capitalization and 19th (2019: 18th) in terms of transaction volume for the year ended December 31, 2020.

In addition to traditional trading venues such as XETRA and the German regional stock exchanges, AIXTRON shares are also traded to a not inconsiderable extent on other trading platforms such as Tradegate, Quotrix and Chi-X Europe.

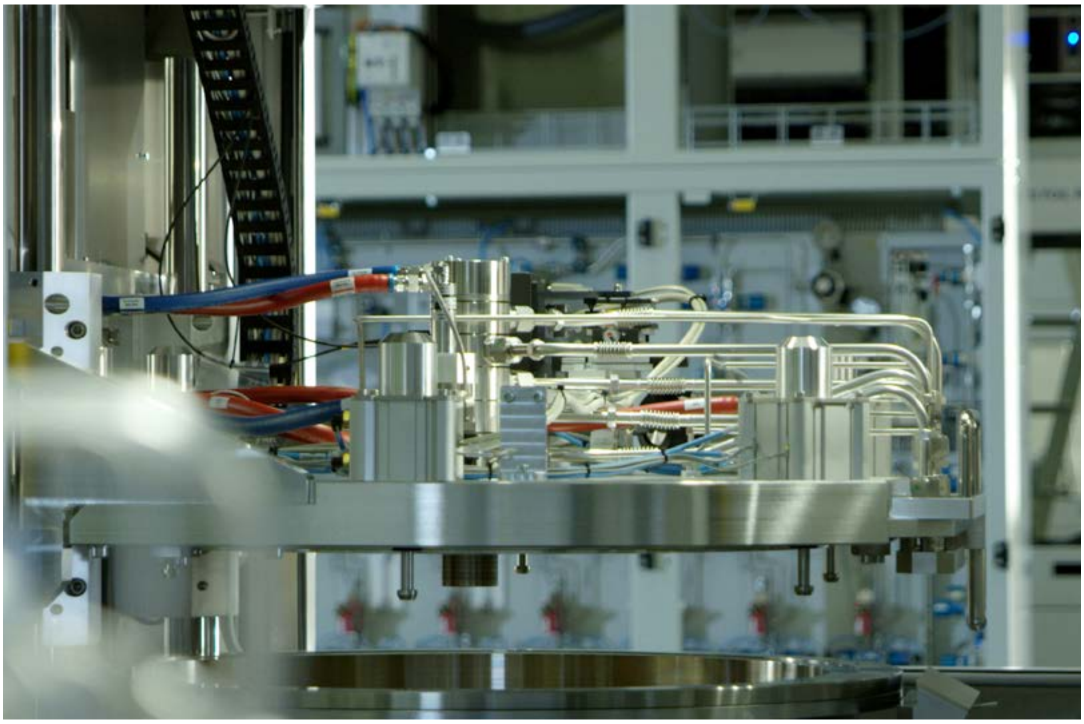
AIXTRON Share Price Development and Trading Volumes during 2020

AIXTRON stock withstands COVID-19 pandemic

The trading year 2020 was dominated worldwide by the COVID-19 pandemic, the respective containment measures and the consequences for global economic development. Towards the end of the year, the widely observed presidential election in the USA also had an increasing impact on share prices. The pandemic led to a sharp rise in demand for digital services of all kinds, with the result that particularly technology stocks continued their upward trend of recent years. However, many other share prices and indices also left their annual lows of March 2020 well behind them and in some cases even ended the trading year with price gains. This was mainly due to sustained investment pressure from the high level of liquidity in the market supported by the central banks. In addition, positive news on vaccine developments and hopes of an imminent economic recovery had a beneficial effect. Particularly on the last trading days of the year, the start of vaccinations in important countries such as the USA, the UK and also Germany once again provided a significant boost to share prices.

At the end of the year, the leading German index DAX was slightly above the previous year's level and thus in the midfield of the world's major stock exchanges. The COVID-19 shock in February and March, which caused the DAX to lose almost 40% of its value within three weeks, was followed by a recovery lasting several months, which brought the index back up to the previous year's level with major fluctuations. Investors were constantly torn between future economic hope and poor current economic conditions - this also depending on the development of the infection figures. In the second half of the year, the DAX moved mostly sideways within a comparatively narrow range. Thanks to the positive investor sentiment at the end of the year, the DAX ended the year 2020 with a slight increase of 3.5%.

The AIXTRON share price already clearly outperformed the general stock market environment at the beginning of the year, thanks to positive analyst comments and a good business outlook. However, the share could not escape the general COVID-19 crash, during which it reached its low for the year of EUR 6.26 on March 19. As our business subsequently proved to be very robust, the share price also clearly outperformed in the subsequent recovery and rose to an interim high of EUR 12.38 by July 20 in the run-up to the announcement of the results for the first half of 2020. Demand for lasers for optical data transmission as well as demand for particularly energy-efficient power electronics or specialty LEDs for display and disinfection applications were among the drivers of our order development. Although good quarterly figures, as expected, were repeatedly used for profit-taking, positive analyst comments and the successful completion of Phase II of the joint OLED project with one of the world's largest display manufacturers gave the share another significant boost at the end of the year. Thus, the share price also reached its high for the year of EUR 14.53 on December 28. Overall, the AIXTRON share price significantly outperformed the overall market, with a 67.3% gain for the year to a closing price of EUR 14.27 (2019 year-end price of EUR 8.53). In comparison, the MDAX and TecDAX indices did not improve quite as strongly until the end of 2020 with 30,796 points (+8.8% compared to 28,313 points) and 3,123 points (+6.6% compared to 3,015 points), respectively, but nonetheless enjoyed a pleasing end to this difficult trading year.



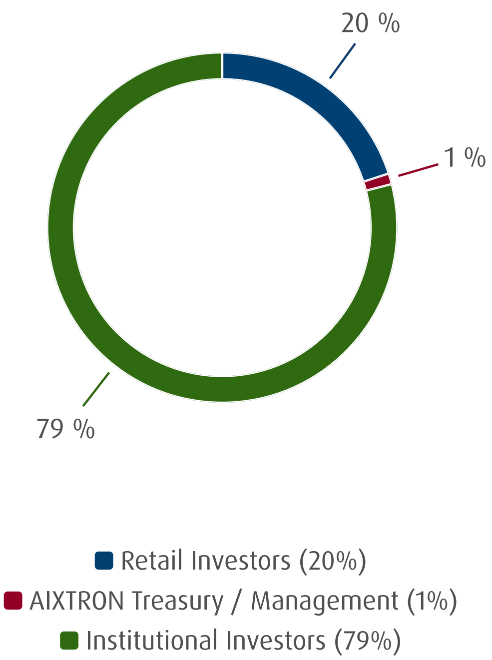
Broadly Diversified Shareholder Structure

As of December 31, 2020, approximately 20% of AIXTRON shares were held by private individuals (2019: 30%), most of whom are domiciled in Germany. Approximately 79% of AIXTRON's outstanding shares were held by institutional investors (2019: 69%). The majority of institutional investors are located in North America (34%), followed by United Kingdom and Ireland (32%) and Germany (16%). The remaining investors came from other parts of Europe and the world. At the end of 2020, the largest shareholders according to the received voting rights notifications were T. Rowe Price International, Artisan Partners and Invesco, each holding more than 5% of AIXTRON shares through their funds. 99% of the shares were in free float as defined by Deutsche Börse and approximately 1% of AIXTRON's shares were held by the Company.

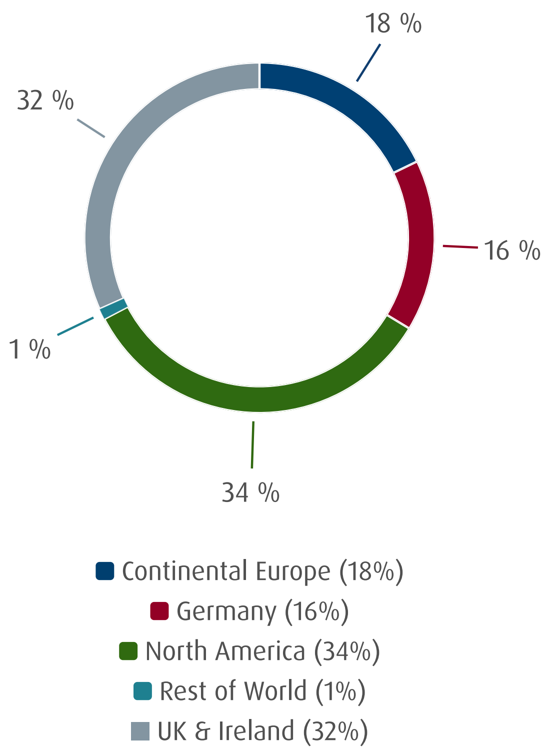
According to the voting rights notifications and public disclosures pursuant to § 33 para. 1 WpHG, the following institutional investors held shares of more than 3% in AIXTRON SE at the end of 2020:

- T. Rowe Price International Funds, Inc., Baltimore, Maryland, USA, 5.2%
- Artisan Partners Funds, Inc., Madison, Wisconsin, USA, 5.0%
- Artisan Partners Asset Management Inc., Wilmington, Delaware, USA, 5.0%
- AIM International Mutual Funds – Invesco International Mutual Funds, Wilmington, Delaware, USA, 5.0%
- Citigroup, Inc., Wilmington, Delaware, USA, 5.0%
- Ministry of Finance on behalf of the State of Norway, Oslo, Norway, 4.9%
- Baillie Gifford & Co., Edinburgh, United Kingdom, 4.9%
- Goldman Sachs Group, Inc., Wilmington, Delaware, USA, 4.4%
- Invesco Ltd., Hamilton, Bermuda, 4.3%
- BlackRock, Inc., Wilmington, Delaware, USA, 3.7%
- Argonaut Capital Partners LLP, Edinburgh, United Kingdom, 3.5%
- FIL Limited Pembroke, Bermuda, 3.2%
- DWS Investment GmbH, Frankfurt, Germany, 3.2%
- Varma Mutual Pension Insurance Company, Helsinki, Finland, 3.1%
- Fidelity Funds SICAV, Luxemburg, Luxembourg, 3.0%

Shareholder Structure



Regional Split of Free Float



Research Coverage

In fiscal year 2020, a total of eleven international banks and brokerage houses (2019: eleven) regularly published stock research reports on AIXTRON and the development of the semiconductor industry. Of the eleven financial analysts who covered our shares as of December 31, 2020, seven gave a "buy" recommendation, another two recommended to hold AIXTRON shares and two analysts rated the shares a "sell". The average target price at the end of December 2020 was EUR 12.52 (2019: EUR 10.34). Bankhaus Lampe withdrew from the equities business at the end of 2020 and, as a result, discontinued the research coverage of our share.

AIXTRON shares are currently being monitored by the following financial analysts:

Firm	Analyst	Location
Barclays Capital	Andrew Gardiner	Düsseldorf
Berenberg	Charlotte Friedrichs	London
Deutsche Bank	Uwe Schupp	London
DZ Bank	Harald Schnitzer	Frankfurt
Exane BNP Paribas	David O'Connor	Frankfurt
Independent Research	Markus Friebel	San Francisco
Liberum Capital	Janardan Menon	Frankfurt
MainFirst	Jürgen Wagner	London
Oddo BHF	Veysel Taze	Frankfurt
Warburg Research	Malte Schaumann	Frankfurt

Our Investor Relations Activities

Transparency and openness in a continuous dialogue with our shareholders and capital market participants are our claims. Our investor relations work is aimed at strengthening confidence in our shares in the long term and 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 about the AIXTRON Group's business and our market environment. In addition, AIXTRON is committed to complying with the principles of good corporate governance.

In individual or group discussions at investor roadshows and conferences our management and investor relations team answered questions from national and international investors and financial analysts on the AIXTRON Group's business strategy and development as well as industry and market trends. As a result of the COVID-19 pandemic outbreak in spring 2020, these roadshows and conferences were held exclusively virtually.

Despite the shift of all investor relations activities to virtual platforms, the AIXTRON Executive Board and Investor Relations team communicated just as intensively with the global financial communities as in the previous year, even though the personal contacts created during Company visits, investor conferences, and roadshows could not be completely replaced. In total, over 200 meetings, telephone calls and conference calls were held with financial market participants in fiscal year 2020.

Due to the COVID-19 pandemic and the associated contact restrictions, the General Meeting of AIXTRON SE also took place in virtual form for the first time on May 20, 2020. The Annual General Meeting, which was streamed completely live on the internet for shareholders, was followed online by more than 300 shareholders and interested persons. 56.9 percent of the share capital was represented. The Executive Board provided a comprehensive overview of the results for the 2019 financial year, the first quarter of 2020, and the Group's technologies, and answered the questions submitted by shareholders in advance of the Annual General Meeting.

CORPORATE GOVERNANCE

Declaration of Corporate Governance

AIXTRON is committed to the principles of transparent, 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 underpin the trust placed in us by our shareholders, the financial markets, our customers, business partners, employees and the general public. We are convinced that good corporate governance is an essential basis for the success of our Company.

The declaration of corporate governance in accordance with the German Commercial Code (HGB) as well as the current joint declaration of conformity by the Executive Board and the Supervisory Board in accordance with § 161 of the German Stock Corporation Act (AktG) are published in the Annual Report and on the AIXTRON website in German and English language.

Declaration of Conformity

The German Corporate Governance Code was revised on December 16, 2019 and became the basis for the Declaration of Conformity upon publication in the Federal Gazette on March 20, 2020 ("DCGK 2020"). The Executive Board and the Supervisory Board of AIXTRON SE declare that AIXTRON SE has complied with the recommendations of the DCGK 2020 and will continue to comply with them in the future, in each case with the following exception:

Consideration for the Chairmanship and Deputy Chairmanship of the Supervisory Board as well as the Chairmanship and Membership of Committees in Supervisory Board Compensation (G.17 DCGK 2020)

According to G.17 DCGK 2020, Supervisory Board compensation shall take into account the Chair and Deputy Chair of the Supervisory Board as well as the Chair and membership of committees. The Supervisory Board compensation resolved by the Annual General Meeting on May 16, 2018 only takes into account the chairmanship and deputy chairmanship of the Supervisory Board and the chairmanship of the Audit Committee in addition to membership of the Supervisory Board. Further consideration of the deputy chairmanship of the Audit Committee and a chairmanship and deputy chairmanship of the other committees is not considered appropriate, as the time and effort involved in these activities is already adequately covered by the Supervisory Board compensation.

Furthermore, the Executive Board and the Supervisory Board of AIXTRON SE declare that AIXTRON SE has complied with the recommendations of the version of the German Corporate

Governance Code dated February 7, 2017 (**"DCGK 2017"**) applicable until March 20, 2020, with the following exceptions (in addition to the deviation from recommendation No. 5.4.6 para. 1 sentence 2 DCGK 2017 already described above, which corresponds to recommendation G.17 DCGK 2020):

Composition of the Executive Board (4.2.1 Sentence 1 DCGK 2017)

According to Section 4.2.1 Sentence 1 of the DCGK 2017 recommends that the Executive Board should consist of several persons and have a chairman or spokesman. The Executive Board of AIXTRON SE consisted of two persons in the past fiscal year until September 30, 2020, and was expanded by one person as of October 1, 2020. A chairman or spokesman of the board was not appointed for the fiscal year 2020. In the course of the expansion of the Executive Board, the Supervisory Board has appointed Dr. Grawert as Chairman of the Executive Board with effect from April 1, 2021.

Maximum limits for Executive Board remuneration (4.2.3 para. 2 Sentence 6 DCGK 2017)

According to Section 4.2.3 para. 2 sentence 6 DCGK 2017, the remuneration of the members of the Executive Board as a whole and with regard to its variable remuneration components should have maximum limits in terms of amounts. The total remuneration of the members of the Executive Board of AIXTRON SE under the previous remuneration system, which was still applicable in the period relevant here until March 20, 2020, includes both a fixed remuneration and various variable remuneration components. Accordingly, the variable remuneration is limited with regard to the variable bonus for the entire Executive Board to a maximum of EUR 6.5 million, whereby in the case of the commitment to shares the point in time of the commitment is decisive, i. e. any increases in value of the shares after their transfer to the Executive Board member are possible in excess of the aforementioned maximum limit.

The current remuneration system, which applies to Executive Board contracts signed after March 20, 2020, provides for maximum limits in terms of amount.

Standard limit for length of service on the Supervisory Board and age limit for Supervisory Board members (5.4.1 para. 2 Sentence 2 DCGK 2017)

According to Section 5.4.1 (2) Sentence 2 DCGK 2017, the Supervisory Board shall specify concrete objectives for its composition which, with due regard to the Company-specific situation, shall take into account, among other things, a standard limit to be specified for the length of membership of the Supervisory Board. An optimum length of membership is difficult to define and the Supervisory Board considers it advantageous to retain the experience and knowledge currently available on the Board. This includes, for example, many years of knowledge of the Company and the niche markets addressed by the Company as well as comprehensive knowledge of capital market and financially relevant issues of a globally positioned Group. The Supervisory Board has therefore not set a regular limit for the length of membership of the Supervisory Board in the relevant period.

Herzogenrath, February 22, 2021
AIXTRON SE

The Executive Board of AIXTRON SE

Dr. Jochen Linck **Dr. Bernd Schulte** **Dr. Felix Grawert**

For the Supervisory Board of AIXTRON SE

Kim Schindelhauer
Chairman of the Supervisory Board

Information on Corporate Governance Practices

Compliance Management

Since 2006, AIXTRON SE has had a **Code of Ethics** for Executive Board members and certain managers in finance. The aim of this Code is to promote upright and ethical conduct, including the ethical handling of conflicts of interest, the complete, fair, precise, timely and transparent disclosure of quarterly and annual reports, compliance with prevailing laws, rules and regulations and the immediate internal reporting of breaches of the Code where necessary and to ensure accountability for compliance with the Code. The complete text of the Code can be found on the AIXTRON website under "Code of Ethics" in the Investors/Corporate Governance section.

In addition, a **Compliance Code of Conduct** applies to the Executive and Supervisory Boards, to the senior management team as well as all to employees Group-wide, holding them accountable for conscientious 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, legal and ethical conduct by 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, security in all operating areas, working in a professional manner, 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 texts of the Compliance Code of Conduct can be downloaded from the AIXTRON website in the Investors/Corporate Governance section under "Code of Conduct".

Furthermore, AIXTRON issued a Group-wide **Compliance Manual** in 2010 which applies to all members of the Executive and Supervisory Boards as well as senior management and which is based on the principles of the Compliance Code of Conduct. The Compliance Manual provides detailed explanations on the compliance organization at AIXTRON, the legal and regulatory requirements and on the resulting conduct requirements applicable to the Executive Board, Supervisory Board, senior management and employees. This Compliance Manual is regularly updated to reflect new/amended legal and regulatory requirements as well as Company internal specifications, most recently in January 2021. The teaching of the contents is an elementary component of the Company-wide compliance training offer. Compliance training is mandatory for members of the senior management team as well as for all other employees of the Group. This is controlled and monitored by our Compliance Office.

In addition, every quarter, the Group-wide members of the senior management as well as select key staff members 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 and follow and communicate its contents within their area of responsibility. In addition, management principles were defined for the Company's senior managers which include what is required of senior managers when dealing with employees.

AIXTRON has a **whistleblower system**. 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/body will work out proposed solutions with the aim of a prompt remedy, including any necessary sanctions and improvements to the management and monitoring processes. Any reports or indication received will be treated discreetly, confidentially and anonymously by the persons/bodies involved. AIXTRON will not impose any reprisals against employees who report violations.

Furthermore, AIXTRON has established a **Vendor Code of Conduct**, which defines ethical, moral and legal standards related 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 U.S. rules regarding the use of conflict minerals, the expectations placed on suppliers and the consequences in the event of non-compliance.

The full text of the Vendor Code of Conduct can be accessed on the AIXTRON website in the Company/Suppliers/Compliance section or in the Supplier Management section respectively.

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 dual management and control 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 oversees and advises the Executive Board in its management duties. To perform certain transactions and measures specified in the Articles of Association of AIXTRON SE or the Executive Board's Rules of Procedure, 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 Rules of Procedure. 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.

As in previous years, the Executive Board and the Supervisory Board worked closely together throughout 2020 for the benefit of the Company. The shared objective is to secure 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 established four committees, an Audit Committee, a Nomination Committee, a Capital Market Committee and a Remuneration Committee (since September 2019). 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 Gersbacher, has expertise in the areas of accounting and auditing (§ 107 para. 4, § 100 para. 5 AktG) and special knowledge and experience in the application of internal control procedures. 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 monitoring of accounting, the accounting process, corporate governance & compliance, the effectiveness of the internal control system, the risk management system, the internal audit system and the audit of the financial statements. Furthermore, the Audit Committee submits to the full Supervisory Board a reasoned recommendation for the appointment of the auditor. It 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 committee chairwoman, Prof. Dr. Anna Gersbacher, reports regularly to the Supervisory Board on the work of the Audit Committee.

The Nomination Committee, which consists of three members of the Supervisory Board, makes election 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.

For the purpose of evaluating, supporting and implementing projects with capital market relevance, a Capital Market Committee has existed since 2014, consisting of two members, the Chairman of the Supervisory Board and another member elected from among the Supervisory Board members.

In addition, a Remuneration Committee was established, consisting of Chairman Kim Schindelhauer and two other members of the Supervisory Board, which deals with the application of the new remuneration system in accordance with the revised DCGK.

Further details on the work of the Executive Board, Supervisory Board and committees during fiscal year 2020 can be found in the Report of the Supervisory Board, which is part of the Annual Report and can be downloaded from the AIXTRON website. Full details of 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, AIXTRON SE's Executive Board is comprised of three members who jointly manage the business as equal members of the Executive Board:

Executive Board

(as of December 31, 2020)

Name	Position	Since	End of Term
Dr. Felix Grawert	President	August 14, 2017	August 13, 2025
Dr. Bernd Schulte	President	April 1, 2002	March 31, 2021
Dr. Jochen Linck	President	October 1, 2020	September 30, 2023

The appointment of Executive Board member Dr. Bernd Schulte will regularly expire at the end of March 31, 2021. At his own request, Dr. Bernd Schulte is no longer available for further appointment. On December 21, 2020, the Supervisory Board appointed Dr. Christian Danninger as a new member of the Executive Board in the function of Chief Financial Officer (CFO) with effect from July 1, 2021 or earlier. The appointment was made for three years.

Furthermore, the Supervisory Board appointed Executive Board member Dr. Felix Grawert as Chairman of the Executive Board effective April 1, 2021.

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 are as follows in accordance with the currently valid **business distribution plan** as of October 1, 2020:

Within the AIXTRON GROUP, **Executive Board member Dr. Grawert** is responsible for Strategic Planning, Marketing, Sales, Customer Service, Human Resources, Finance and Reporting.

Within the Group, **Executive Board member Dr. Schulte** is responsible for Research and Development, Investor Relations & Communications, Corporate Governance, Environment, Social Affairs and Corporate Governance, Compliance & Risk Management, Legal Affairs, and until September 31, 2020, Information Technology, Procurement, Quality Management, Manufacturing, Logistics and Facility Management. Following the resignation of Dr. Schulte, the areas not covered by Dr. Linck will initially be taken over by Dr. Grawert.

Since October 1, 2020, **Executive Board member Dr. Linck** has been responsible within the Group for Procurement, Product Cost Management, Manufacturing and Logistics, Quality Management, IT, Facility Management and - since February 1, 2021 - 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 the Company's activities; 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 to the public outside the regular publicity; 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 discontinuation of business activities or the granting or taking out of loans.

In accordance with the Rules of Procedure, meetings of the Executive Board take place at least twice a month and when the well-being of the Company so requires. Meetings of the Executive Board are convened and chaired by the Executive Board. Each member of the Executive Board can arrange an additional meeting on a specific topic at any time. The Executive Board constitutes a quorum if all members have been invited and more than half of its members are present at the time the resolution is adopted, whereby members of the Executive Board connected by telephone or video conference are deemed to be present. Unless otherwise provided by law, the Articles of Association or the Rules of Procedure, the Executive Board shall decide by a simple majority of the votes cast. In the case of a Board of Management consisting of two members, the Chairman of the Supervisory Board had to be consulted and asked for mediation in the event of a tie.

Each member of the Executive Board will disclose 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 global Company operating in a very dynamic and technologically demanding market environment. Therefore, it is of strategic importance for AIXTRON to have a competent Executive Board and to appoint suitable candidates to the Executive Board. After the complete change of generation in the Executive Board, the Supervisory Board will also pursue a long-term succession planning. As part of the succession planning, the Supervisory Board and the Executive Board will also discuss suitable internal candidates to be appointed to the Executive Board. The age limit for the Executive Board is 65 years 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 five members. The members of the Supervisory Board are generally appointed until the end of the Annual General Meeting in which the shareholders represented ratify 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 Supervisory Board elects a Chairman and a Deputy Chairman from among its members. The Supervisory Board Chairman or – if he is unable to do so – his Deputy convenes and conducts the Supervisory Board meetings.

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 fiscal year 2020. In 2019, the wording of the transactions requiring approval in the Rules of Procedure was adapted to the wording of the Articles of Association. 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.

In order to enable gradual personnel changes in the Supervisory Board, the election periods were no longer set uniformly for the Board as a whole when the Supervisory Board was voted in at the Annual General Meeting in May 2016, but instead with differing terms. The term of office of the Supervisory Board members therefore expires at the end of the Annual General Meeting up to the end of which the respective individual was elected.

Currently, the composition of the Supervisory Board in accordance with the Articles of Association and as determined by the General Meeting is as follows:

Composition of the Supervisory Board

(as of December 31, 2020)

Name	Position	Since	End of Term
Kim Schindelhauer[1)2)3)4)5)]	Chairman of the Supervisory Board Chairman of the Remuneration Committee	2002	AGM 2022
Prof. Dr. Anna Gersbacher[1)]	Chairwoman of the Audit Committee, independent financial expert	2019	AGM 2024
Prof. Dr. Andreas Biagosch[1)4)]		2013	AGM 2021
Prof. Dr. Petra Denk[2)3)]		2011	AGM 2021
Frits van Hout[2)3)]	Deputy chairman of the Supervisory Board	2019	AGM 2024

1) Member of the Audit Committee

2) Member of the Remuneration Committee

3) Member of the Nomination Committee

4) Member of the Capital Market Committee

5) Former AIXTRON Executive Board member

Composition of Committees

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

Both Prof. Dr. Denk and Prof. Dr. Biagosch will apply for re-election to the Supervisory Board at the 2021 Annual General Meeting.

Independence of Supervisory Board Members

The Supervisory Board shall include what it considers to be a sufficient number of independent members. A Supervisory Board member shall be deemed independent if he or she is independent of the Company and its Executive Board and independent of a controlling shareholder (Recommendation C.6 para. 2 DCGK 2020). Pursuant to Recommendation C.7 (1) Sentence 2 DCGK 2020, a Supervisory Board member shall be deemed independent if he or she has no personal or business relationship with the Company or the Executive Board that could give rise to a material conflict of interest that is not merely temporary. The Supervisory Board has set itself the goal that at least half of its members must be independent. Since all members of the Supervisory Board, which consists exclusively of elected shareholder representatives, are to be regarded as independent this objective is also met. The independent members of the Supervisory Board are not named separately here, as the list would include the entire Supervisory Board (see table of Supervisory Board members).

With Mr. Schindelhauer, the Supervisory Board includes one former member of the Executive Board whose term of office as a member of the Executive Board, however, dates back more than two years (refer also to C.7 DCGK 2020). In particular, the Supervisory Board thus includes no more than two former members of the Executive Board (recommendation C.11 DCGK 2020).

In the run-up to the Supervisory Board meeting on December 11, 2020, the members of the Supervisory Board received the self-evaluation questionnaire prepared annually by the Chairman of the Supervisory Board. After evaluation of the questionnaire, it was determined that the Supervisory Board performs its activities efficiently in accordance with recommendation D.13 of the DCGK 2020.

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 34 "Supervisory Board and Management Board".

The Company did not enter into or carry out any material transactions with any related parties in the 2020 fiscal year.

The Audit Committee is chaired by an independent and knowledgeable member of the Supervisory Board in accordance with recommendation D.4 of the DCGK 2020. This is not the Chairman of the Supervisory Board.

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

The Executive Board reports in writing and orally on the individual agenda items and draft resolutions of the Supervisory Board meetings and answers the questions of the 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.

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 shall each constitute a quorum if two thirds of its 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 these 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. Material and not only temporary conflicts of interest in the person of a member of the Supervisory Board result in that person having to resign from office.

Self-evaluation of the Supervisory Board

In fiscal year 2020, the Supervisory Board conducted an internal self-evaluation based on a questionnaire, taking into account AIXTRON-specific topics. The results were discussed by the Supervisory Board and confirmed that the 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 efficient in their work. Hence there is no fundamental need for change.

Information on the equal representation of men and women as per § 76 para. 4 and § 111 para. 5 AktG

Pursuant to §§ 76 para. 4 and 111 para. 5 of the German Stock Corporation Act (AktG), the Supervisory boards and Executive Boards of companies that are listed on the stock exchange or subject to co-determination must set target figures for the proportion of women on the Supervisory Boards, Executive Boards and the two management levels below the Executive Board. The DCGK reflects these regulations in principle 9 sentence 2 DCGK 2020 for the Executive Board and in recommendation C.1 sentence 2 DCGK 2020 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 qualification of all employees. In particular, due to the continuing low proportion of women in technical courses of study, the availability of qualified female applicants is very limited.

The **Supervisory Board** of AIXTRON SE had set the following **target figures for the proportion of women** to be reached by **31 December 2021**:

Level	Target per 31.12.2021	Women's quota as of 31.12.2020	Determined by
Supervisory Board	16,7%	40%	Supervisory Board
Executive Board	0%	0%	Supervisory Board

Since the initial determination of the target figures for achievement by December 31, 2021, the Supervisory Board of AIXTRON SE has been reduced from six to five members. The five-member Supervisory Board includes two women, bringing the proportion of female Supervisory Board members to 40%.

The **Executive Board** of AIXTRON SE has set itself the goal of specifically promoting women in the Company. In line with this, 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	New target per 31.12.2025	Former target per 31.12.2021	Women's quota as of 31.12.2020	Determined by
1. tier management	10%	3%	4%	Executive Board
2. tier management	20%	17%	17%	Executive Board

The target figure for the Executive Board corresponded to the current status at the time of resolution. The proportion of women at the first tier below the Executive Board was 4% as of December 31, 2020 (applicable target as of December 31, 2020: 3%) and 17% at the second tier below the Executive Board (applicable target as of December 31, 2020: 13%).

The Company has therefore achieved the targets set.

Diversity concept for the Executive Board and Supervisory Board; targets for the composition of the Supervisory Board and status of implementation

Executive Board

As provided for by the DCGK 2020, AIXTRON has addressed diversity objectives ("diversity") in corporate governance (recommendations B.1 and C.1).

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

In addition to the above-mentioned characteristics, 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. International experience is an advantage against the background of the Company's international orientation.

In its search for suitable candidates for vacant positions on the Executive Board, the Supervisory Board took the diversity concept into account and, as part of this, also considered female candidates. The Supervisory Board appointed Dr. Linck and Dr. Danninger as members of the Executive Board in each case after weighing up the interests of the Company. Based on the structure now in place, no changes in the composition are planned, so the target for the proportion of women on the Board of Management valid until December 31, 2021 has consequently been set at 0% percent.

Supervisory Board

The Supervisory Board has set the target for the proportion of women on the Supervisory Board at 16.7% and the deadline for achieving this target on December 31, 2021. With Prof. Dr. Petra Denk and Prof. Dr. Anna Gersbacher, two of the five members of the Supervisory Board are women currently (40%).

The targets for the compositions 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 Boards should be elected for the longest period of time permitted by the statutes.
- AIXTRON is strongly export-oriented. Experience in AIXTRON's specific global electronics and semiconductor markets is therefore a great advantage.
- As a general rule, an age limit of 70 years 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 corporate areas of business administration, accounting, auditing, corporate development, capital market, technology, equipment business, markets/distribution, 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, which is reflected in the current proportion of women on the Supervisory Board of 40%.
- 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.
- At least 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 directorships or similar positions or advisory tasks for important competitors of the enterprise.
- The Supervisory Board must have at least one member who is independent in accordance with the recommendations of the DCGK 2020 and who has expertise in the areas of accounting, internal control procedures and auditing. This member of the Supervisory Board is then also a member of the Audit Committee.
- Due to the increased demands on the professionalization of the Supervisory Board and in order to simultaneously ensure the greatest possible efficiency of the Supervisory Board's activities as in previous years, new Supervisory Board members should not hold more than five mandates in other listed companies or other companies if they have comparable requirements.

In addition to the goals set for its composition, the Supervisory Board has also drawn up a competence profile for the entire Board. In view of AIXTRON's business activities and the markets addressed by the Company, the Supervisory Board shall have competencies in the areas of technology, finance/accounting, capital markets, strategy and corporate governance. 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 DCGK 2020) is taken into account, among other things, as a result of the diverse competencies 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 competence profile as well as with the requirement of the DCGK for appropriate diversity and an appropriate number of independent Supervisory Board members.

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 in accordance with principle 25 DCGK 2020 and on the remuneration of the members of the Supervisory Board as well as an exact list of the outstanding Board stock options can be found in the remuneration report as part of the Group's consolidated management report.

The new remuneration system approved by the 2020 Annual General Meeting pursuant to § 87a (1) and (2) sentence 1 AktG has been made publicly available on the Company's website at https://www.aixtron.com/en/investors/corporate-governance/remuneration-policy. In accordance with the transitional provisions of § 26j (1) and (2) of the Introductory Act to the Stock Corporation Act (EGAktG), there is currently no remuneration report on the last financial year prepared in accordance with § 162 AktG, nor is there a resolution on remuneration by the Annual General Meeting in accordance with § 113 (3) AktG. In accordance with §§ 289a (2), 285 No. 9 of the German Commercial Code (HGB) in the version applicable pursuant to Art. 83 (1) of the Introductory Act to the German Commercial Code (EGHGB), the compensation of the members of the Executive Board is described in the remuneration report in accordance with the provisions of the German Commercial Code as part of the Group management report.

Shareholders and Annual General Meeting

In the 2020 fiscal year, the Annual General Meeting was held in completely virtual form for the first time on May 20, 2020, 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 from the time the General Meeting was convened. Immediately after the Annual General Meeting, AIXTRON published the attendance and voting results in a press release and on its website.

Five out of six agenda items were put to the vote. All resolutions were passed with clear majorities, with almost 57% of AIXTRON's share capital represented at the AGM.

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 Group Management Report and the Supervisory Board Report, including also the Financial Statements and the Management Report of AIXTRON SE
- The Non-financial Group Report (Sustainability Report)
- Interim financial reports
- Quarterly conference calls for the press and analysts and respective transcripts
- Company presentations

- Publication of insider information, as well as Company and press statements.

The date of the Annual General Meeting or the publication dates of the financial reports are summarized in the Company's financial calendar on the AIXTRON website in the section Investors/events and dates. This calendar, as well as the reports, speech manuscripts, presentations, webcasts, and announcements listed above, can be freely viewed on the AIXTRON website for a certain period of time.

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, 2020 were prepared in accordance with the International Financial Reporting Standards - IFRS. The separate financial statements of AIXTRON SE for fiscal year 2020 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 individual financial statements of AIXTRON SE were audited by the auditor and approved by the Supervisory Board. It was agreed with the auditors that the Chairman of the Supervisory Board or the Chairman 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

AIXTRON SE has introduced a new Executive Board remuneration system ("new remuneration system"), which was approved by the Annual General Meeting on May 20, 2020. This system is applicable to all contracts concluded with members of the Company's Executive Board subsequent to May 20, 2020. In parallel to the new remuneration system, the former remuneration system approved by the Annual General Meeting on May 16, 2018 continues to apply to existing contracts with members of the Executive Board ("former remuneration system"). This means that two remuneration systems were applied in the 2020 year under report. The following remuneration report sets out the principles underlying these remuneration systems for the Executive and Supervisory Boards of AIXTRON SE as applicable in the 2020 year under report and explains the structure and amount of remuneration. The description of the former remuneration system has been limited to those elements which were applied in fiscal year 2020. Furthermore, the remuneration report also includes individualized disclosures on the remuneration of individual members of the Executive and Supervisory Boards. The remuneration report also includes disclosures made in accordance with the requirements of the German Commercial Code (HGB) and of International

Financial Reporting Standards (IFRS), as well as select disclosures already provided on a voluntarily basis in accordance with the material requirements of the German Act on the Transposition of the Second Shareholder Rights Directive (Gesetz zur Umsetzung der zweiten Aktionärsrechterichtlinie, ARUG II).

Principles of former remuneration system (Application to former Executive Board contracts)

The former remuneration system for members of the Executive Board of AIXTRON SE is aligned not only with the commercial and financial situation and future prospects of the Company and the customary level and structure of Executive Board remuneration at comparable companies but also with the remuneration structure in place in other areas of the Company. In addition, the responsibilities, experience and contribution of each individual Executive Board member, and the long-term commitment to the Company, are taken into account when calculating the remuneration.

Executive Board remuneration consists of three components: fixed remuneration (including benefits in kind and payments into a private pension insurance), variable remuneration, and share-based remuneration.

Scope of application in 2020

In fiscal year 2020, the former remuneration system was applied to former Executive Board contracts as follows:

- Dr. Bernd Schulte: from January 1, 2020 to December 31, 2020
- Dr. Felix Grawert: from January 1, 2020 to August 13, 2020.

Fixed remuneration in former remuneration system

The Executive Board employment contracts stipulate an annual income for the fixed remuneration component. The fixed remuneration component is non-performance-related and is paid out as a monthly salary. Additional payments in kind are provided, mainly in the form of Company car usage and payments for individual private pension insurance.

Variable remuneration in former remuneration system

The limited variable remuneration scheme for the collective Executive Board (profit-sharing) is based on consolidated net income for the year and is paid from an "accrued internal bonus pool", defined as up to 10% of the consolidated net income for the year, but not to exceed EUR 6.5 million in total. The consolidated net income for the year is obtained from the Company's consolidated financial statements (IFRS) certified by the auditor.

The variable remuneration per member of the Executive Board – paid out of the above mentioned “accrued internal bonus pool” – amounts to 2.5% of the Group’s net income per board member and is paid half in cash and half in stocks. The portion of the variable bonus that is payable in stocks is converted into whole numbers of stocks of the Company and deferred to the third bank working day after the Annual General Meeting in the third fiscal year after being granted to the Board members. The number of stocks to be granted for the part of the variable bonus payable in stocks is determined by reference to the closing price of the Company’s stock on the third banking day after the Annual General Meeting to which the annual and consolidated financial statements are presented for the fiscal year for which the bonus is granted. The stocks are serviced from treasury stocks. During the multiyear qualifying period, the Executive Board members participate in both positive and negative developments in the stock price. This means the variable remuneration structure is clearly aligned to sustainable Company performance.

Share-based remuneration in former remuneration system

In addition, as a variable component with a long-term incentive effect and risk character, Executive Board members may receive share-based remuneration in the form of option rights granted under AIXTRON’s stock option plans or of AIXTRON stocks. Under a historic contract, Dr. Grawert thus receives stocks in the Company worth EUR 50,000 per fiscal year. The number of shares is determined on the basis of the closing price of the Company’s share on the third banking day after the Annual General Meeting to which the annual and consolidated financial statements are presented for the corresponding fiscal year. No stock options were granted in fiscal year 2020. Details of the outstanding Executive Board options and of their allocation to individual stock option plans and tranches can be found below in the section “Remuneration of Executive Board members in fiscal year 2020”.

Other aspects of former remuneration system

The former remuneration system does not provide any individual pension commitments for the current Executive Board members. In view of this, no provisions for pensions have been stated. Executive Board members also do not receive any loans from the Company.

Principles of new remuneration system (Application to new Executive Board contracts)

The new remuneration system was introduced at AIXTRON SE following the approval provided by the Annual General Meeting on May 20, 2020. It takes into account selected requirements of the German Act on the Transposition of the Second Shareholder Rights Directive (Gesetz zur Umsetzung der zweiten Aktionärsrechterichtlinie, (ARUG II)) and is aligned to the recommendations made in the new version of the German Corporate Governance Code taking effect on March 20, 2020 (DCGK 2020).

Scope of application in 2020

The new remuneration system was applied to new Executive Board employment contracts in fiscal year 2020 as follows:

- Dr. Felix Grawert: from August 14, 2020 to December 31, 2020
- Dr. Jochen Linck: from October 1, 2020 to December 31, 2020.

Principles of new remuneration system

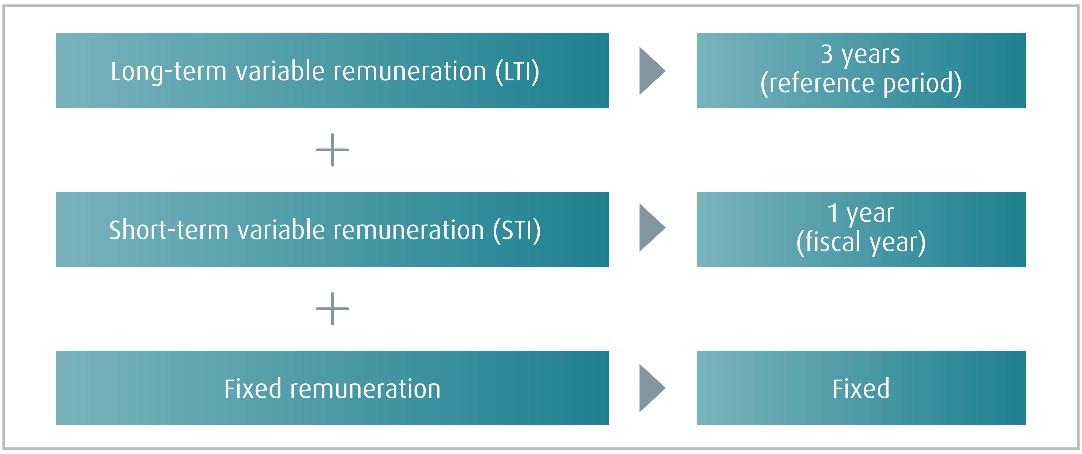
Executive Board remuneration at AIXTRON SE is structured in a way that creates incentives for the sustainable, long-term development of the Company and for the long-term commitment of Executive Board members.

The Supervisory Board sets the specific remuneration for each Executive Board member on the basis of the remuneration system. To the extent legally permissible, the Supervisory Board seeks to offer Executive Board members remuneration that is both in line with the market and competitive, also in order to be able to recruit outstanding individuals to AIXTRON SE and gain their long-term commitment.

Based on the remuneration system, the Supervisory Board sets target total remuneration for each individual Executive Board member for the forthcoming fiscal year. This 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 the provision of a Company car, allowances for individual private pensions, and the assumption of costs for other insurance policies.

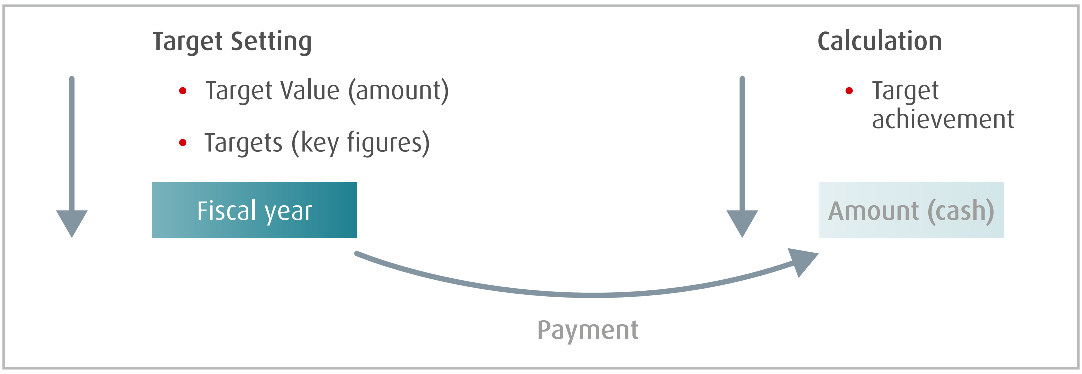
Variable remuneration is tied to the performance of the AIXTRON Group and consists of short-term variable remuneration (STI) and long-term variable remuneration (LTI). The amount of both components depends on the achievement of financial and non-financial performance indicators.

Short-term performance-related variable remuneration (STI) in new remuneration system

The short-term performance-related remuneration, also referred to as the **short-term incentive (STI)**, is geared to the performance of the AIXTRON Group in the given fiscal year and is paid out in full in cash.

The STI is determined using the indicators consolidated net income for the year, the market position of the AIXTRON Group, as well as financial and operational targets. In this regard, the relative weighting amounts to 70% for consolidated net income for the year, 15% for market position, and 15% for financial and operational targets.

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 target STI 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.

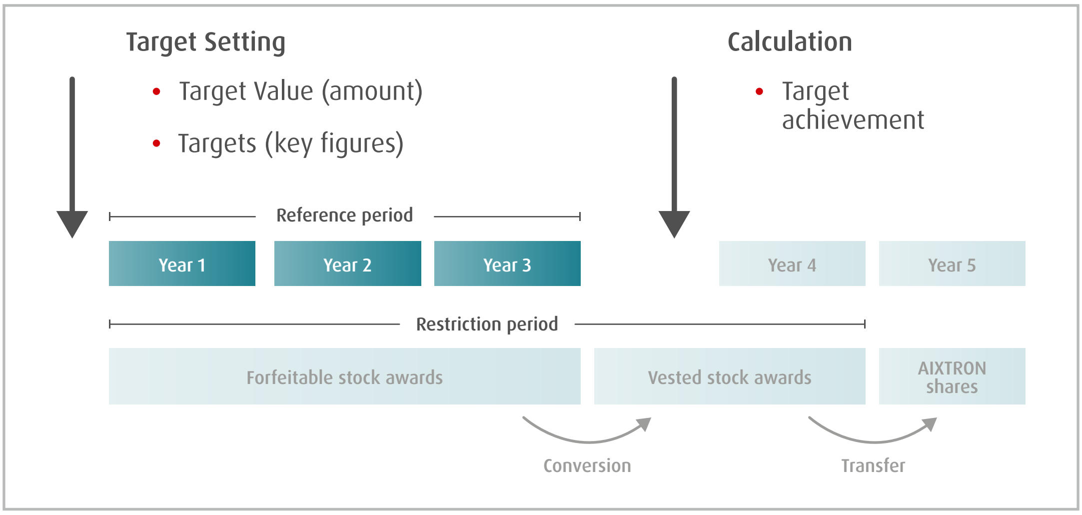
STI **target achievement** is determined after the expiry of the fiscal year. This is capped at a maximum of 250% target achievement. No STI is paid if the consolidated net income for the year is negative, i.e. in years in which the Company posts a loss. STI is paid out in cash after the Supervisory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

Long-term performance-related variable remuneration (LTI) in new remuneration system

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 that the aggregate consolidated net incomes for must achieve 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 good 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 achievements, 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 in new remuneration system

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 AIXTRON SE, Executive Board remuneration is limited by setting **maximum remuneration** and a **remuneration cap**.

Maximum remuneration (expenditure cap), i.e. the total remuneration owed to the Executive Board for a fiscal year, 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 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, such as at subsidiaries.

Further provisions governing new remuneration system

To ensure that the interests of the Executive Board are aligned with those of shareholders, the Company has a **stockholding 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 provision, 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.

A detailed description of the new Executive Board remuneration system adopted by the Annual General Meeting on May 20, 2020 can be found on AIXTRON's website at https://www.aixtron.com/en/investors/corporate-governance/remuneration-policy.

Comparison of remuneration in new remuneration system

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, Lam Research, ASML, and ASMI, as well as to those companies listed in the TecDAX that have market capitalizations between 50% and 200% of that at AIXTRON SE.

For the internal comparison, the Supervisory Board defines the senior management level as the ten senior managers whose remuneration is not tied to collective bargaining agreements and who have the greatest managerial responsibility and decision-making powers.

Reporting in new remuneration system

The Executive Board and the Supervisory Board prepare a remuneration report each year in accordance with statutory provisions. The remuneration report for fiscal year 2020 already includes select disclosures that are provided on a voluntary basis in accordance with the material requirements of the German Act on the Transposition of the Second Shareholder Rights Directive (ARUG II). A remuneration report consistent with the requirements of stock corporation law pursuant to § 162 AktG as amended by ARUG II will be published for the first time for fiscal year 2021. In this, the Supervisory Board will explain which performance criteria were applied and how the amounts of the respective variable remuneration components are calculated.

Remuneration reports for previous fiscal years each contain an outlook on application of the remuneration system in the respective current fiscal year. The outlook provides advance information about the selection of financial performance criteria. By contrast, non-financial performance criteria and the specific targets set for financial indicators are only explained once the periods relevant for STI and/or LTI have expired. This avoids the premature disclosure of any strategic projects with a bearing on competition.

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.

No benefits in excess of this severance payment are 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 2020

Executive Board remuneration

The following section describes the specific application of the remuneration system for members of the Executive Board of AIXTRON SE in fiscal year 2020. It includes details and background information about the total remuneration of the Executive Board, the setting and achievement of targets for variable remuneration, and individualized disclosures on the remuneration of individual Executive Board members for fiscal year 2020.

Total remuneration for fiscal year 2020

Total Executive Board remuneration for fiscal year amounted to EUR 2,956,429 (2019: EUR 2,459,339; 2018: EUR 3,133,032). The non-performance-related fixed remuneration of the Executive Board for fiscal year 2020, comprising base remuneration, allowances for pension schemes, and benefits in kind, amounted to a total of EUR 911,530 (2019: EUR 785,469; 2018: EUR 789,932).

Base remuneration for fiscal year 2020

Base remuneration comprised the following amounts in fiscal year 2020:

- for Dr. Felix Grawert: EUR 343,000
- for Dr. Bernd Schulte: EUR 390,000
- for Dr. Jochen Linck: EUR 75,000 (October 1, 2020 – December 31, 2020)

Pension allowances for fiscal year 2020

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 2020:

- for Dr. Felix Grawert: EUR 30,000
- for Dr. Bernd Schulte: EUR 40,000
- for Dr. Jochen Linck: EUR 7,500 (October 1, 2020 – December 31, 2020)

Variable remuneration for fiscal year 2020 under former remuneration system

The former remuneration system was applied in fiscal year 2020 to determine the variable remuneration payable to Dr. Felix Grawert from January 1, 2020 to August 13, 2020 and to Dr. Bernd Schulte from January 1, 2020 to December 31, 2020. Variable remuneration under the former remuneration system amounts to 2.5% of consolidated net income for the year per Executive Board member and is paid out on a prorated basis, with half being paid in cash and half in shares. Under the former remuneration system, this resulted in the following variable remuneration for fiscal year 2020:

- for Dr. Felix Grawert: EUR 267,000 in cash and EUR 267,000 to be granted in shares,
- for Dr. Bernd Schulte: EUR 431,000 in cash and EUR 431,000 to be granted in shares.

Furthermore, under his former contract Dr. Felix Grawert received AIXTRON shares worth EUR 50,000 per full fiscal year. On a prorated basis for the period from January 1, 2020 to August 13, 2020, this resulted in the following claim:

- for Dr. Felix Grawert: EUR 31,000 to be granted in shares.

Short-term variable remuneration (STI) for fiscal year 2020 under new remuneration system

In fiscal year 2020, the new remuneration system was applied to determine the short-term variable remuneration for Dr. Felix Grawert from August 14, 2020 to December 31, 2020 and for Dr. Jochen Linck from October 1, 2020 to December 31, 2020.

Target dimension “consolidated net income for the year”

In December 2019, the Supervisory Board set a target value of EUR 19,000 for the consolidated net income for 2020. The actual figure of EUR 34,470k results in a target achievement of 181%.

Target dimension “market position”

For the “market position” target position, the Supervisory Board set targets in respect of existing markets and of growth markets which the Company should penetrate for the first time. Strong sales performance in existing markets and success in growth markets resulted in a target achievement of 162%.

Target dimension “financial and operational targets”

The “financial and operational targets” target dimension was determined by setting performance criteria in the OLED business and further strategic objectives. Target achievement in this area amounted to 11% in the past fiscal year.

Based on the target achievement in these three target dimensions, short-term variable remuneration (STI) under the new remuneration system can be calculated as follows for fiscal year 2020:

- for Dr. Felix Grawert: EUR 193k in cash,
- for Dr. Jochen Linck: EUR 81k in cash.

Long-term variable remuneration (LTI) for fiscal year 2020 under new remuneration system

In 2020, the new remuneration system was applied to the new contracts with Dr. Felix Grawert and Dr. Jochen Linck.

Target achievement for the 2020 LTI tranche is calculated by reference to the results achieved in the period from January 1, 2020 to December 31, 2022. It is determined by the following performance criteria:

- Consolidated net income for fiscal years 2020, 2021, and 2022 (50% share)
- Change in total shareholder return (TSR) from Q4 / 2019 to Q4 / 2022 (40% share)
- Sustainability (10% share), measured in terms of energy consumption in kWh normed to the most important drivers of consumption and employee training measured in terms of the number of lessons.

The share price of AIXTRON SE relevant for the TSR target remuneration for 2020 amounts to EUR 8.682. This corresponds to the average of XETRA closing prices on all stock market trading days in the 4th quarter of 2019. The degree of achievement for the performance criteria will be determined by the Supervisory Board upon the expiry of fiscal year 2022. Depending on the target achievement, the forfeitable stock awards will then be converted into vested stock awards. The stock awards will be transferred to the Executive Board after a restriction period of at least four years which, for fiscal year 2020, will expire at the earliest on December 31, 2024.

For the long-term variable remuneration (LTI) for 2020, the Supervisory Board stipulated the values of target LTI as follows:

- for Dr. Felix Grawert: EUR 163k in forfeitable stock awards for the period from August 14, 2020 to December 31, 2020
- for Dr. Jochen Linck: EUR 66k in forfeitable stock awards for the period from October 1, 2020 to December 31, 2020.

Variances from new remuneration system

There were no variances and no adjustments to the comparative group of companies in 2020 compared with the resolution adopted by the AGM in respect of the remuneration system in May 2020.

Benefits granted and payments made in fiscal year 2020

The tables below show the values of the benefits granted to the respective Executive Board members in office in fiscal year 2020 pursuant to DCGK as well as the payments actually made to the respective Executive Board members in fiscal year 2020 (“allocation” column). The “Benefits granted” section also includes details of the minimum and maximum possible values of individual remuneration pursuant to DCGK for fiscal year 2020.

Consistent with the DCGK recommendation, for the one-year variable remuneration the target value granted upon 100% target achievement is stated as the benefit granted for the year under report. The DCGK recommendations also require fixed remuneration and the one-year variable remuneration to be stated as an allocation for the respective fiscal year. For subscription rights and other share-based payments, the time and amount pursuant to German tax law are taken as the time of allocation and the allocation amount.

Benefits granted and payments made to each Executive Board member

Dr. Felix Grawert Executive Board member Member since August 14, 2017		Benefits granted				Allocation	
€ 000s		2019	2020	2020 (100% target achievement)*	2020 (maximum)	2019	2020
Non-performance-related remuneration	Fixed remuneration	330	373	373	373	330	373
	Fringe benefits	12	11	11	11	12	11
	Total	**342**	**384**	**384**	**384**	**342**	**384**
Performance-related remuneration	**Short-term variable remuneration**	**406**	**460**	**127**	**1,323**	**406**	**460**
	Under former contract (01.01.-08.13.2020)	406	267	0	1,006	406	267
	Under new contract (08.14.-12.31.2020) STI tranche 2020		193	127	317		193
	Long-term variable remuneration	**456**	**546**	**163**	**1,413**	**0**	**42**
	Share-based portion of one-year variable remuneration (restriction period 2017-2020)	0	0	0	0	0	42
	Share-based portion of one-year variable remuneration (restriction period 2019-2023)	456	0	0	0	0	0
	Share-based portion of one-year variable remuneration (restriction period 2020-2024) prorated for 01.01.-08.13.2020	0	298	0	1.006	0	0
	Under new contract (08.14.-12.31.2020) 2020 LTI tranche (restriction period 2020-2025)	0	248**	163	407	0	0
Total non-performance-related / performance-related remuneration		**1,204**	**1,390**	**674**	**3,120**	**748**	**886**
Pension allowance		0	0	0	0	0	0
Total remuneration		**1,204**	**1,390**	**674**	**3,120**	**748**	**886**

*: Disclosures on LTI tranche under new remuneration system
**: Fair value measurement of 2020 LTI tranche

The theoretical minimum and maximum remuneration for Dr. Felix Grawert under the former remuneration system amounted to € 0k and € 2,012k (former contract: 1.1. – 8.13.2020).

Benefits granted and payments made to each Executive Board member

Dr. Bernd Schulte Executive Board member Member since March 7, 2002 € 000s		Benefits granted				Allocation	
		2019	2020	2020 (100% target achievement)*	2020 (maximum)	2019	2020
Non-performance-related remuneration	Fixed remuneration	430	430	430	430	430	430
	Fringe benefits	13	13	13	13	13	13
	Total	**443**	**443**	**443**	**443**	**443**	**443**
Performance-related remuneration	**Short-term variable remuneration**	**406**	**431**	**0**	**1,625**	**406**	**431**
	Long-term variable remuneration	**406**	**431**	**0**	**1,625**	**0**	**0**
	Share-based portion of one-year variable remuneration (restriction period 2019-2023)	406		0	0	0	0
	Share-based portion of one-year variable remuneration (restriction period 2020-2024)		431	0	1,625	0	0
Total non-performance-related / performance-related remuneration		**1,255**	**1,305**	**443**	**3,693**	**849**	**874**
Pension allowance		0	0	0	0	0	0
Total remuneration		**1,255**	**1,305**	**443**	**3,693**	**849**	**874**

*: Theoretical minimum and maximum remuneration under former remuneration system applicable for Dr. Bernd Schulte.

Dr. Jochen Linck Executive Board member Member since October 1, 2020 € 000s		Benefits granted				Allocation	
		2019	2020	2020 (100% target achievement)*	2020 (maximum)	2019	2020
Non-performance-related remuneration	Fixed remuneration	0	83	83	83	0	83
	Fringe benefits	0	2	2	2	0	2
	Total	**0**	**85**	**85**	**85**	**0**	**85**
Performance-related remuneration	**Short-term variable remuneration**	**0**	**81**	**52**	**130**	**0**	**81**
	Long-term variable remuneration	**0**	**96**	**66**	**165**	**0**	**0**
	2020 LTI tranche (restriction period 2020-2024)	0	96**	66	165	0	0
Total non-performance-related / performance-related remuneration		**0**	**262**	**203**	**380**	**0**	**166**
Pension allowance		0	0	0	0	0	0
Total remuneration		**0**	**262**	**203**	**380**	**0**	**166**

*: Disclosures on LTI tranche under new remuneration system
**: Fair value measurement of 2020 LTI tranche

Stock option plans

Stock options do not form part of the "former remuneration system" or the "new remuneration system" set out above. In view of this, Dr. Felix Grawert and Dr. Jochen Linck do not hold any stock options. Only Dr. Bernd Schulte holds stock options, in this case an existing position of 50,000 stock options as of December 31, 2020. These date back to period prior to the validity of the remuneration systems described here.

The number of shares underlying the options is structured as follows:

Stock option plans

Executive Board member	Allocation date	Outstanding	Exercisable	Option value on grant date (EUR)	Exercise price (EUR)	Maturity	Lapsed shares
Dr. Bernd Schulte	Oct 2014	50,000	50,000	189,000	13.14	Oct 2024	0
	Nov 2010	0	0		26.60	Nov 2020	52,000
	Nov 2009	0	0		24.60	Nov 2019	52,000
Total		**50,000**	**50,000**				**104,000**

Of the expenses for stock option-based remuneration, the following amounts were attributable to the stock options held by Dr. Bernd Schulte:

in EUR thousands	2020	2019	2018
Dr. Bernd Schulte	0	0	34

In fiscal year 2020, 52,000 option rights to purchase AIXTRON shares lapsed (2019: 52,000; 2018: 0).

The Executive Board members in office in fiscal year 2020 did not exercise any option rights in 2020 (2019: 0; 2018: 0).

Outlook for application of new remuneration system in 2021

Short-term variable remuneration (STI)

For the current fiscal year 2021, the Supervisory Board has stipulated the following target dimensions and performance criteria for short-term variable remuneration (STI):

- Target dimension "consolidated net income for the year": In December 2020, the Supervisory Board set a target value for 2021 consolidated net income in the context of its outlook for the year.
- Target dimension "market position": For this target dimension, the Supervisory Board has stipulated targets for individual market segments for 2021.

- Target dimension "Financial and operational targets": For this target dimension, performance criteria have been stipulated in the areas of operating performance, the market launch of new products, and for the OLED business.

Long-term variable remuneration (LTI)

For long-term variable remuneration (LTI), the Supervisory Board has stipulated the following performance criteria:

- Consolidated net income for fiscal years 2021, 2022, and 2023 (50% share)
- Change in total shareholder return (TSR) from Q4 / 2020 to Q4 / 2023 (40% share)
- Sustainability (10% share), measured in terms of energy consumption in kWh normed to the most important drivers of consumption and employee training measured in terms of the number of courses.

The target achievement for the 2021 LTI remuneration will be calculated on the basis of the results achieved in the period from January 1, 2021 to December 31, 2023. The share price of AIXTRON SE relevant for LTI target achievement amounts to EUR 11.582. This corresponds to the average of XETRA closing prices on all stock market trading days in the 4th quarter of 2020. Achievement of the performance criteria will be determined by the Supervisory Board upon the expiry of fiscal year 2023. Depending on the target achievement, the forfeitable stock awards will then be converted into vested stock awards. The stock awards will be transferred to the Executive Board after a four-year restriction period which, for fiscal year 2021, will expire on December 31, 2024.

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 the Annual General Meeting on May 16, 2018. 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.

The members of the Supervisory Board who are only members of the Supervisory Board for part of the fiscal year or who are the Chairman or Deputy Chairman of the Supervisory Board or Audit Committee 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.

The remuneration allocable to individual Supervisory Board members in fiscal years 2019 and 2020 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 2020.

Supervisory Board remuneration

Supervisory Board Member	Year	Fixed (EUR)	Variable (EUR)	Attendance Fee (EUR)	Total (EUR)
Kim Schindelhauer[1)2)3)4)5)6)7)] (Chairman of the Supervisory Board)	2020	180,000			180,000
	2019	180,000	0	0	180,000
	2018	180,000	0	0	180,000
Prof. Dr. Anna Gersbacher[1)] (since May 15, 2019) (Chairwoman of the Audit Committee) (Independent Financial Expert)	2020	80,000			80,000
	2019	53,333	0	0	53,333
	2018	0	0	0	0
Dr. Andreas Biagosch[1)4)7)]	2020	60,000			60,000
	2019	60,000	0	0	60,000
	2018	60,000	0	0	60,000
Prof. Dr. Petra Denk[2)3)6)]	2020	60,000			60,000
	2019	60,000	0	0	60,000
	2018	60,000	0	0	60,000
Frits van Hout[2)3)] (since May 15, 2019) (Deputy Chairman of the Supervisory Board)	2020	90,000			90,000
	2019	60,000	0	0	60,000
	2018	0	0	0	0
Prof. Dr. Wolfgang Blättchen[1)4)] (until May 15, 2019) (Deputy Chairman of the Supervisory Board) (Chairman of the Audit Committee) (Independent Financial Expert)	2020	0			0
	2019	45,833	0	0	45,833
	2018	110,000	0	0	110,000
Dr. Martin Komischke (until May 15, 2019)	2020	0			0
	2019	25,000	0	0	25,000
	2018	60,000	0	0	60,000
Prof. Dr. Rüdiger von Rosen[8)] (until May 16, 2018)	2020	0			0
	2019	0	0	0	0
	2018	25,000	0	0	25,000
Total	**2020**	**470,000**	**0**	**0**	**470,000**
	2019	**484,166**	**0**	**0**	**484,166**
	2018	**495,000**	**0**	**0**	**495,000**

1) Member of the Audit Committee

2) Member of the Compensation Committee

3) Member of the Nomination Committee

4) Member of the Capital Markets Committee

5) Former AIXTRON Executive Board Member

6) Chair of the Technology Committee until February 2018

7) Member of the Technology Committee until February 2018

8) Chairman of the Nomination Committee until May 16, 2018

Directors & Officers (D&O) insurance

The Company has concluded D&O insurance for all members of its Executive and Supervisory Boards. Consistent with the requirements of § 93 (2) AktG and the correspondingly amended recommendation in Chapter 3.8 of the German Corporate Governance Code, all members of the Executive and Supervisory Boards are subject to a deductible amounting to at least 10% of the respective damages incurred and to a maximum of 1.5 times their respective annual fixed remuneration.

GROUP MANAGEMENT REPORT

AS OF DECEMBER 31, 2020

This Management Report comprises both the 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 § 315e HGB and International Financial Reporting Standards (IFRS) as adopted by the EU. 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. German Accounting Standard 20 (DRS 20) "Group Management Report" was applied.

Further information about the adherence to reporting standards is contained in section "Significant Accounting Policies" of the Notes to the Consolidated Financial Statements.

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, and 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 significantly influenced by requirements for higher energy efficiency, a further increase in data processing and transmission speeds, the use of new 3D sensors or innovative display technologies in consumer electronics, and the need to reduce the cost of existing and future power and optoelectronic devices. 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, 2020, AIXTRON SE held direct and indirect stakes in 10 companies which are part of the AIXTRON Group, and which are fully consolidated. A list of all consolidated companies is shown in Note 30 of the Notes to the Consolidated Financial Statements.

As of December 31, 2020, AIXTRON had the following facilities worldwide:

Facility location	Use
Herzogenrath, Germany	Headquarters, R&D, Manufacturing, Engineering, Sales, Service
Cambridge, UK	R&D, Manufacturing, Engineering, Service
Santa Clara, CA, USA	Sales, Service
Hwaseong, South Korea	Sales, Service
Asan, South Korea	Engineering, Service
Shanghai, China	Sales, Service
Hsinchu, Taiwan	Sales, Service
Tainan, Taiwan	Sales, Service
Tokyo, Japan	Sales, 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 2020, there were the following personnel changes in the Company's management and supervisory bodies:

In its meeting on May 8, 2020, the Supervisory Board appointed Dr. Jochen Linck as Executive Board member and Chief Operating Officer (COO) as of October 1, 2020. Executive Board member Dr. Bernd Schulte will retire at his own request when his contract expires on March 31, 2021. Furthermore, the Supervisory Board renewed Dr. Felix Grawert's contract for five years and appointed him Chief Executive Officer (CEO) with effect from April 1, 2021. Finally, it was resolved to expand the Executive Board by a Chief Financial Officer to three members. With the resolution to appoint Dr. Christian Danninger to the position of Chief Financial Officer (CFO) no later than July 1, 2021, the succession planning for the Executive Board of AIXTRON SE was successfully completed in December 2020.

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 according to § 289f HGB in conjunction with § 315d HGB, including the Declaration of Conformity according to § 161 AktG are part of the annual report and also available on the AIXTRON website at https://www.aixtron.com/en/investors/corporate-governance/rules-of-procedure-supervisory-board.

Technology and Products

AIXTRON's product range includes customer-specific systems for the deposition of complex semiconductor materials on a diverse range of different substrate sizes and materials.

The **MOCVD process (Metal Organic Chemical Vapor Deposition)** is used for the vapor phase deposition of so-called compound semiconductor materials for the manufacture of power and optoelectronic components such as LEDs, lasers, other optoelectronic components or power electronics.

In the field of **optoelectronics**, our customers use our systems to manufacture lasers for optical data transmission and 3D sensor technology, whether for facial recognition and environment detection in smartphones or for environment detection in robots, autonomous vehicles or other applications that require context recognition. Other applications include the production of special LEDs, such as Micro LEDs or red, orange and yellow LEDs (ROY) for display applications, among others, high-power LEDs for automotive lighting or UV LEDs for environmentally friendly disinfection of water or air.

In the area of **power electronics**, our systems are used, for example, for the production of gallium nitride (GaN) semiconductor devices for more compact and more powerful power supplies in consumer electronics, for the efficient power supply of data centers and mobile communications infrastructure. In addition, GaN is used on the other hand for wireless data transmission in mobile communications (especially in 5G). The GaN components required for this are also manufactured on our systems. Finally, customers use our CVD systems to manufacture silicon carbide (SiC) components which are used, for example, in electric vehicles and their charging infrastructure and in inverters for renewable energies (solar and wind).

For the fabrication of complex carbon nanostructures (carbon nanotubes and wires or graphene) the **PECVD (Plasma Enhanced Chemical Vapor Deposition) process** is used.

Moreover, AIXTRON's subsidiary APEVA offers the **OVPD (Organic Vapor Phase Deposition) process** for the deposition of thin film materials for organic electronic applications, including organic light emitting diodes (OLEDs).

AIXTRON is constantly working on the improvement of existing technologies and products. In recent years, AIXTRON has introduced several new system generations and technologies, such as the fully automated AIX G5+C for opto & power electronics applications or the AIX G5 WW C for the mass production of next-generation silicon carbide (SiC) epitaxial wafers for applications such as power electronics.

Business Processes

Manufacturing and Procurement

AIXTRON's manufacturing activities focus on the assembly, testing and qualification of prototype and customer equipment. The Group purchases components and most of the assemblies required to manufacture the equipment from third-party suppliers and contractors. For strategic reasons, there are typically several suppliers for each equipment component/assembly. However, for a few key components with distinctive technical features, we are dependent on single suppliers. Assembly is performed at AIXTRON's own production facility with the help of external ser-vice providers and is managed and supervised by AIXTRON employees. Final testing is performed by AIXTRON employees.

Both of AIXTRON's manufacturing facilities have process-oriented quality management systems certified in accordance with ISO 9001:2015. In 2020, the certification of the quality management systems of AIXTRON SE and AIXTRON Ltd. was confirmed without any deviation by external auditors.

Employees

AIXTRON's success is very much determined by the achievements and motivation of its staff. The employees are recruited based on professional and personal qualifications and experience. The Group uses a variety of communication and recruitment channels to attract new, qualified employees. Apart from the direct advertising of job opportunities to attract new employees, AIXTRON regularly participates in job fairs and other career events, has local press coverage, and enjoys close collaborative relationships with universities worldwide, including the RWTH Aachen University and the University of Cambridge.

Leadership culture in an organization also has a great impact on the success of the Company. Therefore, AIXTRON promotes this culture through individual measures in which managers acquire knowledge and qualifications for leadership and team building.

The continuous training of our employees is both important and a matter of course. Our offering ranges from individual training programs to acquire professional and personal skills, through a broad range of in-house training courses, to personal coaching.

In 2020, the total number of employees in the Group increased by approximately 6%, from 688 employees at the end of 2019 (2018: 628) to 728 as of December 31, 2020. This is particularly due to new hires resulting from the positive business development. As in previous years, the majority of AIXTRON's worldwide employees were based in Europe.

Customers and Geographic Regions

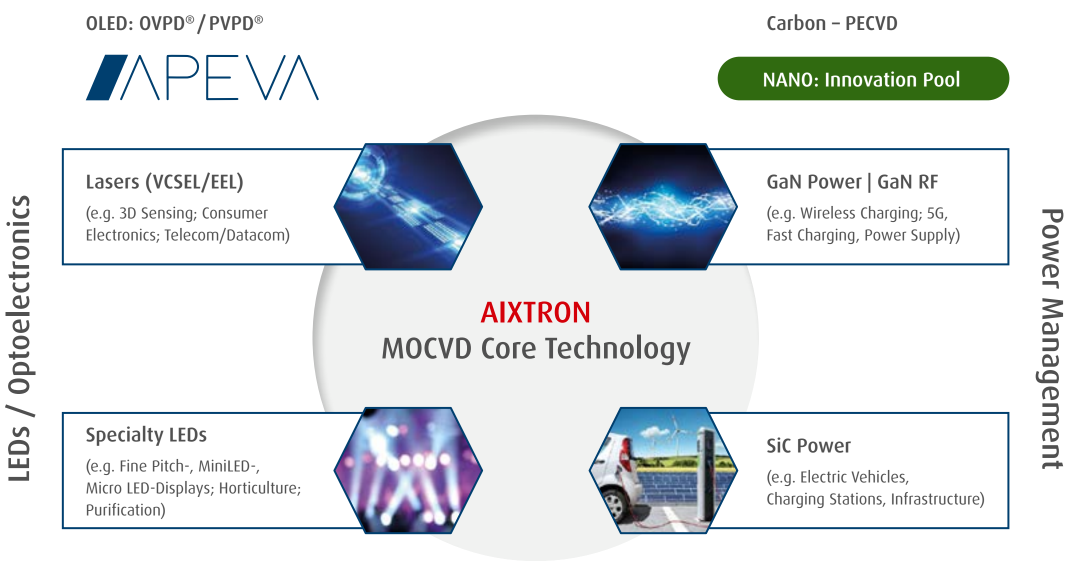
Among other areas of activity, AIXTRON's semiconductor device customers are engaged in the manufacturing of LEDs, lasers, high frequency devices, power electronics and other optoelectronic devices. Some of these customers are vertically integrated device manufacturers who serve the entire value chain as far as the end consumer. Others are independent manufacturers of components or epitaxial wafers who deliver the products made on AIXTRON equipment to the next link in the value chain, namely, the electronic device manufacturers. The Company's customers also include research centers and universities. Most of the world's leading electronic device manufacturers produce in Asia and consequently, the majority of AIXTRON sales continue to be delivered into this region.

See also "Development of Revenues" in this report for a breakdown of revenues by region.

Objectives and Strategies

As recognized technology leader in the field of complex deposition processes, AIXTRON currently focuses on its core competencies in this area. With the development, manufacture, distribution and maintenance of thin film deposition systems for complex materials, AIXTRON addresses growing future markets along a variety of end-user applications, such as consumer electronics, automotive, telecommunications, and data transmission technology.

Technology Portfolio for Complex Material Deposition



It is our objective to secure and further expand our market position in the addressed focus markets in the long term through innovation and technology leadership, and to access adjacent markets by leveraging our core competencies. Increasing revenues and profitability are the focus of our strategic planning.

As in the previous year, AIXTRON's strategy is to target applications and markets that are attractive to AIXTRON in terms of size, growth, profitability and differentiation potential. These applications, from the consumer electronics, IT infrastructure, and electromobility sectors, are subject to largely independent growth dynamics. AIXTRON is not only dependent on a single segment but strives to be robust against fluctuations in individual application markets across the entire range of applications. To this end, AIXTRON actively develops a broad technology portfolio through in-house or sponsored developments, through collaborations, or through targeted acquisitions. In addition, AIXTRON works closely with its customers to establish new technologies, which in turn address new applications.

AIXTRON focuses on markets where the use of AIXTRON technology allows for a clear differentiation from competitors and thus creates value added for customers. These include, among other things, achieving high yields on the wafer by realizing high uniformity of the physical properties of the deposited layers while simultaneously maintaining high throughput, low material and maintenance costs. Markets with not enough potential for technical differentiation offer only low margins.

AIXTRON pursues a platform strategy with its AIX 2800G4 and AIX G5 and AIX G5 WW families of systems that are based on the planetary concept. With a high proportion of identical parts, the systems can be configured according to customer's specification. As outlined in the previous section, this allows for a broad diversification and the addressing of numerous applications. In addition to the AIX 2800G4 and AIX G5/G5WW system families, which address customers with high production volumes, AIXTRON sells a showerhead-based system series, to universities and niche markets. This allows AIXTRON to come into contact with emerging applications at an early stage and to understand customer needs in new markets.

In addition to the MOCVD product line, AIXTRON is developing a second product line for thin-film deposition of organic materials, primarily for OLED displays. In 2018, AIXTRON SE signed a joint venture agreement with H&IRUJA Co. Ltd. of South Korea to invest in APEVA, the subsidiary responsible for this application area. This was followed by the evaluation of APEVA's Organic Vapor Phase Deposition (OVPD) technology in collaboration with a major Asian OLED display manufacturer, with a Gen1-sized prototype and a larger Gen2 prototype deployed at that customer's facility. In December 2020, APEVA received final acceptance of the Gen2 deposition system from the customer. This phase of the qualification project on the way to commercialization of APEVA's proprietary technology has been successfully completed. APEVA is currently in talks with customers about a final qualification project for series production.

In addition, AIXTRON works on innovation projects for the development and industrialization of new technologies for the production of graphene and carbon nanotubes based on the plasma-enhanced CVD process (PECVD) as part of its innovation projects.

Management and Control System

Since the various activities of the Group are largely integrated from an operational perspective, management by means of performance indicators is carried out by the Executive Board of AIXTRON SE at Group level. The Executive Board's development projections for the Group 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 (EBIT) 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 reflects the investment behavior of our customers and thus serves as an early indicator for revenues. The period between receipt and delivery of an order for an MOCVD system is generally between six and eight months.

Gross margin, which expresses gross profit in relation to sales, 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.

Additional Performance Indicators

Free cash flow is no longer used as a key performance indicator at AIXTRON since fiscal year 2020, as the exact timing of large cash inflows from ongoing customer orders is difficult to forecast. Nevertheless, management still attaches great importance to always generating sufficient cash flow to secure the Group's financial resources in the medium and long term.

With the introduction of the new Executive Board remuneration system approved by the Annual General Meeting on May 20, 2020, AIXTRON has defined sustainability targets for the Executive Board and included corresponding non-financial performance indicators in Group management for the first time. The following non-financial performance indicators have been defined for fiscal years 2020 and 2021:

- AIXTRON Group's energy consumption
  (measured in kWh standardized to the most important consumption drivers)
- the further training of AIXTRON Group's employees
  (measured in hours of training completed)

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

AIXTRON's R&D activities in 2020 included development programs for new products as well as continual improvement programs for AIXTRON's existing products. Design-to-Cost-activities and strategic approaches to the optimization of maintenance intervals have been implemented for numerous R&D projects in order to continuously reduce costs e. g. through design improvements in externally provided components or through enhanced data analyses. Furthermore, AIXTRON is working on customer-specific development projects and often does research within the framework of publicly funded projects.

The Group's R&D capability remains of important strategic significance, as it provides for a competitive, leading edge technology portfolio and supports the future business development. There-fore, AIXTRON is committed to investing specifically in research and development projects to retain or to expand the Company's leading technology position in MOCVD equipment for applications such as lasers, 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 seen as having great potential in research in line with international predictions (roadmaps).

APEVA is still evaluating the OVPD technology to achieve customer qualification for OLED display manufacturing. In Q4 2020, the Gen2 OLED qualification project was completed together with engineers from a renowned display manufacturer. Further information on APEVA's field of activity can be found, among other things, in the opportunities report and the earnings development chapter of this report.

For the consistent technological enhancement of our product portfolio, we continued to invest more than one in five euros (around 22%) of our revenues in research and development (R&D) in the challenging year 2020, totaling EUR 58 million. At year-end 2020, 254 of AIXTRON Group's total 728 employees were engaged in research and development activities.

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, 2020, the Group had 274 (thereof AIXTRON SE: 250) patent families available (December 31, 2019: 248 patent families). For 34 patent families (AIXTRON SE: 22), 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. Patents are maintained and renewed annually and will expire between 2021 and 2040. AIXTRON continuously conducts a worldwide patent analysis in order to identify and assess changes in the competitive environment at an early stage.

Research projects 2020

AIXTRON is working on targeted research projects in areas that are considered to have growth potential in the future. While the „HEA2D" research project was successfully completed in 2019, work on the previous year's „UltimateGaN" project continues. The research topic „MOCVD 4.0" was continued with the project „MOCVD 4.2" in the 2020 fiscal year.

Examples of the Group's research work include the "MOCVD 4.2", "MehrSi" and "SiTaSol" as well as "2D-EPL" and "AdaptAR" projects, on which AIXTRON worked intensively in 2020:

Our research work on optimizing the production of compound semiconductors **„MOCVD 4.2"**, which began in 2019, is already delivering important results regarding the digitalization and optimization of industrial production. The collected and analyzed data provide input values for networked and automated machine concepts, intelligent software and improved process control. The foundations developed in this context are to serve the introduction of new software-based services. The aim is to successfully complete the project at the end of 2021.

As part of the funded **„MehrSi"** project, AIXTRON together with the Fraunhofer Institute for Solar Energy Systems ISE, the Technical University of Ilmenau, the Philipps University of Marburg aims at an increase in efficiency of solar cells. A multi-junction solar cell grown directly on a silicon substrate, for example, achieved an efficiency of 25.9 percent for the first time. Thus, a central stage in the development of economic solutions for the industrial use of multi-junction solar cells for power generation has been reached. This was achieved in the project thanks to the improved system technology developed by AIXTRON and the good cooperation with the project partners.

In the EU-funded **„SiTaSol"** project, also addressing the topic of efficient energy generation with solar cells, the aim is to make tandem solar cell technology accessible to the broad photovoltaic sector by means of cost-effective processes. AIXTRON has already been working on such III-V multi-junction solar cells on silicon with several partners for many years. As part of the project, AIXTRON has built and tested a specially optimized epitaxy system in its own laboratory.

AIXTRON is involved as one of eleven partners in the 2D Experimental Pilot Line **„2D-EPL"** initiative of the European Commission's „Graphene Flagship" project. The project was launched on October 1, 2020 and aims to create a suitable European environment for prototype production of electronics, photonics, and sensors made from graphene and related materials. In order to bring graphene and 2D materials to market and integrate them into semiconductor devices, AIXTRON will develop a MOCVD reactor as part of this initiative. This growth technology can be used to produce industrial grade 2D materials and associated heterostructures. Future application areas for large scale integration of graphene and 2D materials could include logic, memory, photonics and sensor devices.

AIXTRON is also working on innovative manufacturing processes as part of research projects. For example, an augmented reality system with a digital twin as the data basis is being developed as part of the **„AdaptAR"** research project. In the project, which is funded by the German Federal Ministry of Education and Research (BMBF) as part of the „Innovations for tomorrow's production, services and work" program, every product in the factory is given a so-called digital twin or digital shadow. AIXTRON expects that a solution combining Augmented Reality (AR) and Digital Twin will make it easier and more intelligent to create, use and maintain technical manuals than before. The AR-supported technology can be linked to a remote service offering to increase efficiency.

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 customers' willingness to invest.

After a strong contraction in 2020, the global economy is not yet back on track for the broad-based recovery that had been hoped for. After a modestly positive start to 2020, the COVID-19 pandemic quickly became the dominating factor for economic development in many sectors. The global spread of the virus and its mutations, and the sometimes drastic containment measures, have led to severe distortions in sales and procurement markets and in international supply chains, confronting countries, companies and consumers with a multi-faceted crisis. A number of vaccine approvals and the start of vaccination in some countries have raised hopes for a possible end to the pandemic. The major burden of the economic downturn was in the first half of 2020. Unprecedented fiscal, monetary, and regulatory measures helped to substantially mitigate the economic impact of the pandemic in many places and allow for a swift recovery. This is also reflected in the forecast of the International Monetary Fund (IMF) in its World Economic Outlook of January 2021. For 2020 as a whole, the IMF expects global economic output to slump by -3.5% following 2.8% growth in 2019. The expected growth rate for the advanced economies is -4.9% (2019: +1.6%), while the growth rate for the emerging and developing countries is expected to be -2.4% (2019: +3.6%). Global trade is expected to contract by 9.6%. The situation in the strongly export-oriented German machinery and plant engineering sector is correspondingly difficult. According to reports by the German Engineering Federation (Verband Deutscher Maschinen- und Anlagenbau e. V. (VDMA)), a 12%[1] decline in order intake is reported for the first eleven months of 2020. In contrast, investment in manufacturing equipment for semiconductor wafers (wafer front-end equipment) increased by 17% to almost USD 59 billion in 2020, according to estimates by investment bank UBS AG.

1) VDMA: Order intake in mechanical engineering: Eastern Germany and Germany, November 2020

In terms of the AIXTRON Group's business development, the downturn in the general global economic environment in 2020, as a result of the COVID-19 pandemic, had only a minor impact. Demand for AIXTRON's products is largely dependent on industry-specific developments, such as the introduction of new applications in consumer electronics, or demand in sub-segments of the global semiconductor market, which remained stable overall, partly as a result of the digitalization trend, which was reinforced by the pandemic. Like many technology hardware companies, we have so far weathered the COVID-19 pandemic wave without any significant impact on value creation. In addition, we were able to maintain operations throughout the past fiscal year while adhering to strict protective measures for the safety of our employees. In addition, we were able to access a stable supply chain without interruption.

After the US dollar exchange rate was still very strong during the first wave of the COVID-19 pandemic in spring with rates around 1.08 USD/EUR, it weakened significantly in the further course of 2020. This was partly due to statements by the US Federal Reserve Bank (Fed) to focus more strongly on high employment in the future and to keep interest rates low for a longer period of time even as economic output and inflation picked up. The US dollar closed the year at 1.2232 USD/EUR on December 31, 2020 (2019: 1.122 USD/EUR), thus depreciating by almost 9% overall. AIXTRON applied an average USD/EUR exchange rate of 1.14 USD/EUR in fiscal year 2020 (Q1/2020: 1.11 USD/EUR; Q2/2020: 1.10 USD/EUR; Q3/2020: 1.17 USD/EUR; Q4/2020: 1.18 USD/EUR), which was about 2 percent above the prior year average (2019: 1.12 USD/EUR). This had a corresponding negative impact on the Group's sales revenues invoiced in US dollars.

AIXTRON Management continues to carefully monitor the developments of the global economy and the financial markets to decide what can potentially be done to mitigate negative exogenous effects on AIXTRON's business. In 2020, no forward exchange contracts or other hedging transactions were entered into. As of December 31, 2020, no currency hedging contracts were in place. 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 LPE (Italy) 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") 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.

Based on the published financial results of competitors and own estimates, AIXTRON sees its global market leadership for MOCVD equipment in 2019 confirmed. AIXTRON thus holds the top position for the fourth year in a row: accordingly, AIXTRON's market share amounted to 56%, followed by AMEC (China) with 25% and Veeco (USA) with 14%. At the same time, the global market for MOCVD equipment stagnated in 2019 compared to the previous year, totaling USD 524 million (2018: USD 553 million).

In particular due to the limited differentiation potential in the blue LED market, AIXTRON is increasingly focusing on markets for high-quality products, such as lasers for sensors or optical data communications, wide-band-gap power electronics or other LED applications (ROY LEDs or Micro LEDs).

AIXTRON's subsidiary APEVA competes with established manufacturers of vacuum thermal evaporation ("VTE") technologies such as Canon Tokki Corporation (Japan), Ulvac, Inc. (Japan), SNU Precision (South Korea), Sunic System (South Korea), YAS (South Korea) as well as manufacturers of wet chemical printing technologies for e. g. polymer OLEDs such as Kateeva (USA), Panasonic (Japan), SEMES (South Korea), and Tokyo Electron Ltd. (Japan) („TEL“) as well as a number of smaller companies for equipment used in organic semiconductor applications. While these companies use VTE and polymer technologies to produce OLEDs, APEVA uses the innovative organic vapor deposition (OVPD) technology for large area coatings. APEVA believes that these technologies are technically superior to traditional VTE and polymer technologies and enable lower costs for manufacturing OLEDs. APEVA positions itself as an alternative supplier of deposition equipment for the large-scale production of next generation OLEDs as well as for applications such as displays, solar cells and other OLED applications.

Key Target Markets

LED Market

The market for LEDs, which can be produced with AIXTRON compound semiconductor equipment, is divided into various applications, which are addressed by AIXTRON with appropriately adapted strategies.

Red, orange and yellow LEDs (ROY LEDs) are used in mini-LED displays in large-format color displays for sports stadiums, airports and shopping malls, as well as in automotive taillights or for agricultural technology, among other applications. In addition, televisions and monitors in the premium segment are increasingly being equipped with mini-LEDs. Thus, the market for red, orange and yellow LEDs (ROY LEDs) grew by 9% to USD 1.6 billion in 2019. The market for infrared and ROY LED manufacturing equipment is expected to double from 2020 to 2025, reaching USD 108 million (Epitaxy Growth Equipment for More than Moore Devices Report, Yole, 2020). According to Yole, the demand for the global area of direct-emitting, large-area LED display walls is growing at an average rate of 63% per year between 2017 and 2024.

According to LEDinside, the greatest growth potential in the field of LEDs is the market for Micro LEDs. 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. The Micro LED technology is still in the development stage, so that estimates of the future market size of various analysts diverge widely. LEDinside, for example, predicts that the Micro LED market will grow from USD 318 million in 2020 to USD 2.9 billion in 2025. As Micro LED technology matures, AIXTRON expects that both the individual application fields and market sizes and the technical requirements will become clearer.

Another small segment of the LED market addressed by AIXTRON is the market for UV LEDs. These are used for curing plastics and - driven especially in 2020 by the COVID-19 pandemic - for disinfecting surfaces, circulating air and (drinking) water. Due to increased hygiene awareness, this market could gain importance in the future. According to LED Inside (Deep UV LED Application Market and Branding Strategies, LED Inside 2020), the ultraviolet LED (UV LED) market will grow at a very rapid rate from USD 305 million in 2019 to USD 1,021 million in 2024, at a compound annual growth rate of 27%.

For the application of blue LEDs for general lighting, only moderate growth is projected due to saturation of the required production capacity on the one hand and due to continuously decreasing prices on the other hand. AIXTRON had already withdrawn from this application in 2017, in particular due to the prevailing low price level.

Laser based 3D Sensor Market

Laser-based 3D sensors have been increasingly used in mobile phones since they were introduced to the market with the iPhone X in 2017. Apple is using this technology in its smartphones in the third generation and is now also using it in the tablet series. In addition, more and more mobile phone manufacturers are equipping their models with 3D sensors. In addition to sensors on the display side of the mobile phone for facial recognition, more and more models are using additional 3D sensors with a longer range on the back of the mobile phones, which can be used to detect the surroundings in three dimensions. Thus, consumer electronics will be the major demand driver for laser-based 3D sensors in the next few years, according to market research firm Yole Développement (Yole). Yole expects surface emitting lasers to grow from USD 738 million in 2018 to USD 3.775 billion in 2024, representing a compound annual growth rate („CAGR") of 31%.

In addition to consumer electronics applications, edge and surface emitting lasers are increasingly being used in the industrial and automotive sectors for 3D sensing. Yole expects a strong increase in demand for these components by 2024, especially from the automotive industry, as an element for distance measurement in driver assistance systems and in automotive vehicles.

Laser based Optical Data Transmission Market

The volume of data transmitted via fiber optic cable continues to grow exponentially, driven by the increasing use of cloud computing and Internet services. 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 data volumes, the enormously high transmission at the speed of light that is possible with optical data transmission also plays a major role. Lasers, which can be produced 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 data transfer via optical fibers increase the demand for lasers as optical signal generators, photodiodes as receivers, and optical amplifiers and switches.

Market research companies such as OVUM, IDC or Frost & Sullivan expect that investments in laser-based communication will continue to increase to enable the growing data traffic. For this reason, market research firm Strategies Unlimited predicts that the total number of lasers used in telecommunications will increase from 2020 to 2025 with an annual growth rate of 20.9%.

Moreover, for the year 2025, Strategies Unlimited estimates a total market volume of more than USD 5.8 billion.

Wide-Band-Gap (WBG) Gallium Nitride (GaN) and Silicon Carbide (SiC) Power Semiconductor Market

Power semiconductors based on Wide-Band-Gap (WBG) materials, which can be produced with AIXTRON equipment, enable the manufacture of very compact and highly efficient AC-DC and DC-DC converters. They are therefore increasingly used in a wide range of applications, from low power (e. g. power supply units for smart phones) to high power (e. g. fast charging stations for electric vehicles). WBG power semiconductors reduce conversion losses by up to 50% and thus contribute significantly to an increase in energy efficiency and reduction of CO2 emissions.

GaN semiconductor devices are mainly used in low and medium power and voltage applications, such as power supplies for smartphones and laptops, wireless charging, and power supplies for servers and other IT infrastructure.

After a long qualification phase, GaN devices in compact power supplies for smartphones and notebooks reached significant volume for the first time in 2020. Compact chargers based on GaN devices are now offered by a variety of aftermarket companies. Similarly, GaN-based power switches have been qualified for a variety of high-efficiency server power lines, which will be produced in volume in the coming years. Other applications of GaN devices, such as use in the compact on-board charger (OBC) for electric vehicles, are currently being prepared by customers.

Based on the wide range of applications, Omdia analysts expected the GaN power semiconductor market to grow 63% to USD 41.4 million in 2020. Annual growth is expected to remain very high in 2022 and subsequent years, with a compound annual growth rate (CGAR) of 49.1% from 2019 to 2029 to reach USD 1,376 million in 2029.

Furthermore, GaN semiconductor devices are increasingly used in high frequency applications. In 5G telecommunication networks and - likely - in subsequent network generations, the advantage of GaN technology of lower power losses at high frequencies comes into play. As a result, more and more manufacturers are shifting their production of high-frequency switches to GaN. Yole analysts expect the market for GaN high-frequency semiconductor devices to grow from USD 740 million in 2019 to USD 2 billion in 2025 at a compound annual growth rate (CAGR) of 12%.

Silicon carbide (SiC) WBG power devices have also seen strong tailwinds in 2020. They are particularly suitable for use in higher power and voltage classes. Areas of application are primarily electric vehicles and their fast-charging stations, but also photovoltaic and wind energy converters and other electric drives. In these applications, SiC enables a significant reduction in conversion losses, resulting in a greater range per battery charge in vehicles and a higher amount of energy delivered in the power generation sector.

Driven by significantly increased awareness for the importance of CO2 reduction, both in the regulatory and private sectors, vehicle manufacturers worldwide have been raising their targets for powertrain electrification. Volkswagen and BMW, for example, expect to deliver 30% and 50% of their vehicles with an electric powertrain by 2030.

Based on this trend, the financial services firm Cannacord Genuity predicts that the market for SiC components will grow from less than USD 1 billion at present to USD 10 billion in 2030. According to Cannacord, this is mainly due to the development of electric cars and the corresponding fast-charging infrastructure.

OLED Display Market

In recent years, the market for OLED displays has been significantly shaped by their use in mobile phones. In the coming years, APEVA expects the use of OLED displays to continue to increase in mobile devices, especially in the Chinese market. In addition, further growth in the OLED market is expected to result from the increasing prevalence of OLED televisions.

Due to rising demand for OLED displays, this market segment is expected to show substantial growth potential in the medium to long term. For example, analysts at DSCC (Display Supply Chain Consultants), expect the market for OLED TV panels to grow from approximately 4 million square meters in 2020 to approximately 15 million square meters in 2025. Foldable and flexible displays for mobile applications are also important drivers for the OLED market. For these form factors, the DSCC analysts expect the market to grow at a compound annual growth rate (CAGR) of 23% and the required display area to grow from 2.5 million square meters in 2020 to about 7 million square meters in 2025.

Business Development

The 2020 fiscal year was significantly impacted by the ongoing tensions in global trade and uncertainties surrounding the United Kingdom's exit from the EU (BREXIT) on the one hand and the outbreak of the COVID-19 pandemic on the other. Both events had a significant impact on the economic situation of many companies and on global trade volumes. At AIXTRON, the negative effects were limited to isolated delays of equipment installations at customers, mainly in the first half of the year. Our supply chains as well as our production and administration functioned smoothly for the most part during the pandemic. We countered the BREXIT with a preventive increase in inventories of important components in both the UK and Germany. As a result, we have fully met the forecast we made before the start of the COVID-19 pandemic and which we maintained throughout the year.

Demand for AIXTRON products remained at a high level. High customer demand was mainly seen in systems for the production of lasers for optical data communication and 3D sensing, and in systems for the production of energy-efficient power electronics based on gallium nitride (GaN) and silicon carbide (SiC), as well as in systems for the production of LEDs for display applications. Overall, we recorded an order intake of EUR 301.4 million in fiscal year 2020 (2019: EUR 231.9

million), on par with the 2018 level of EUR 302.5 million. Revenues developed as expected and, at EUR 269.2 million (2019: EUR 259.6 million), were around 4% above the previous year's level. At 40%, the gross margin was in line with expectations. Slightly higher operating costs combined with continued significant future expenditures in R&D led to an operating result of EUR 34.8 million with an operating margin of 13% (2019: EUR 39.0 million; 15%). This resulted in a net profit of EUR 34,5 million (2019: EUR 32.5 million). Free cash flow (cash flow from operating activities adjusted for changes in financial assets - investments + proceeds from disposals) of EUR 14.0 million (2019: EUR 35.1 million) was reported for the fiscal year 2020.

We achieved important milestones in the 2020 fiscal year for the fully automated AIX G5 WW C planetary system for the efficient high-volume production of high-performance silicon carbide power electronics, which was introduced at the end of 2019. For example, the system has already been qualified by two customers for the production of SiC power semiconductors and additional customers have purchased the system to qualify our technology. Silicon carbide is a key component of advanced power electronics systems currently being used in next-generation electric vehicles and will play a critical role in vehicle electric powertrains.

As part of our OLED qualification project, which is jointly run by engineers from our customer and our subsidiary APEVA, we achieved an important milestone in Q4 2020: With the final acceptance of the Gen2 deposition system by the customer, this phase of the qualification project on the way to commercialization of APEVA's proprietary technology has been successfully completed. APEVA is currently in talks with customers about a final qualification project for series production.

In order to continue to achieve a sustainable profitable development of the AIXTRON Group in the future, our product portfolio focuses exclusively on product lines with a positive contribution to earnings or those that promise a significant return on investment (ROI) in the foreseeable future.

Results of Operations

Development of Orders

	2020 m EUR	2019 m EUR	2018 m EUR	2020-2019 in EUR	%
Total order intake incl. spares & services	301.4	231.9	302.5	69.5	+30
Equipment order backlog (end of period)	150.9	116.7	138.3	34.1	+29

The 2020 US dollar-based **order intake** and **order backlog** have been recorded at the budget exchange rate of 1.20 USD/EUR (2019: 1.20 USD/EUR; 2018: 1.20 USD/EUR). Spares & service orders are not included in the order backlog.

In 2020, **total order intake** including spares & services stood at EUR 301.4 million, thus higher than the previous year's figure. This development was driven in particular by increased demand from the fields of power electronics, especially GaN power electronics, and optoelectronics, especially optical data communication. In Q4/2020, order intake at EUR 92.2 million was up 30% against the previous quarter (Q3/2020: EUR 70.8 million).

At EUR 150.9 million, the **equipment order backlog** as of December 31, 2020 was also higher than the order backlog of EUR 116.7 million at the beginning of 2020 (both at the budget rate of 1.20 USD/EUR). Compared to the end of the previous quarter, the order backlog decreased by 8% at year-end (September 30, 2020: EUR 164.1 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 Management 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, Management comes to the conclusion that the realization of an order is not sufficiently likely or involves an unacceptable degree of risk, Management 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. The order backlog is regularly assessed and - if necessary - adjusted in line with potential execution risks.

Development of Revenues

The development of revenues in fiscal year 2020 was primarily influenced by the demand for MOCVD systems, especially for the production of optoelectronics, particularly lasers for optical data communication, for the production of power electronics, particularly GaN power electronics, and Specialty LEDs.

Revenues in fiscal year 2020 amounted to EUR 269.2 million and were thus about 4% higher than in the previous year (2019: EUR 259.6 million; 2018: EUR 268.8 million). EUR 46,2 million or 17% of revenues in fiscal year 2020 were generated from the sale of **spare parts and services**. While revenues from MOCVD systems for power electronics increased strongly compared to the previous year, the optoelectronics business remained below the previous year's level, in particular due to the expected low demand for laser systems for 3D sensor technology. The Specialty LEDs business was also below the prior-year level overall. Systems for the manufacture of optoelectronic components continued to make the largest revenue contribution, accounting for 33% of equipment revenues. Systems for the manufacture of power electronics contributed 31% of equipment revenues, while systems for the manufacture of LEDs, incl. ROY-LEDs, accounted for 27%.

Revenues by Equipment, Spares & Service

	2020 m EUR	%	2019 m EUR	%	2018 m EUR	%	2020-2019 m EUR	%
Equipment revenues	223.0	83	207.3	80	221.8	82	15.7	8
Service, spare parts, etc.	46.2	17	52.4	20	47.1	18	-6.1	-12
Total	**269.2**	**100**	**259.6**	**100**	**268.8**	**100**	**9.6**	**4**

At EUR 197.0 million, demand from customers in Asia continued to account for the majority of total revenues in 2020. The lower contribution from customers outside of Asia were a result of the regional mix of customers addressing the above-mentioned demand drivers.

Revenues by Region

	2020		2019		2018		2020-2019	
	m EUR	%	m EUR	%	m EUR	%	m EUR	%
Asia	197.0	73	177.5	68	144.7	54	19.5	11
Europe	41.0	15	40.3	16	69.7	26	0.7	2
Americas	31.3	12	41.9	16	54.4	20	-10.6	-25
Total	**269.2**	**100**	**259.6**	**100**	**268.8**	**100**	**9.6**	**4**

Development of Results

Cost of Sales, Gross Profit, Gross Margin

Cost of sales amounted to EUR 161.0 million in the past fiscal year (2019: EUR 150.9 million) and increased to 60% relative to revenues (2019: 58%). This was mainly due to a less favorable USD/EUR exchange rate especially in the second half of the year, a changed product mix and costs of underutilization in production and service in the first half of the year. Consequently, the **gross profit** for the fiscal year was EUR 108.3 million, corresponding to a **gross margin** of 40%.

Development of Results

	2020		2019		2018		+/-	
	m EUR	% Rev.	m EUR	% Rev.	m EUR	% Rev.	m EUR	% Rev.
Cost of sales	**161.0**	**60**	**150.9**	**58**	**151.2**	**56**	**10.1**	**7**
Gross profit	**108.3**	**40**	**108.7**	**42**	**117.6**	**44**	**-0.4**	**0**
Operating expenses	**73.5**	**27**	**69.7**	**27**	**76.2**	**28**	**3.8**	**5**
Selling Expenses	9.7	4	9.9	4	9.4	4	-0.2	-2
General and administration expenses	18.0	7	16.5	6	18.4	7	1.5	9
Research and development costs	58.4	22	55.0	21	52.2	19	3.4	6
Other operating expenses (income)	(12.6)	5	(11.6)	4	(3.8)	1	1.0	9

Operating Expenses

Operating expenses increased slightly year-on-year in 2020, both in absolute terms and relative to revenues. In absolute terms, operating expenses increased from EUR 69.7 million in 2019 to EUR 73.5 million in the past fiscal year. This is mainly due to higher R&D expenses and an increase in general and administrative expenses.

The following individual effects must be taken into account:

Selling, general and administrative expenses were slightly higher in a year-on-year comparison at EUR 27.7 million (2019: EUR 26.4 million; 2018: EUR 27.7 million). Relative to revenues, selling, general and administrative expenses were stable at 10% (2019: 10%; 2018: 10%). The increase was mainly due to higher variable cost components and higher recruitment costs for new employees and the appointment of new members to the Executive Board.

Research and development expenses, including expenses for OLED development activities, increased by 6% year-on-year to EUR 58.4 million. The increase is mainly due to the development of next-generation MOCVD systems for applications within the defined core markets. Research and development expenses for OLED activities in 2020 were EUR 17.3 million (2019: EUR 16.7 million; 2018: EUR 23.7 million).

Key R&D Information

	2020	2019	2018	2020-2019
R&D expenses (million EUR)	58.4	55.0	52.2	6%
R&D expenses, % of revenues	22	21	19	

Net other operating income and expenses in 2020 resulted in a stable income of EUR 12.6 million (2019: income of EUR 11.6 million, 2018: income of EUR 3.8 million).

These include grants of EUR 8.1 million for publicly funded development projects (2019: EUR 7.9 million; 2018: EUR 4.7 million). Please refer to the section Research & Development included in the chapter “Fundamental Information on the Group” for more information. In addition, due to a change in use for one of the two production facilities in Germany, there was a reversal of an impairment loss, which resulted in other operating income of EUR 2.9 million.

In fiscal year 2020, a **net foreign exchange loss** of EUR 0.8 million (2019: EUR 1.3 million gain; 2018: EUR -1.8 million loss) was recorded from transactions in foreign currencies and the translation of balance sheet items.

Total **personnel costs**, including production and service, were 10% higher in fiscal 2020 than in the previous year at EUR 66.1 million (2019: EUR 60.3 million). This increase was mainly due to new hires in the areas of development and production as well as higher variable compensation.

Operating Result (EBIT)

The **operating result (EBIT)** decreased year-on-year by 11% and amounted to EUR 34.8 million in the fiscal year 2020 (2019: EUR 39.0 million; 2018: EUR 41.5 million). This resulted in an EBIT margin of 13% (2019: 15%; 2018: 15%). This development is mainly due to the revenue and cost development described above. For further information please refer to the “Consolidated income statement” on page 107 of this report.

Result before Tax

Profit before tax decreased slightly from EUR 39,7 million in 2019 (2018: EUR 42.5 million) to EUR 35.1 million in 2020. This includes net interest income of EUR 0.2 million.

Interest and Taxes

	2020 m EUR	2019 m EUR	2018 m EUR	2020-2019 m EUR	%
Net finance income	**0.2**	**0.8**	**1.0**	**-0.6**	**-75**
Finance income	0.3	0.9	1.0	-0.6	-67
Finance expense	-0.1	-0.1	0.0	0.0	0
Tax income/(expense)	**-0.6**	**-7.2**	**3.4**	**6.6**	**-92**

In fiscal year 2020, AIXTRON recorded an **income tax** expense of EUR 0.6m (2019: EUR 7.2m income tax expense; 2018: EUR 3.4m income tax benefit). The decrease in income tax expense was significantly influenced by the capitalization of deferred taxes on loss carryforwards due to expected future profits. The disclosure on deferred taxes is included in Note 14 to the consolidated financial statements.

Consolidated net income for the year

The AIXTRON **Group’s consolidated net income** in fiscal year 2020 was EUR 34.5 million, or 13% of revenues (2019: EUR 32.5 million, or 13%; 2018: EUR 45.9 million, or 17%).

Assets and Liabilities

The Balance Sheet Total as of 31 December 2020 increased year-on-year to EUR 590.4 million (31 December 2019: EUR 563.0 million; 31 December 2018: EUR 538.9 million). The complete consolidated statement of financial position can be found in the consolidated financial statements.

Assets

Property, plant and equipment decreased slightly from EUR 64.5 million as of 31 December 2019 to EUR 63,5 million as of 31 December 2020 (31 December 2018: EUR 63.1 million) as depreciation and amortization slightly exceeded capital expenditures and reversals of impairment losses in the fiscal year.

Goodwill was EUR 71.0 million compared to EUR 72.4 million as of December 31, 2019 (December 31, 2018: EUR 71.6 million). The difference is completely due to exchange rate fluctuations. No impairment losses were recognized. Further information on goodwill is provided in Note 12 „Intangible assets" in the Notes to the Consolidated Financial Statements.

Other intangible assets increased to EUR 2.9 million as of 31 December 2020 (31 December 2019: EUR 2.4 million; 31 December 2018: EUR 2.1 million), which is due to higher capital expenditures.

Inventories were broadly unchanged at EUR 79.1 million (December 31, 2019: EUR 79.0 million; December 31, 2018: EUR 73.5 million). This mainly reflects the expected sales of systems in the following quarters and the construction of prototypes. The inventory turnover rate at the end of 2020 was 2.0 (2019: 1.9).

As deliveries within the last quarter of the past fiscal year were phased later than in the previous year, **trade receivables** as of December 31, 2020 were significantly higher than the previous year's level at EUR 41.3 million (December 31, 2019: EUR 29.2 million). The current days sales outstanding (DSO) decreased to 18 days at the end of 2020 compared to 30 days at the end of 2019 (2018: 36 days).

Cash and cash equivalents and financial assets increased to EUR 309.7 million as of December 31, 2020 (31. December 2019: EUR 298.3 million; 31. December 2018: EUR 263.7 million). In this context, **financial assets** include fund investments of EUR 62.4 million as well as non-current bank deposits with a maturity of more than 12 months amounting to EUR 60.0 million, which are included in the balance sheet item **other non-current financial assets**. Please also refer to Notes 13, 17 and 18 of the Notes to the consolidated financial statements.

Liabilities

The strong decrease in **trade payables** to EUR 10.8 million as of 31 December 2020 (31 December 2019: EUR 19.4 million; 31 December 2018: EUR 27.8 million) reflects AIXTRON's commitment to pay our suppliers in a timely manner and to avoid negative interest rates.

Provisions (non-current and current) increased from EUR 18.1 million as of December 31, 2019 to EUR 20.2 million as of December 31, 2020 (December 31, 2018: EUR 20.8 million). The high number of systems delivered resulted in higher warranty provisions at the reporting date.

Contract liabilities for advance payments received from customers at EUR 50.8 million as of December 31, 2020 were broadly stable compared to the previous year's level of EUR 51.1 million as of December 31, 2019 (December 31, 2018: EUR 53.3 million), reflecting the current order situation.

Mainly due to payments received for publicly funded development projects, **other current liabilities** increased to EUR 7.4 million (December 31, 2019: EUR 4.2 million; December 31, 2018: EUR 5.0 million).

Financial Position

Principles 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 share capital within the Group companies as required.

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 Supervisory Board of AIXTRON SE. Excess cash is invested by the finance department in accordance with this policy. The policy 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. Our central finance department routinely monitors if and to what extent currency hedging instruments should be used. Speculative foreign currency transactions are not concluded.

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 strong equity base 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** as of December 31, 2020 increased slightly to 84% compared to 82% as of December 31, 2019.

As of December 31, 2020, the **share capital** of AIXTRON SE amounted to EUR 112,927,320 (December 31, 2019: EUR 112,927,320; December 31, 2018: EUR 112,927,320). It is divided into 112,927,320 registered no-par value ordinary shares with a notional value of EUR 1.00 per share. All shares are fully paid. Please also refer to Note 19 in the Notes to the Consolidated Financial Statements.

The Group has **stock option programs** in place that granted the members of the Executive Board and employees the right to purchase AIXTRON shares under certain conditions. In 2020, no stock options (2019: 0; 2018: 2,590 options) were exercised and no stock options were issued (2019: 0; 2018: 0).

AIXTRON ordinary shares

	Dec. 31, 2020	Exercised	Expired/ Forfeited	Allocation	Dec. 31, 2019
Stock options to acquire shares	601,600	0	393,850	0	995,450

As of December 31, 2020, 2019 and 2018, AIXTRON did not have any **bank borrowings**.

Investments

In fiscal year 2020, AIXTRON Group's total capital expenditures amounted to EUR 9.3 million (2019: EUR 7.8 million; 2018: EUR 9.2 million).

EUR 7.8 million (2019: EUR 6.4 million; 2018: EUR 8.1 million) was invested in property, plant and equipment (including testing and laboratory equipment) in fiscal year 2020. The remaining EUR 1.4 million in 2020 (2019: EUR 1.3 million; 2018: EUR 1.1 million) related to intangible assets including software licenses.

The **cash outflow from investing activities** for fiscal year 2020 amounted to EUR 32.5 million due to changes in fixed-term deposits with a maturity of at least three months (2019: no change; 2018: increase by EUR 7.5 million).

All investments in the fiscal years 2020, 2019 and 2018 were funded out of available cash resources.

Liquidity and Cashflow

Description	Balance sheet item	December 31, 2020	December 31, 2019	+ / -
Bank deposit	Cash and cash equivalents	187.3	270.8	-83.5
Short-term bank deposits (term of 3 to max. 12 months)	Other financial assets	0	27.5	-27.5
Fund investments	Other financial assets	62.4	0	+62.4
Long-term bank deposits (term of more than 12 months)	Other non-current financial assets	60.0	0	+60.0
Total liquidity		**309,7**	**298.3**	**+11.4**

Cash and cash equivalents including **other financial assets** increased to EUR 309.7 million as of 31 December 2020 (December 31, 2019: EUR 298.3 million; December 31, 2018: EUR 263.7 million).

As of December 31, 2020, other financial assets included fund investments (EUR 62.4 million) as well as long-term bank deposits, primarily in euros, with a maturity of at least twelve months (see also „Investments") in the amount of EUR 60.0 million, which are included in the balance sheet item Other non-current financial assets. In the previous year, there were short-term bank deposits with a maturity of at least three months up to a maximum of twelve months in the amount of EUR 27.5 million (see also „Investments").

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

Mainly due to the acquisition of fund investments in the amount of EUR 62.4 million, **cash flow from operating activities** amounted to EUR -39.2 million in fiscal year 2020 (2019: EUR 42.8 million; 2018: EUR 11.9 million). Adjusted for this effect, the largest change in cash flow from operating activities resulted from the change in trade receivables compared with the previous year (see also note on trade receivables).

Cash flow from investing activities in the 2020 fiscal year was EUR -41.5 million (2019: EUR -6.8 million; 2018: EUR -15.1 million). This figure is mainly due to increased fixed-term deposits with a term of more than 90 days (2020: EUR -32.5 million, 2019: EUR 0 million, 2018: EUR -7.5 million).

Cash flow from financing activities amounted to EUR -0.9 million in 2020 (2019: EUR -1.2 million; 2018: EUR 10.4 million). In 2020 and 2019, the cash outflow resulted mainly from repayments of lease liabilities.

Free cash flow (cash flow from operating activities adjusted for changes in financial assets - investments + proceeds from disposals) for the 2020 fiscal year was EUR 14.0 million compared to EUR 35.1 million in 2019 (free cash flow 2018: EUR 4.4 million). The difference compared to the previous year is mainly due to cash outflows from trade receivables as of the reporting date (see note on trade receivables). As a result of the first-time application of IFRS 16, the comparative presentation of the consolidated statement of cash flows for 2019 in this report has been adjusted accordingly.

Financial and Non-Financial Performance Indicators

AIXTRON's key performance indicators are **order intake, revenues, gross margin** and **EBIT margin**. These form the basis for group-wide operational and strategic planning. They are used to pursue the goal of combining profitable revenue growth with cost and asset efficiency in order to achieve a sustainable increase in value. Thus, AIXTRON now focuses on four key performance indicators for the Group.

Since fiscal year 2020, free cash flow is no longer used as a key performance indicator for AIXTRON. Nevertheless, management continues to attach great importance on achieving sufficient cash flow to secure the Group's financial resources in the medium- and long-term.

Non-financial performance indicators include energy consumption and the training activities of the AIXTRON Group's employees for internal control and management purposes.

Management Assessment of Company Situation

In fiscal year 2020, AIXTRON continued to focus on successfully serving the targeted growth markets in a sustainably profitable manner. At the same time, the Group continued to drive development and sales activities, especially for power electronics.

Equipment revenues in 2020 amounted to EUR 223.0 million, of which EUR 73.2 million (33%) was attributable to MOCVD systems for the production of components for the optoelectronics segment (laser, solar) and EUR 69.3 million (31%) to MOCVD/CVD systems for the power electronics segment (GaN/SiC). Growth is generally expected in the aforementioned markets because the use of lasers for optical data transmission continues to increase, because laser-based 3D sensors are increasingly being used in consumer electronics, and because modern power electronics components are increasingly being manufactured from the materials silicon carbide or gallium nitride.

MOCVD equipment revenues for the production of ROY LEDs in particular were EUR 61.0 million in 2020 (27% of equipment revenues). The increasing penetration of displays or backlighting based on mini-LED technology, of other LED applications such as disinfection or agricultural technology, or the ongoing development of Micro LED displays should have a positive impact on the demand for our systems and show growth potential.

In addition to the above activities, there is a focus on costs as well as margin contributions of individual revenue drivers. In addition, the Executive Board is continuously reviewing 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.

Particularly against the backdrop of a market environment characterized by uncertainty, business development in 2020 was very positive across all areas from a Group perspective. AIXTRON sees further growth potential for all addressed market areas over the next years.

The AIXTRON Group continues to have a healthy financing structure with a high level of cash and cash equivalents and no bank borrowings.

Achievement of guidance in 2020

In order to give our stakeholders including our shareholders the opportunity to follow our business development, we regularly publish our guidance for the current year with the publication of the annual report of the previous year. The order intake, revenue, gross margin and EBIT margin forecasts for the 2020 financial year published in the 2019 Annual Report and refined in the course of the year were met in full despite the challenges mentioned.

	Outlook FY 2020 27.02.2020	First Quarter 2020 30.04.2020	Second Quarter 2020 23.07.2020	Third Quarter 2020 29.10.2020	Result 2020 25.02.2021
Order Intake*	Range of EUR 260m to EUR 300m	Confirmation of outlook for FY 2020 as of 27.02.20	Confirmation of outlook for FY 2020 as of 27.02.20	Range of EUR 270m to EUR 300m	EUR 301.4m
Revenue	Range of EUR 260m to EUR 300m	Confirmation of outlook for FY 2020 as of 27.02.20	Confirmation of outlook for FY 2020 as of 27.02.20	Range of EUR 260m to EUR 280m	EUR 269.2m
Gross Margin	around 40%	Confirmation of outlook for FY 2020 as of 27.02.20	Confirmation of outlook for FY 2020 as of 27.02.20	Confirmation of outlook for FY 2020 as of 27.02.20	40%
EBIT Margin	Range of 10% to 15%	Confirmation of outlook for FY 2020 as of 27.02.20	Confirmation of outlook for FY 2020 as of 27.02.20	Confirmation of outlook for FY 2020 as of 27.02.20	13%

** = 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 are combined according to § 315 Para. 5 HGB in conjunction with § 298 Para. 2 HGB. Both reports are published simultaneously in the electronic 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 or balance sheet loss and thus the possible distribution amount.

Basically, 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 seven subsidiaries held directly or indirectly at 100% each, which are primarily responsible for the worldwide distribution of AIXTRON's products, AIXTRON SE currently holds an 87% interest in the APEVA Group, which is driving the development and evaluation of the OVPD technology.

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 Business Report.

Income Statement of AIXTRON SE according to HGB

EUR million	2020	2019
Revenues	**250.2**	**237.8**
Changes in inventories	-6.0	4.9
Other own work capitalized	0.2	0.1
Total output	**244.4**	**242.8**
Other operating income	16.1	54.1
Cost of materials and external services	125.4	122.5
Personnel expenses	39.6	34.0
Depreciation and amortization	10.7	8.3
Other operating expenses	57.9	57.7
Operating result	**27.0**	**74.4**
Income from investments	0.0	2.4
Interest result	0.0	0.4
Financial result	**0.0**	**2.8**
Profit before tax	**27.0**	**77.2**
Taxes on income and earnings	2.9	5.0
Profit after tax	24.1	72.2
Other taxes	0.2	0.2
Net profit for the year	**23.9**	**72.0**
Loss (-)/profit carried forward (+)	-5.6	-77.6
Net retained profit (+)/loss (-)	**18.4**	**-5.6**

Results of operations of AIXTRON SE according to HGB

AIXTRON SE's **revenues** amounted to EUR 250.2 million in fiscal year 2020 and thus increased by EUR 12.3 million, or 5%, compared with fiscal year 2019 (EUR 237.8 million). Revenues were influenced by increased demand for MOCVD systems for the production of Specialty LEDs, GaN and SiC power electronics and lasers for optical data communication, among other things. The other revenues are attributable to intra-Group charges.

Revenues by category

		2020		2019		2018		2020-2019
	m EUR	%	m EUR	%	m EUR	%	m EUR	%
Equipment revenues	201.7	80	182.3	77	197.7	80	19.3	11
Service and spare parts	41.9	17	46.9	20	40.2	16	-5.0	-11
Other revenues	6.7	3	8.6	3	9.5	4	-1.9	-22
Total	**250.2**	**100**	**237.8**	**100**	**247.4**	**100**	**12.3**	**5**

At 73%, demand from customers in Asia still accounted for the largest share of total revenues in 2020.

Revenues by region

	2020		2019		2018		2020-2019	
	m EUR	%	m EUR	%	m EUR	%	m EUR	%
Asian	182.2	73	169.9	71	133.0	54	12.4	7
Europe	41.1	16	39.3	17	70.9	29	1.7	4
Americas	26.9	11	28.6	12	43.4	18	-1.7	-6
Total	**250.2**	**100**	**237.8**	**100**	**247.4**	**100**	**12.3**	**5**

At EUR 23.9 million (2019: EUR 72.0 million), the **net result for the year** was lower than in the previous year. The following factors contributed to this development:

At 51.4%, the **cost of materials ratio** (cost of materials in relation to total output) was slightly above the previous year's figure (2019: 50.5%).

The annual average number of employees at AIXTRON SE rose from 387 in the previous year to 431 in the fiscal year 2020. Consistent with this development, **personnel expenses** increased due to higher variable cost components from EUR 34.0 million in the previous year to EUR 39.6 million in fiscal year 2020.

Depreciation and amortization increased by EUR 2.3 million from EUR 8.3 million in 2019 to EUR 10.7 million in 2020. This was a result of additional depreciation due to shorter useful lives of some laboratory equipment.

Other operating expenses were stable at EUR 57.9 million compared to EUR 57.7 million in fiscal year 2019, with higher currency losses and expenses for warranty provisions offset by lower costs for external development services.

In comparison to 2019, **other operating income** decreased from EUR 54.1 million to EUR 16.1 million in the 2020 fiscal year. In 2019, other operating income included an extraordinary income of EUR 39.2 million resulting from a return of capital contributions by a subsidiary. Adjusted for this effect, other operating income increased by EUR 1.2 million, mainly due to income from reversals of impairment losses resulting from a change in use for one of the two production sites in Germany.

In addition, no **investment income** was generated in 2020, while EUR 2.4 million was received from dividends from subsidiaries in fiscal year 2019.

Net interest income totaled EUR 23 thousand in fiscal year 2020 compared to EUR 394 thousand in 2019.

Net Result AIXTRON SE - Use of Result

The net result for the year amounted to EUR 23.9 million. Offset against the loss carried forward from the previous year, this produced a new accumulated profit of EUR 18.4 million as of December 31, 2020 (accumulated loss 2019: EUR -5.6 million; 2018: EUR -77.6 million). The Executive Board and Supervisory Board will propose to the Annual General Meeting to distribute a dividend of EUR 0.11 per share for 2020 (2019: EUR 0, 2018: EUR 0).

Assets and Liabilities and Financial Position of AIXTRON SE

At EUR 481.8 million, balance sheet total of AIXTRON SE at the end of 2020 was about 3% higher than the previous year's figure (2019: EUR 468.2 million). This was due in particular to the positive net result for the year.

Balance Sheet of AIXTRON SE (HGB)

EUR million	2020 Dec. 31	2019 Dec. 31
Assets		
Intangible assets	2.6	2.1
Property, plant and equipment	56.4	59.1
Financial assets	50.1	50.0
Non-current assets	**109.1**	**111.2**
Inventories	69.0	72.2
Trade receivables	21.5	14.5
Receivables from affiliated companies	15.1	15.4
Other assets	3.4	2.5
Securities	62.4	0.0
Cash and cash equivalents	200.8	252.0
Current assets	**372.2**	**356.6**
Prepaid expenses	0.6	0.4
Total assets	**481.8**	**468.2**

EUR million	2020 Dec. 31	2019 Dec. 31
Equity and liabilities		
Subscribed capital	112.9	112.9
Treasury stock	-1.1	-1.1
Issued capital	111.8	111.8
Capital reserve	276.3	276.3
Accumulated profit / deficit	18.4	-5.6
Equity	**406.5**	**382.6**
Provisions	**24.8**	**21.1**
Advance payments from customers	40.1	45.4
Trade payables	5.8	13.6
Liabilities from affiliated companies	1.0	3.8
Other liabilities	3.5	1.7
Liabilities	**50.5**	**64.5**
Total equity and liabilities	**481.8**	**468.2**

Assets

Property, plant and equipment decreased from EUR 59.1 million in 2019 to EUR 56.4 million in fiscal year 2020. This was because the depreciation of EUR 9.8 million (2019: EUR 7.4 million) exceeded the capital expenditure and reversals of impairments of EUR 7.2 million (2019: EUR 4.7 million).

Financial assets were stable at EUR 50.1 million (2019: EUR 50.1 million).

The slight decrease in **inventories** from EUR 72.2 million to EUR 69.0 million in fiscal year 2020 mainly reflects the expected sale of systems in the following quarters and the construction of prototypes.

Due to reporting date factors, **trade receivables** increased from EUR 14.5 million to EUR 21.5 million due to the high number of deliveries at the end of the 2020 financial year.

Liabilities

The **subscribed capital** of AIXTRON SE was unchanged at EUR 112.9 million as of December 31, 2020 (December 31, 2019: EUR 112.9 million). **Issued capital** was EUR 111.8 million (2019: EUR 111.8 million). A total of 3,200 shares were issued from treasury stock as part of share-based payments in the financial year.

Due to the increase in the net result for the year, and despite the higher balance sheet total, the **equity ratio** rose from 82% in 2019 to 84%.

To secure **advance payments from customers**, AIXTRON SE had guarantee lines with banks of EUR 57.5 million as of December 31, 2019 (2019: EUR 57.5 million), of which EUR 26.5 million had been utilized as of the balance sheet date (2019: EUR 12.6 million).

Trade payables decreased to EUR 5.8 million depending on the reporting date (2019: EUR 13.6 million).

As of December 31, 2020, AIXTRON did not have any **bank borrowings**, as was the case on the two prior-year balance sheet dates.

Investments

Capital expenditures at AIXTRON SE totaled EUR 5.7 million in fiscal year 2020 (2019: EUR 5.6 million) of which EUR 4.2 million in 2020 were for property, plant and equipment (2019: EUR 4.7 million). As in the previous year, this capital expenditure was mainly for laboratory equipment and test and demonstration equipment.

Furthermore, AIXTRON SE invested EUR 1.4 million in intangible assets for licenses and software (2019: EUR 0.9 million).

No investments were made in financial assets in fiscal years 2020 and 2019.

Liquidity

Cash Flow Statement of AIXTRON SE (HGB)

EUR million	2020	2019
Cash flow from operating activities	16.9	30.8
Cash flow from investing activities	-68.1	62.8
Cash flow from financing activities	0.0	0.0
Change in cash and cash equivalents	**-51.2**	**93.6**
Cash and cash equivalents at the beginning of the period	252.0	158.4
Cash and cash equivalents at the end of the period	**200.8**	**252.0**

Development of Financial Position (Cash Flow)

Cash and cash equivalents decreased by EUR 51.2 million from EUR 252.0 million to EUR 200.8 million in the fiscal year, mainly due to the acquisition of fund investments in the amount of EUR 62.4 million. Adjusted for this effect, liquidity would have increased by EUR 13.0 million.

Cash flow from operating activities decreased from EUR 30.8 million in 2019 to EUR 16.9 in 2020 mainly due to the change in trade receivables and trade payables.

Cash flow from investing activities was significantly influenced by the acquisition of funds in the amount of EUR 62.4 million in 2020. In addition, investments amounting to EUR 5.7 million were made.

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

Opportunities and Risks

The business development of AIXTRON SE is essentially subject to the same risks and opportunities as the AIXTRON Group. AIXTRON SE generally participates in the risks of the subsidiaries in proportion to its SE generally participates in the risks of the subsidiaries in proportion to its respective shareholding. As a result of the central As a result of the centralized financial management of the AIXTRON Group, all financing transactions are AIXTRON SE. As the parent company of the AIXTRON Group, AIXTRON SE is integrated into the Group-wide risk integrated into the Group-wide risk management system. Further information on this can be found in 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. For further information please refer to section "Expected Developments" of this report.

Publication

The annual financial statements of AIXTRON SE, which have been issued with an unqualified opinion by Deloitte GmbH Wirtschaftsprüfungsgesellschaft in accordance with the accounting principles of the German Commercial Code (HGB), from which in particular the balance sheet and the income statement are reproduced here, will be submitted to the operator of the German Federal Gazette (Bundesanzeiger) and are accessible via the website of the Company Register. The HGB annual financial statements of AIXTRON SE as well as the consolidated financial statements will be made available on the Internet at https://www.aixtron.com/en/investors/publications.

Report on Expected Developments, Opportunities and Risks

Expected Developments

Future Market Environment

In its report „World Economic Outlook Update“ (January 2021), the IMF forecasts global economic growth of 5.5% in 2021 after the effects of the COVID-19 pandemic, despite all remaining uncertainties, with the strength of the recovery expected to vary significantly between countries depending on, among other things, access to healthcare, the effectiveness of political support and structural characteristics at the beginning of the crisis. At this point in time, AIXTRON does not expect the general global economic environment to have a significant impact on its business development, although the visibility of customers' investment behavior is limited against the background of the still unresolved pandemic and the risk of renewed setbacks for the global economy cannot be excluded.

Market observers are very positive about the development for production equipment in the semiconductor industry in the coming years. According to a December 2020 study by SEMI, the leading global industry association, the total market for investments in so-called wafer fab equipment, which includes AIXTRON's deposition equipment, will increase from USD 59.6 billion in 2019 to USD 76.1 billion in 2022. Of this, Korea, Taiwan, and China account for a large portion of the market, representing approximately 30%, 25%, and 22% of the global market, respectively. According to SEMI, the growth of wafer fab equipment in this context is steadily positive, in contrast to earlier predictions - even in 2020 and despite any COVID-19 effects. Investments in new „leading edge“ technologies and demand for digital end products, e. g. for high-performance and cloud computing, are among the main drivers of this growth.

Irrespective of the market development of the semiconductor industry as a whole, the 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 sales markets:

Sales of power semiconductors made of GaN and SiC materials are mainly driven by the need to increase energy efficiency in global IT infrastructure and data centers in order to curb the rapid increase in energy consumption. It is expected that the use of electric vehicles in the future will lead to an increased use of SiC components both, in the powertrain and in the charging infrastructure in order to better meet the requirements for range and efficiency.

The increasing demand for lasers manufactured on AIXTRON systems is due to the exponentially growing need for fast and energy-efficient optical data communications (cloud computing, video streaming, etc.) as well as the adoption of 3D sensing in consumer electronics (smart phones, televisions) and in access control areas. Also, the progress of industrial digitization and a growing number of semi-autonomous vehicles that use 3D sensing technology will lead to increased demand for lasers.

Finally, AIXTRON's future markets will be determined by the adoption of novel displays in TVs, smartphones and notebooks: both Micro LED displays, whose self-luminous LED pixels can be produced on AIXTRON MOCVD systems, and OLED displays, which can be produced on the OVPD systems of APEVA, are aimed at replacing today's LCD screen technology with innovative, energy-saving alternatives with better brightness, contrast, color fidelity and resolution. The adoption of these novel display technologies will significantly determine the size of AIXTRON's sales markets.

Expected Results of Operations and Financial Position

For the fiscal year 2021, the Group expects a positive revenue development compared to 2020, with customer demand spanning all technology areas. The Executive Board is optimistic about both the favorable short- and long-term outlook, both for demand for MOCVD equipment for the manufacture of lasers for 3D sensor technology or optical data transmission, as well as for LED-based display applications. In particular, with regard to the demand for equipment for the production of power devices based on the wide band gap materials SiC- and GaN (silicon carbide, gallium nitride), the Executive Board again expects an increasing revenue contribution in 2021 compared to 2020.

Based on the current corporate structure, an assessment of the order situation and the budget rate of 1.25 USD/EUR (2020: 1.20 USD/EUR), the Executive Board expects **order intake** in a range between EUR 340 million and EUR 380 million for the Group in fiscal year 2021. With **revenues** in a range between EUR 320 million and EUR 360 million, the Executive Board expects to achieve a **gross margin** of approximately 40% and an **EBIT margin** of approximately 16% of sales in fiscal year 2021. The expectations for 2021 fully include the results of the APEVA Group including all necessary investments to further drive the development of the OLED activities and are under the assumption that the COVID-19 pandemic continues to have no significant impact on the development of our business.

Furthermore, with a view to the AIXTRON Group's sustainability goals, which were redefined in 2020, we are aiming for a discernible reduction in energy consumption in the medium term, as well as a significant expansion of further training measures for our employees.

As in previous years, the Executive Board expects that AIXTRON will not require external bank financing in fiscal year 2021. Furthermore, the Group will also maintain its solid equity base for the foreseeable future.

Overall Statement on the Future Development

AIXTRON's equipment enables the production of lasers as key components for high-speed optical data transmission (cloud computing, Internet of Things), high-frequency chips for 5G mobile networks, or for the production of next-generation displays (OLED displays, Mini- and Micro LED displays). AIXTRON technology also enables highly efficient energy conversion in the field of power supply for server farms or consumer electronics, or for electric vehicles and their charging infrastructure (GaN and SiC devices). Lasers, which can be manufactured on AIXTRON equipment, are key components, for example, for 3D sensor technology in smartphones or in increasingly complex vehicle assistance systems.

Based on AIXTRON's proven ability to develop and market innovative deposition equipment in flexible numbers for multiple customer markets, the Executive Board is convinced of the positive future prospects for the Group and its target markets.

As of December 31, 2020, AIXTRON did not have any legally binding agreements regarding financial investments, acquisitions or disposals companies or businesses.

Risk Report

Risk Management System

AIXTRON's risk management system is centrally controlled and involves all major organizational units of the AIXTRON Group in the process. The Board Member of AIXTRON SE in charge of the Compliance area is responsible for establishing an effective risk management system and informs the Executive Board and Supervisory Board at regular intervals or, if necessary, ad-hoc.

The primary objectives of the system are to support the achievement of strategic business objectives and to identify potential risks at an early stage that could negatively affect their achievement. The risk management system supports the Executive Board in the systematic and rational management of identified risks by defining, prioritizing and tracking of risk-reducing measures.

The periodic quarterly risk inventory is initiated and monitored by the central risk manager. All risk officers from the operating divisions are questioned about current developments of already identified risks and measures to reduce them. The results are compiled at a central level and discussed in a risk committee prior to informing the Supervisory Board.

AIXTRON uses a risk management software to support the process. All risk officers have access to the system. This ensures that abrupt changes in the risk situation or newly identified risks are reported by the risk officers from the operating divisions and integrated into the risk portfolio or the risk reporting.

At AIXTRON, all single risks are assessed and classified applying the same method. The probability of occurrence is measured in four categories, as is the potential amount of loss if the risk materializes. The amount of loss relates to the impact on the AIXTRON Group's operating result (EBIT); in individual cases, a possible cash outflow is used as the amount of loss. The probability of risks occurring is broken down into:

- Remote = < 5%
- Unlikely = 5% - 10%
- Possible = >10% - 50%
- Likely = >50% - 100%

Wherever possible, risks with a probability of occurrence of more than 50% are recognized as provisions in the financial statements or taken into account in planning. In addition, the recognition of contingent liabilities in the financial statements is also reviewed for lower probabilities of occurrence. Please refer to Note 28 in the Notes to the Consolidated Financial Statements.

The criterion used to assess the potential financial impact of a risk on the AIXTRON Group's earnings (EBIT) is the potential net loss (measured as a percentage of equity):

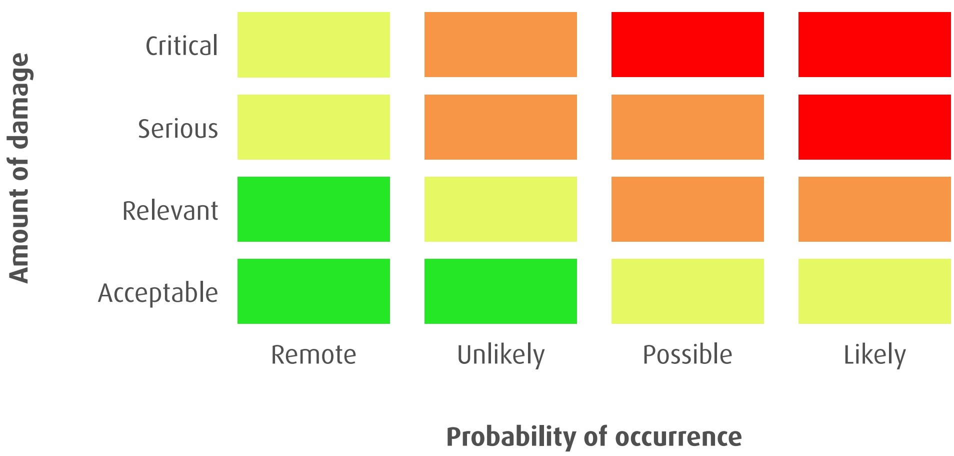
- Acceptable = <0.4%
- Relevant = 0.4% - 2%
- Serious = >2% - 4%
- Critical = > 4%

The net loss describes the potential loss in the event of a risk occurring, taking into account the effects resulting from the risk reduction measures. A risk matrix is derived from this assessment, which divides the risks of the AIXTRON Group into the following four risk classes according to their importance or urgency (see chart for color scale):

- Acceptable Risk (green)
- Relevant Risk (yellow)
- Serious Risk (orange)
- Substantial Risk (red)

The risks classified as substantial are those that are significant in terms of the threat to the AIXTRON Group as a going concern as defined by German Accounting Standard (GAS) 20.

Risk Map



Single Risk Factors

The following risks could potentially have a substantially adverse impact on the revenue, the financial position, the net assets, the Company's liquidity and the market price of the AIXTRON share, and on the actual outcome of matters which the forward-looking statements contained in this annual report refer to. The risks described below are not the only ones the Group faces. There may be additional 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. There may also be risks that AIXTRON currently considers to be immaterial, but which may ultimately also have a significantly adverse effect on the Group. Further information on forward-looking statements can be found in the section „Forward Looking Statements".

The following risks were assessed as material according to DRS 20:

Information technology (IT) and information security (IS) risks

Information is a valuable asset for AIXTRON which needs to be protected adequately. Due to increasing digitization and interconnectedness, a large proportion of information is generated, processed and stored with IT systems. Therefore, the security of information and IT systems are mutually dependent. AIXTRON defines IT and IS risks as a violation of the integrity, confidentiality or asset availability.

The Group has implemented comprehensive technical and organizational measures to protect information from unauthorized access, unwanted modification or deletion. The measures taken to ensure information security are regularly reviewed and adjusted as necessary. By continuously sensitizing employees, they are enabled to take personal responsibility for ensuring greater security in handling IT-supported information and to adequately counter the threats and risks associated with handling IT-supported information assets.

Due to the complexity of today's IT environment and increasingly intense threats, AIXTRON cannot fully rule out that information assets may be compromised nor a subsequent unauthorized disclosure or manipulation of information assets.

In part, AIXTRON uses external service providers to provide IT services and systems. Reputation, security aspects and the compliance of service providers with the requirements of the data protection regulation play a key role in their selection.

The categorization as a significant risk is based on the possible probability of occurrence and a significant level of damage. The elimination of damage in the event of a breach of the integrity, confidentiality and/or asset availability that AIXTRON classifies as critical would involve a high financial expense that is nonetheless not considered to be a threat to the Group's continued existence.

Market- and competition-related risks

AIXTRON's target markets are globally distributed, with a regional focus on Asia. AIXTRON is therefore exposed to global economic cycles and geopolitical risks, e. g. the trade conflict between the USA and China, which could have a negative impact on the Group's business. Such risks cannot be influenced by the Group.

The markets addressed by the Group may be cyclical and therefore extremely volatile. The timing, duration and intensity of these industry cycles are difficult to predict and to be influenced by the Group. In order to spread market-related risks, AIXTRON therefore diversifies and offers products in different markets.

AIXTRON competes with other companies in each of these markets. There is always the possibility that new competitors may enter the market, or that established competitors may adopt strategies or bring products to market that could adversely affect AIXTRON's business development.

The Group continuously monitors and assesses market developments. In order to reduce the risk of dependence on individual markets and their fluctuations, AIXTRON has implemented a management system to ensure that market developments are recognized at an early stage and exploited optimally.

The reason why market- and competition-related risks are classified as substantial risks is to be seen in AIXTRON's high medium to long-term sales and profit expectations.

Technological risks

The technologies offered by AIXTRON are in part enabling new and disruptive applications. This often means long sales and qualification cycles for the Company's products, as demanding technical or other customer specifications have to be met (sometimes for the first time) before a business transaction can be concluded.

Due to the often long development and qualification cycles for many of AIXTRON's products, AIXTRON may develop technologies and products for markets or application areas in which the general conditions of the sales markets or the strategic plans of potential customers change fundamentally during the development cycle.

The continued focus on research and development activities in the past fiscal year and the intensive involvement of external technology partners are still considered by the Group's management to be suitable measures to reduce this risk.

The OVPD process, developed by APEVA together with a customer and aimed at the manufacture of deposition equipment for the deposition of organic semiconductor materials, is such an innovative technology. The business purpose of APEVA is the development, qualification and production of the technology for the production of OLED displays at customer sites.

Qualification of the Gen2 facility was successfully completed by APEVA in fiscal 2020. At the time of preparation of the management report, no order for a production-size OVPD deposition chamber has been placed. Should such an order for a production-size OVPD deposition chamber fail to materialize, this would represent a development-impairing fact that could develop into a going-concern risk for APEVA. From today's perspective it appears possible that in this case APEVA's business operations would be discontinued.

This could have a negative impact on the future results of operations of the AIXTRON Group in the form of restructuring and liquidation expenses. Such expenses explicitly do not represent a going concern risk for AIXTRON at this point in time.

The reason why AIXTRON generally classifies technology risks as substantial risks is based on the Group's high medium to long-term revenue and profit expectations. If it turns out that a technology risk has materialized and the introduction of a new technology cannot be realized as planned, this could result in planned and forecast revenues being exposed to the risk of postponement or cancellation, and development activities thus being refinanced later than planned or not at all.

AIXTRON's risk management system considers the following risks to be not material to the Group:

- Currency risk and other financial risks
- Sourcing and production risks
- Staff-related risks
- Legal risks
- Risks relating to patents and intellectual property
- COVID-19 pandemic

The progress and impact of the COVID-19 pandemic are being continuously monitored. For this purpose, among other things, a crisis team has been formed and protective and preventive measures have been introduced. In addition, the Executive Board regularly communicates the current situation - i. e., current developments in general and at AIXTRON, as well as the measures derived therefrom - to the employees. As part of risk management, the effects, measures, and outlook regarding the current pandemic situation are recorded, discussed, and reported in our quarterly risk inventory.

Overall picture of the risk situation of AIXTRON SE

Compared to fiscal year 2019, the overall risk situation of AIXTRON SE and its subsidiaries in 2020 remains unchanged. The further focusing of research and development activities, with a focus on the renewal of the product portfolio, streamlines the risk portfolio and thus improves the exploitation of opportunities and the active avoidance of risks in the markets AIXTRON addresses.

Neither in fiscal year 2020 nor at the time of writing this Management Report has the Executive Board of AIXTRON SE identified risks to the Company that could threaten its continued existence. Even if the existential risk for APEVA were to occur, the consequences for the entire Group would not be a threat to its continued existence.

Opportunities Report

AIXTRON's core competence is the development of cutting-edge technology for the precise deposition of complex semiconductor structures and other functional materials. The Company has achieved globally leading positions in these areas. In order to defend or expand these positions, AIXTRON invests in appropriate research and development projects, such as for MOCVD systems to produce semiconductors for use in lasers, power electronics or LEDs. Management will maintain the focus on this core competence in order to successfully develop both existing as well as new markets.

Important market segments in optoelectronics include consumer electronics, data communications and display technology. The trend towards optical data transmission also across shorter distances, e.g. in data centers, as well as the application of 3D sensor systems in mobile end devices such as especially smartphones, is generating an increasing demand for edge emitting laser (EEL) and surface emitting laser (VCSEL) systems. AIXTRON anticipates a further increase in demand over the coming years in this area. In addition, AIXTRON notes continuously high demand for systems for the production of red-orange-yellow (ROY), infrared and UV LEDs. An additional growth segment in the area of optoelectronic applications are direct-emitting LED displays. A commercial deployment of Micro LED displays in particular has the potential to generate significant system demand for this demanding application. These display technologies have potential in a diverse number of end applications within consumer electronics.

Important market segments for power electronics based on wide-band-gap materials such as gallium nitride (GaN) and silicon carbide (SiC) are the automotive, energy, telecommunications and consumer electronics industries. The development of energy-efficient solutions for AC-DC converters, inverters and high-frequency power amplifiers are increasingly gaining in importance. The trend towards electrification of vehicles and there charging infrastructure using SiC-based components plays an important role in this regard. GaN-based components, e. g. for fast and/or wireless charging of mobile devices, are in the market launch phase. GaAs-based or GaN-based high frequency components will be used among others for the signal transmission of 5G networks. In these fields, AIXTRON expects demand for production systems to increase as the market penetration of these applications increasingly gains momentum.

Following the completion of the Gen2 project, APEVA is currently conducting customer discussions on a final qualification project for series production. The OVPD technology enables highly efficient deposition of organic materials especially on large area substrates and offers a number of advantages over currently used technologies, especially in material consumption and yield. Successful qualification of OVPD technology at production scale would open up significant growth opportunities in the display sector.

AIXTRON expects the following market trends and opportunities in the relevant end user markets could possibly have a positive effect on future business:

Short Term:

- Increasing adoption of compound semiconductor-based lasers for 3D sensor systems in mobile devices as well as sensors for infrastructure applications.
- Further increasing demand for lasers for optical data transmission of large volumes, such as for video streaming and Internet-of-Things (IoT) applications.

- Increasing use of LEDs and specialty LEDs (esp. red-orange-yellow, UV or IR) for displays and other applications.
- Increasing use of wide-band-gap GaN- or SiC-based components for energy-efficient power electronics devices in autos, in consumer electronics, in mobile devices and in IT infrastructure.
- Increasing use of GaAs-based devices in mobile devices (e. g. smartphones) for 5G mobile communications
- Increasing use of GaN-based devices in the field of 5G network infrastructure
- Order for production-scale qualification of OVPD technology

Mid- 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 power management.
- Adaptation of Micro LED displays in the mass market
- Development of alternative LED applications, such as visual-light communication technology or Micro LED displays.
- Increased use of compound semiconductor-based laser sensors for autonomous driving.
- Use of GaN-based devices in mobile terminals (e. g. smartphones) for the millimeter-wave range of 5G and 6G mobile communications.
- Increased development activities for high performance solar cells made of compound semiconductor.

Overall Picture of Opportunities

As part of the assessment of our business opportunities, options for investments or development projects are reviewed and prioritized for their potential value contribution to ensure an effective allocation of resources. We focus specifically on growth markets that are positively influenced by global trends such as increasing electromobility, digitization, and networking, among others, in order to systematically and optimally exploit the opportunities that arise for the sustainable and profitable business development of the Group.

Should identified opportunities be considered probable, then these are included in the business plans and short-term forecasts. Any further trends or events that could lead to a positive development for our net assets, financial position and results of operations are being observed and may have a positive impact on our medium to long-term prospects.

Internal Control System ICS

The AIXTRON Group's internal control system covers both the accounting process of AIXTRON SE and the Group accounting process. It defines controls and monitoring activities that are measures designed to ensure the proper conduct of business activities, reliable financial reporting, and compliance with laws and regulations. An appropriate control system, taking into account the size of the Company and its business activities, is essential to effectively manage operational, financial and other risks.

Controls are defined at risk points in the accounting process to help ensure that the consolidated financial statements are prepared in accordance with the rules. A separation of functions appropriate to the size of the Company and the application of the dual control principle reduce the risk of fraudulent acts.

A global IT system is used to prepare the annual financial statements and the consolidated financial statements and for consolidation, ensuring uniform and consistent procedures and data security. Central system backups are regularly performed for the relevant IT systems to prevent data loss. In addition, defined authorizations and access restrictions are part of the security concept.

The Group function Finance & Administration is technically and organizationally in charge of the preparation of 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 guidelines on content and timing, as well as accounting policies and valuation principles. The Compliance department regularly reviews the observance and effectiveness of the controls and is thus integrated into the overall process.

Through the sufficiency of coordinated processes, systems and controls the Executive Board ensures that the Group accounting process is in compliance with IFRS, the annual financial statement in accordance with the German Commercial Code (HGB) and other accounting-related regulations and laws and is reliable.

Legal Disclosures

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

The Group Corporate Governance Statement includes the statement pursuant to § 289f of the German Commercial Code (HGB) for AIXTRON SE and the statement pursuant to § 315d of the German Commercial Code (HGB) for the AIXTRON Group. It is published on the homepage of AIXTRON SE at www.aixtron.com/de/investoren/corporate-governance.

Remuneration Report

The remuneration report pursuant to §§ 289a para. 2 and 315a para. 2 of the German Commercial Code (HGB) is part of the Combined Management Report and can be found in the Corporate Governance chapter of the Annual Report.

Information concerning § 289a in conjunction with § 315a of the German Commercial Code (HGB) on takeovers

The share capital of AIXTRON SE as of December 31, 2020 amounted to EUR 112,927,320 (December 31, 2019: EUR 112,927,320; December 31, 2018: EUR 112,927,320) divided into 112,927,320 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.

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.

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)

	2020 Dec. 31	Approved since	Expiration date	2019 Dec. 31	2018 Dec. 31	2020-2019
Subscribed shares	112,927,320	--	--	112,927,320	112,927,320	0
Authorised capital 2018 - Capital increase in cash or in kind with or without subscription rights for existing shareholders	45,944,218	16.05.2018	15.05.2023	45,944,218	45,944,218	0
Authorised capital 2017 - cash capital increase with subscription rights for existing shareholders	10,518,147	09.05.2017	08.05.2022	10,518,147	10,518,147	0
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	25,000,000	16.05.2018	15.05.2023	25,000,000	25,000,000	0
Conditional Capital II 2012 - Stock Option Program 2012	4,208,726	16.05.2012	15.05.2017	4,208,726	4,208,726	0
Conditional Capital II 2007 - Stock Option Program 2007	2,686,523	22.05.2007	21.05.2012	2,686,523	2,686,523	0

In accordance with § 71 (1) no. 8 German Corporations Act, AktG, the Company is authorized until May 15, 2023, with the approval of the Supervisory Board, to purchase its own shares representing an amount of up to EUR 11,292,473 of the share capital. 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; § 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, 2020, about 20% of AIXTRON shares were held by private individuals, most of whom were domiciled in Germany. Around 80% were held by institutional investors. The largest shareholders according to voting rights notifications were T. Rowe Price International, Artisan Partners und Invesco, each holding more than 5% of AIXTRON shares through their funds at year-end 2020. According to the definition of Deutsche Börse AG, 99% of AIXTRON's share capital was in free float.

The Supervisory Board appoints and removes from office the members of the Executive Board, who may serve for a maximum term of six years before being reappointed.

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 accordance with §§ 315b et seq. HGB

The AIXTRON Group's Sustainability Report (CSR Report) is available on our website at www.aixtron.com/en/investors/publications.

GROUP CONSOLIDATED FINANCIAL STATEMENTS

Consolidated income statement

in EUR thousands	Note	2020	2019	2018
Revenues	3	269,247	259,627	268,811
Cost of sales		160,960	150,882	151,190
Gross profit		**108,287**	**108,745**	**117,621**
Selling expenses		9,723	9,945	9,393
General administration expenses		17,950	16,455	18,350
Research and development costs	4	58,379	54,955	52,204
Other operating income	5	14,536	12,541	6,123
Other operating expenses	6	1,941	934	2,331
Operating expenses		**73,457**	**69,748**	**76,155**
Operating result		**34,830**	**38,997**	**41,466**
Finance Income		348	865	1,011
Finance Expense		104	143	9
Net Finance Income	8	**244**	**722**	**1,002**
Profit before taxes		**35,074**	**39,719**	**42,468**
Taxes on income	9	604	7,241	-3,390
Profit for the year		**34,470**	**32,478**	**45,858**
Attributable to:				
Owners of AIXTRON SE		34,879	32,833	45,862
Non-controlling interests		-409	-355	-4
Basic earnings or loss per share (EUR)	20	0.31	0.29	0.41
Diluted earnings or loss per share (EUR)	20	0.31	0.29	0.41

See acCompanying notes to consolidated financial statements.

Consolidated statement of other comprehensive income

in EUR thousands	Note	2020	2019	2018
Profit for the year		**34,470**	**32,478**	**45,858**
Items that will not be reclassified subsequently to Profit or Loss:				
Remeasurement of defined benefit obligation		-21	-47	8
Items that may be subsequently reclassified to Profit or Loss:				
Reclassification of currency translation differences		0	0	-6
Currency translation adjustment	19	-3,344	1,180	2,936
Other comprehensive income/loss		**-3,365**	**1,133**	**2,938**
Total comprehensive income		**31,105**	**33,611**	**48,796**
Attributable to:				
Owners of AIXTRON SE		31,535	33,935	48,801
Non-controlling interests		-430	-324	-5

See acCompanying notes to consolidated financial statements.

Consolidated statement of financial position

in EUR thousands	Note	31.12.20	31.12.19
Assets			
Property, plant and equipment, and leased assets	11	63,469	64,539
Goodwill	12	70,977	72,369
Other intangible assets	12	2,876	2,372
Other non-current financial assets	13	60,497	446
Deferred tax assets	14	14,415	11,258
Total non-current assets		**212,234**	**150,984**
Inventories	15	79,087	79,022
Trade receivables	16	41,304	29,203
Current tax receivables	10	949	298
Other current assets	16	7,171	5,134
Other financial assets	17	62,422	27,500
Cash and cash equivalents	18	187,259	270,819
Total current assets		**378,192**	**411,976**
Total assets		**590,426**	**562,960**
Liabilities and equity			
Share capital	19	111,843	111,840
Additional paid-in capital		376,399	375,273
Retained earnings or losses		4,903	(29,955)
Currency translation reserve		2,241	5,564
Equity attributable to the owners of AIXTRON SE		**495,386**	**462,722**
Non-controlling interests		992	1,422
Total equity		**496,378**	**464,144**
Other non-current payables	26	2,617	2,548
Other non-current provisions	23	3,979	1,938
Total non-current liabilities		**6,596**	**4,486**
Trade payables	24	10,846	19,367
Contract liabilities for advance payments	25	50,824	51,051
Other current provisions	23	16,188	16,122
Other current liabilities	24	7,379	4,197
Current tax payables	10	2,215	3,593
Total current liabilities		**87,452**	**94,330**
Total liabilities		**94,048**	**98,816**
Total liabilities and equity		**590,426**	**562,960**

See acCompanying notes to consolidated financial statements.

Consolidated statement of cash flow

in EUR thousands	Note	2020	2019	2018
Cash flow from operating activities				
Net Profit		34,470	32,478	45,858
Adjustments to reconcile net profit to net cash from operating activities				
Expense from share-based payments		1,129	889	1,531
Depreciation, amortization and impairment expense	11, 12	9,547	10,141	9,941
Net result from disposal of property, plant and equipment	5, 6	51	35	-480
Deferred income taxes	9	-3,310	1,657	-9,301
Interest and lease repayments shown under investing or financing activities	8, 26	619	375	-1,026
Change in				
Inventories		-677	-5,185	-30,422
Trade receivables		-12,880	11,521	-20,074
Other assets		-3,312	6,278	-5,234
Financial assets at FVTPL		-62,422	0	0
Trade payables		-7,742	-8,713	13,131
Provisions and other liabilities		2,222	-3,609	-14,376
Non-current liabilities		2,220	-378	-151
Advance payments from customers		923	-2,682	22,528
Net cash provided by operating activities		**-39,162**	**42,807**	**11,925**
Investing				
Capital expenditures in property, plant and equipment	11	-7,847	-6,427	-8,064
Capital expenditures in intangible assets	12	-1,443	-1,329	-1,141
Proceeds from disposal of fixed assets		24	0	606
Proceeds from disposal of intangible assets		0	53	0
Interest received	8, 26	285	865	1,026
Bank deposits with a maturity of more than 90 days	17	-32,500	0	-7,500
Net cash provided by (used in) investing activities		**-41,481**	**-6,838**	**-15,073**
Financing				
Transactions with non-controlling interests in subsidiaries		0	0	10,400
Proceeds from the issue of equity shares		0	0	11
Interest paid	8, 26	-27	-143	0
Repayment of lease liabilities	26	-877	-1,097	N.A
Net cash provided by (used in) financing activities		**-904**	**-1,240**	**10,411**
Effect of changes in exchange rates on cash and cash equivalents		-2,013	-117	2,418
Net change in cash and cash equivalents		-83,560	34,612	9,681
Cash and cash equivalents at the beginning of the period		270,819	236,207	226,526
Cash and cash equivalents at the end of the period	**18**	**187,259**	**270,819**	**236,207**
Income taxes paid		-5,973	-3,719	-6,844
Income taxes received		271	318	265

See accompanying notes to consolidated financial statements.

Consolidated statement of changes in equity

in EUR thousands	Subscribed capital under IFRS	Additional paid-in capital	Currency translation	Retained earnings or losses	Shareholders' equity attributable to the owners of AIXTRON SE	Non-controlling interests	Total
Balance January 1, 2018	**111,802**	**372,912**	**1,481**	**-117,289**	**368,906**	**0**	**368,906**
Share based payments		1,531			1,531		1,531
Transactions with non-controlling interests in subsidiaries		-3	6	9,333	9,336	1,064	10,400
Issue of shares	38	-27			11		11
Net profit for the year				45,862	45,862	-4	45,858
Other comprehensive income			2,939		2,939	-1	2,938
Total comprehensive income for the year			2,939	45,862	48,801	-5	48,796
Balance December 31, 2018 and January 1, 2019	**111,840**	**374,413**	**4,426**	**-62,094**	**428,585**	**1,059**	**429,644**
Share based payments		889			889		889
Reclassification of share based payments equity credit		-29		29	0		0
Adjustment arising from change in non-controlling interests in subsidiaries			-11	-676	-687	687	0
Net profit for the year				32,833	32,833	-355	32,478
Other comprehensive income			1,149	-47	1,102	31	1,133
Total comprehensive income for the year			1,149	32,786	33,935	-324	33,611
Balance December 31, 2019 and January 1, 2020	**111,840**	**375,273**	**5,564**	**-29,955**	**462,722**	**1,422**	**464,144**
Share based payments		1,129			1,129		1,129
Issue of shares	3	-3			0		0
Net profit for the year				34,879	34,879	-409	34,470
Other comprehensive income			-3,323	-21	-3,344	-21	-3,365
Total comprehensive income for the year			-3,323	34,858	31,535	-430	31,105
Balance December 31, 2020	**111,843**	**376,399**	**2,241**	**4,903**	**495,386**	**992**	**496,378**

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 also
- the requirements of § 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 22, 2021 for examination.

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 30.

(B) Basis of accounting

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

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 requires management to make estimates and assumptions 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 underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised 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. Judgments which have a significant effect on the Group's financial statements are described in note 35.

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 30). 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. Revenues 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 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 applied IFRS 16 on 1 January 2019 using the cumulative catch-up approach and therefore comparative information has not been restated and is presented under IAS 17. The details of accounting policies under both IAS 17 and IFRS 16 are presented separately below.

Policies applicable from 1 January 2019.

The Group assesses whether a contract is, or contains, a lease, at inception of the contract. The Group recognises 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 recognises 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 recognises 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 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 liability is measured at amortised 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.

Policies applicable prior to 1 January 2019.

Prior to 2019 all leases were classified as operating leases. Rental payments for assets under operating leases were recognised in profit or loss on a straight-line basis over the lease term. Lease incentives received were recognised as an integral part of the total lease expense, over the lease term.

(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 annually 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 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 these categories 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 to 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 "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 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 allows members of the Executive Board, management and employees of the Group to acquire shares of AIXTRON SE. 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 incentives

Executive Board remuneration system at AIXTRON SE consists long-term variable remuneration incentives 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 29.

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 performance 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 that affect the warranty liability include the historical and anticipated rates of warranty claims and cost per 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 (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.

(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 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 for the sale of equipment which is built for a specific customer and does not have an alternative use is recognized over time based on milestones for the particular contract and the extent to which the Group's performance obligations have been satisfied. Typically, these contracts relate to a small number of upgrades to equipment already belonging to the customer.

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 is recognized either at the point in time at which the service, such as a repair, is delivered and the customer obtains control of the related item, or for services such as extended warranty, revenue is recognized over time during the period in which it is provided.

AIXTRON gives no general rights of return, settlement discounts, credits or other sales incentives within its terms of sale.

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.

The Group uses a combination of methods such as an estimated cost plus margin approach, and allocating discounts from list price proportionately to each performance obligation when determining the consideration for each performance obligation.

The portion of equipment revenue related to installation services is determined based on either the fair value of the installation services 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.

Fair value of the installation services is determined based on the price that would be received in an orderly transaction in the principal market for such equipment at the measurement date under current market conditions.

(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) and the European Union 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) 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. 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. The deferred taxes are calculated, based on tax rates applicable at the balance sheet date or known to be applicable in the future. Effects of changes in tax rates on the deferred tax assets and liabilities are recognized upon substantively enacted amendments to the law.

(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

The cash flow statement is prepared in accordance with IAS 7. Cash flows from operating activities are prepared using the indirect method. Cash flows from taxes are included in cash flows from operating activities.

(T) Adoption of new and revised standardsS

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 Board that are effective for an annual period that begins on or after 1 January 2020. Their adoption has not had any material impact on the disclosures or on the amounts reported in these financial statements.

Initial application of Interest Rate Benchmark Reform amendments to IFRS 9 and IFRS 7 (Phase 1)	The Group has adopted the Interest Rate Benchmark Reform amendments to IFRS 9, IAS 39 and IFRS 7. These amendments modify specific hedge accounting requirements. The group has not had any hedge contracts during the period covered by this annual report and therefore the change has had no impact on the Group.

Initial application of COVID-19 Related Rent Concessions Amendment to IFRS 16	In current year, the IASB issued COVID-19 Related Rent Concessions (Amendment to IFRS 16) that provides practical relief to lessees in accounting for rent concessions occurring as a direct consequence of COVID-19, by introducing a practical expedient to IFRS 16. The Company has had no COVID-19 related rent concessions and therefore it has had no impact of the Group results.
Amendments to Conceptual Framework and to References to the Conceptual Framework in IFRS Standards	The Group has adopted the amendments for the first time in the current year. The amendments include consequential amendments to affected Standards so that they refer to the new Framework. This has had no impact on the Group results.
Amendments to IFRS 3 Definition of a business	The Group has adopted the amendments to IFRS 3 for the first time in the current year. The amendments clarify the definition of a business. This has had no impact on the Group results.
Amendments to IAS 1 and IAS 8 Definition of material	The Group has adopted the amendments to IAS 1 and IAS 8 for the first time in the current year. The amendments make the definition of material in IAS 1 easier to understand and are not intended to alter the underlying concept of materiality in IFRS Standards. This has had no impact on the Group results.

New and revised IFRS Standards in issue but not yet effective

At the date of authorization of these financial statements, the following Standards and Interpretations which have not been applied in these financial statements were in issue but not yet effective:

IFRS 17	Insurance Contracts
IFRS 10 and IAS 28 (amendments)	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture
Amendments to IAS 1	Classification of Liabilities as Current or Non-current
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	Amendments to IFRS 1 First-time Adoption of International Financial Reporting Standards, IFRS 9 Financial Instruments, IFRS 16 Leases, and IAS 41 Agriculture
Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16	Interest Rate Benchmark Reform (Phase 2)

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.

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 2018 to 2020 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).

AIXTRON values the equipment revenue deferred for equipment installation services, using a market based approach, based on observed transactions for all such contracts involving two elements where revenue has been recognized during the financial year. This is level 2 within the fair value hierarchy described in IFRS 13. The fair value of the installation services is taken as the most frequently observed (modal value) percentage of the contract price payable upon completion of the installation service. For the years 2018 to 2020, 10% of the revenue related to equipment is allocated for installation services.

For contracts where equipment revenue is recognized in two elements, the same method is also used to determine the fair value of products delivered, which is taken to be the most frequently observed (modal value) percentage of the contract value payable upon delivery of the equipment to the customer. This is also level 2 in the fair value hierarchy.

Segment revenues and results

in EUR thousands	Note	2020	2019	2018
Equipment revenues		223,018	207,274	221,758
Spares revenues		41,348	48,454	42,709
Services revenues		4,881	3,899	4,344
Revenue from external customers		**269,247**	**259,627**	**268,811**
Inventories recognized as an expense	15	113,801	106,064	129,130
Reversals of inventory provisions	15	-1,029	-646	-16,361
Obsolescence and valuation allowance expense for inventories	15	1,918	4,627	3,018
Personnel expense	7	66,081	60,267	55,181
Depreciation and impairment	11	11,525	9,119	7,631
Amortization	12	931	1,022	779
Other expenses		53,904	51,884	52,144
Foreign exchange losses	5	1,822	834	1,946
Other operating income	5	-14,536	-12,541	-6,123
Segment profit		**34,830**	**38,997**	**41,466**
Finance income	8	348	865	1,011
Finance expense	8	-104	-143	-9
Profit before tax		**35,074**	**39,719**	**42,468**

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.

As at the end of each reporting period there are contracts with customers which are only partly completed. These mainly relate to installation of equipment which necessarily takes place after shipment. The contractual transaction price allocated to partially completed or unsatisfied performance obligations at December 31, 2020 is kEUR 28,935 (31 December 2019 kEUR 16,743).

Management expects that approximately 80% of the transaction price allocated to the unsatisfied contracts as of the year ended 2020 will be recognized as revenue during 2021. The remaining amount will be recognized during the next financial year.

Revenues of kEUR 45,341 were realized in 2020 from the kEUR 51,051 of Contract liabilities for advance payments outstanding at the end of 2019. Revenues of kEUR 50,884 were realized in 2019 from the kEUR 53,314 of Contract liabilities for advance payments outstanding at the end of 2018.

Segment assets and liabilities

in EUR thousands	31.12.20	31.12.19
Semi-conductor equipment segment assets segment assets	264,884	253,085
Unallocated assets	325,542	309,875
Total Group assets	**590,426**	**562,960**

in EUR thousands	31.12.20	31.12.19
Semi-conductor equipment segment liabilities segment liabilities	91,833	95,223
Unallocated liabilities	2,215	3,593
Total Group liabilities	**94,048**	**98,816**

For the purpose of monitoring segment performance and allocating resources all assets other than tax assets, cash 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 increased by kEUR 60,051 during 2020 (increased by kEUR 16 during 2019).

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	2020	2019	2018
Asia	196,973	177,486	144,697
Europe	40,954	40,263	69,710
Americas	31,320	41,878	54,404
Total	**269,247**	**259,627**	**268,811**

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	2020	2019	2018
Germany	12,235	8,316	17,379
USA	29,849	39,037	54,332
China	153,478	119,655	72,594
Taiwan	16,140	32,982	43,205

Revenues from all countries outside Germany were kEUR 257,012, kEUR 251,311, and kEUR 251,432 for the years 2020, 2019, and 2018 respectively.

In 2020 sales to one customer represented 10.4% of Group revenue, with no other customer exceeding 10%. During 2019 sales to one customer represented 11.1% of Group revenue, with no other customer exceeding 10%. In 2018 sales to one customer represented 10.2% of Group revenues, with no other customer exceeding 10%.

in EUR thousands	31.12.20	31.12.19
Asia	1,124	1,894
Europe excluding Germany	14,653	13,701
Germany	111,810	113,338
USA	9,735	10,793
Total Group non current assets	**137,322**	**139,726**

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, were kEUR 58,379, kEUR 54,955 and kEUR 52,204 for the years ended December 31, 2020, 2019 and 2018 respectively.

After deducting project funding received and not repayable, net expenses for research and development were kEUR 50,327 kEUR 47,089 and kEUR 47,476 for the years ended December 31, 2020, 2019 and 2018 respectively.

5. Other operating income

in EUR thousands	2020	2019	2018
Research and development funding	8,052	7,866	4,728
Income from resolved contract obligations	315	769	0
Compensation received	535	1,427	0
Foreign exchange gains	1,027	2,098	120
Gain on disposal of assets	1	0	606
Reversals of impairment allowance	2,909	0	0
Other	1,697	381	669
	14,536	**12,541**	**6,123**

in EUR thousands	2020	2019	2018
Foreign exchange gains	1,027	2,098	120
Foreign exchange losses (see note 6)	-1,822	-834	-1,946
Net foreign exchange gains (losses)	**-795**	**1,264**	**-1,826**

The total amount of exchange gains and losses (see also note 6) recognized in profit or loss was a loss of kEUR 795 (2019 gain kEUR 1,264; 2018 loss kEUR 1,826).

Compensation received in 2020 of kEUR 535 (2019 1,427; 2018 nil) is an insurance claim for damages incurred during shipment of goods.

In 2020 the gain on disposal of assets amounted to kEUR 1. There were no gains on disposal of assets in 2019. The gain on disposal of assets of kEUR 606 in 2018 relates to the disposal of equipment.

6. Other operating expenses

in EUR thousands	2020	2019	2018
Foreign exchange losses	1,822	834	1,946
Losses from the disposal of fixed assets	52	35	126
Additions to allowances for receivables or write-off of receivables	12	65	185
Financial assets at FVTPL	16	0	0
Other	39	0	74
	1,941	**934**	**2,331**

The net loss of kEUR 16 in 2020 arose on financial assets required to be measured at FVTPL (2018 nil too).

7. Personnel expense

in EUR thousands	2020	2019	2018
Payroll	56,263	51,285	46,508
Social insurance contributions	7,441	7,010	6,154
Expense for defined contribution plans	1,248	1,083	995
Share based payments	1,129	889	1,524
	66,081	**60,267**	**55,181**

8. Net finance income

in EUR thousands	2020	2019	2018
Finance income			
Interest income on bank deposits	348	865	1,011
On financial assets measured at amortised cost	348	865	1,011
Finance expense			
Interest paid on bank overdrafts and balances	-35	-56	-9
Interest expense on lease liabilities	-69	-87	
On financial liabilities not at fair value through profit or loss and on financial assets	-104	-143	-9
Net finance income	**244**	**722**	**1,002**

Interest income relates to interest on cash and cash equivalents, and other financial assets.

9. Income tax expense/benefit

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

in EUR thousands	2020	2019	2018
Current tax expense (+)/current tax income (-)			
for current year	3,958	5,313	6,024
for prior years	-44	271	-113
Total current tax expense	**3,914**	**5,584**	**5,911**
Deferred tax expense (+)/deferred tax income (-)			
from temporary differences	-96	37	-231
-Income/expense from changes in local tax rate	2	0	0
from reversals and write-downs	-3,216	1,620	-9,070
Total deferred tax income/expense	**-3,310**	**1,657**	**-9,301**
Taxes on income/loss	**604**	**7,241**	**-3,390**

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

in EUR thousands	2020	2019	2018
Income/loss before income taxes			
Germany	26,999	36,672	39,290
Outside Germany	8,075	3,047	3,178
Total	**35,074**	**39,719**	**42,468**
Income tax expense/income			
Germany	-400	5,592	-4,937
Outside Germany	1,004	1,649	1,547
Total	**604**	**7,241**	**-3,390**

The Group's effective tax rate is different from the German statutory tax rate of 32.80% (2019: 32.80%; 2018: 32.80%) which is based on the German corporate income tax rate, including solidarity surcharge, and trade tax.

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

in EUR thousands	2020	2019	2018
Net result before taxes	**35,074**	**39,719**	**42,468**
Income tax expense/benefit (German tax rate)	11,504	13,027	13,930
Effect from differences to foreign tax rates	-1,160	-657	-854
Non-deductible expenses	464	184	343
Tax losses not recognized as assets	173	1,245	16
Recognition / derecognition of deferred tax assets	-3,665	378	-9,164
Effect from changes in local tax rate	2	0	0
Effect of the use of loss carryforwards	-5,986	-7,261	-7,765
Effect of permanent differences	3	18	8
Other	-731	307	96
Taxes on income/loss	**604**	**7,241**	**-3,390**
Effective tax rate	**1.7%**	**18.2%**	**-8.0%**

10. Current tax receivable and payable

As of December 31, 2020 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 kEUR 949 (2019: kEUR 298) and kEUR 2,215 (2019: kEUR 3,593) respectively.

11. Property, plant and equipment and leased assets

in EUR thousands	Land and buildings	Technical equipment	Other equipment	Assets under construction	Leased land and buildings	Leased equipment	Total
Cost							
Balance at January 1, 2019	64,590	71,761	14,332	3,229	3,671	257	157,840
Additions	274	1,370	1,402	3,242	64	75	6,427
Disposals	68	1,693	167	0	0	0	1,928
Transfers	144	2,845	188	-3,177	0	0	0
Effect of movements in exchange rates	137	138	81	46	158	0	560
Balance at December 31, 2019	**65,077**	**74,421**	**15,836**	**3,340**	**3,893**	**332**	**162,899**
Balance at January 1, 2020	65,077	74,421	15,836	3,340	3,893	332	162,899
Additions	59	2,252	983	3,371	353	830	7,848
Disposals	0	2,197	32	14	475	401	3,119
Transfers	0	2,107	321	-2,428	0	0	0
Effect of movements in exchange rates	-130	-142	-113	-48	-188	-4	-625
Balance at December 31, 2020	**65,006**	**76,441**	**16,995**	**4,221**	**3,583**	**757**	**167,003**
Depreciation and impairment losses							
Balance at January 1, 2019	27,323	51,681	11,789	8	0	0	90,801
Depreciation charge for the year	1,894	4,984	1,056	0	955	230	9,119
Impairments	0	0	0	0	0	0	0
Disposals	43	1,691	159	0	0	0	1,893
Effect of movements in exchange rates	127	129	66	0	11	0	333
Balance at December 31, 2019	**29,301**	**55,103**	**12,752**	**8**	**966**	**230**	**98,360**
Balance at January 1, 2020	29,301	55,103	12,752	8	966	230	98,360
Depreciation charge for the year	2,815	3,854	1,176	0	883	234	8,962
Impairments	0	2,563	0	0	0	0	2,563
Reversal of impairment	-2,909	0	0	0	0	0	-2,909
Disposals	0	2,147	31	0	475	389	3,042
Effect of movements in exchange rates	-120	-134	-90	-1	-54	-1	-400
Balance at December 31, 2020	**29,087**	**59,239**	**13,807**	**7**	**1,320**	**74**	**103,534**
Carrying amounts							
At January 1, 2019	37,267	20,080	2,543	3,221	3,671	257	67,039
At December 31, 2019	**35,776**	**19,318**	**3,084**	**3,332**	**2,927**	**102**	**64,539**
At January 1, 2020	35,776	19,318	3,084	3,332	2,927	102	64,539
At December 31, 2020	**35,919**	**17,202**	**3,188**	**4,214**	**2,263**	**683**	**63,469**

Depreciation

Depreciation expense amounted to kEUR 8,962 for 2020 and was kEUR 9,119 and kEUR 7,631 for 2019 and 2018 respectively.

During each financial year, asset useful lives and residual values are reviewed in accordance with IFRS. The effect of the changes in asset useful lives and residual values has been to decrease the depreciation expense in 2020 by kEUR 962 (2019 by kEUR nil; 2018 kEUR nil) compared with the depreciation which would have occurred had the asset useful lives and residual values remained unchanged.

Impairments

In 2020 AIXTRON reviewed the valuation of its Property, Plant and Equipment and wrote down the value of some specific test equipment that no longer had any economic value. An impairment expense of kEUR 2,563 was incurred.

In 2020 AIXTRON reviewed the valuation of its German production facilities and reversed an impairment allowance of kEUR 2,909 for one of the two production sites as we expect to continue to use this facility for production.

In 2019 AIXTRON reviewed the valuation of its Property, Plant & Equipment and found that no impairment write down was necessary.

In 2018 AIXTRON reviewed the valuation of its Property, Plant and Equipment and wrote down the value of some specific test equipment that no longer had any economic value. An impairment expense of kEUR 1,631 was incurred.

In 2018 AIXTRON reviewed the valuation of its facility in Herzogenrath in Germany and reversed kEUR 100 of a previous impairment charge. The valuation was carried out internally based upon a valuation performed by a professionally qualified valuer and is level 2 in the hierarchy of valuations in IFRS 13. The valuation was based on observable inputs from comparable property transactions.

There were no other impairments or reversals of impairments in 2020, 2019 or 2018.

Assets under construction

Assets under construction relates mainly to self-built systems for development laboratories in 2020 and 2019.

Leased assets

Disclosures in respect of the underlying leases are shown in note 26.

12. Intangible assets

in EUR thousands	Goodwill	Other intangible assets	Total
Cost			
Balance at January 1, 2019	88,503	44,575	133,078
Acquisitions	0	1,329	1,329
Disposals	0	-217	-217
Effect of movements in exchange rates	987	580	1,567
Balance at December 31, 2019	**89,490**	**46,267**	**135,757**
Balance at January 1, 2020	89,490	46,267	135,757
Acquisitions	0	1,444	1,444
Effect of movements in exchange rates	-1,598	-2,023	-3,621
Balance at December 31, 2020	**87,892**	**45,688**	**133,580**
Amortization and impairment losses			
Balance at January 1, 2019	16,904	42,450	59,354
Amortization charge for the year	0	1,022	1,022
Disposals	0	-164	-164
Effect of movements in exchange rates	217	587	804
Balance at December 31, 2019	**17,121**	**43,895**	**61,016**
Balance at January 1, 2020	17,121	43,895	61,016
Amortization charge for the year	0	931	931
Effect of movements in exchange rates	-206	-2,014	-2,220
Balance at December 31, 2020	**16,915**	**42,812**	**59,727**
Carrying amounts			
At January 1, 2019	71,599	2,125	73,724
At December 31, 2019	**72,369**	**2,372**	**74,741**
At January 1, 2020	72,369	2,372	74,741
At December 31, 2020	**70,977**	**2,876**	**73,853**

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	2020 Amortization	2019 Amortization	2018 Amortization
Cost of sales	31	6	22
General administration expenses	808	922	738
Research and development costs	92	94	19
	931	**1,022**	**779**

In 2020, 2019 and 2018, no impairment losses were incurred and no reversals of impairment losses were made.

The amortization expected to be charged on other intangible assets in the future years is as follows:

in EUR thousands	
2021	1,160
2022	837
2023	549
2024	146
2025	128
After 2025	56

The actual amortization can differ from the expected amortization.

Impairment of goodwill

At the end of 2020 the Group assessed the recoverable amount of goodwill and determined that no impairment loss had to be recognized (2019: kEUR 0; 2018 kEUR 0).

The carrying value of goodwill was kEUR 70,977 (2019 kEUR 72,369; 2018 kEUR 71,599).

As at the end of 2020 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, 2020 the market capitalization of AIXTRON was Euro 1,595.4 million, based on a share price of Euro 14.27 and issued shares (excluding Treasury Shares) of 111,843,215.

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.

in Tausend EUR	Impairment Test 2020	Impairment Test 2019	Sensitivity Analysis No control premium
Share price - Euros	14.27	8.53	4.50
Market capitalisation as of December 31	1,595.4	953.8	503.9
Costs to sell in percentage	1.50%	1.50%	1.50%
Costs to sell	-23.9	-14.3	-7.6
Market capitalisation less cost to sell	1,571.5	939.5	496.3
Control premium in percentage	20.00%	20.00%	0.00%
Control premium	314.3	187.9	0.0
Market capitalisation and control premium less cost to sell	1,885.8	1,127.4	496.3
Net debt	-310.2	-298.3	-310.2
Tax assets	-13.1	-8.0	-13.1
Fair value less costs to sell of CGU	1,562.4	821.1	173.0
Carrying amount of the CGU	173.1	157.9	173.1
Surplus of fair value less cost to sell over carrying amount	1,389.4	663.2	0.0
Surplus of fair value less cost to sell over carrying amount as a percentage	803%	420%	0%

The fair value less costs to sell, which is the recoverable amount, exceeds the carrying amount of the CGU by 803% (2019: 420%).

A sensitivity analysis of the impairment test, in which the control premium is reduced to zero, shows that the carrying amount of the CGU would equal the recoverable amount should the market capitalization of AIXTRON fall by 68.4% (2019: 50.6%) to Euro 503.9 million (2019: Euro 471.2 million).

13. Other non-current financial assets

in EUR thousands	2020	2019
Long-term deposits with a term of more than 12 months	60,000	0
Miscellaneous other non-current financial assets	497	446
Total	**60,497**	**446**

Long-term deposits are cash deposits at banks. Miscellaneous other non-current financial assets mainly include security deposits for buildings.

The long term deposits are expected to be held for more than 12 months after the balance sheet date, but have the ability to be withdrawn without penalty with less than 3 months' notice. The deposits are with a first rate bank within the European Union and the Company does not expect to incur any credit losses in respect of these deposits. The deposits are measured at amortized cost.

14. Deferred tax assets

Recognized deferred tax assets

Deferred tax assets are attributable to the following items:

in EUR thousands	2020	2019
Property, plant and equipment	-322	-4
Trade receivables	72	1
Inventories	527	554
Employee benefits	134	82
Customer advances	-142	0
Provisions and other liabilities	197	85
Other	31	2
Tax losses	13,918	10,538
Total	**14,415**	**11,258**

Deferred tax assets are recognized at the level of individual consolidated companies in which a loss was realized in the current or preceding financial year, only to the extent that realization in future periods is probable. The nature of the evidence used in assessing the probability of realization includes forecasts, budgets and the recent profitability of the relevant entity. The carrying amount of deferred tax assets for entities which have made a loss in either the current or preceding year was kEUR 453 (2019: kEUR 105).

Deferred taxes for tax losses in the amount of kEUR 144,190 (2019: kEUR 154,538) and on deductible temporary differences in the amount of kEUR 7,765 (2019: kEUR 1,683) were not recognized.

Tax losses in the amount of kEUR 141,535 can be used indefinitely (2019: kEUR 134,712), kEUR nil expire by 2025 (2019: kEUR nil, by 2024) and kEUR 10,420 expire after 2025 (2019: kEUR 21,509 after 2024).

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

in EUR thousands	Balance at January 1, 2020	Recognised in income statement	Directly recognised in Other Comprehensive Income	Balance at December 31, 2020
Property, plant and equipment	-4	-323	0	-322
Trade receivables	1	71	0	72
Inventories	554	-18	0	527
Employee benefits	82	54	0	134
Currency translation	0	0	-153	0
Provisions and other liabilities	85	115	0	197
Customer Advances	0	-142	0	-142
Other	2	-2	0	31
Tax losses	10,538	3,555	0	13,918
	11,258	**3,310**	**-153**	**14,415**

in EUR thousands	Balance at January 1, 2019	Recognised in income statement	Directly recognised in Other Comprehensive Income	Balance at December 31, 2019
Property, plant and equipment	77	-83	0	-4
Trade receivables	0	0	0	1
Inventories	767	-224	0	554
Employee benefits	137	-58	0	82
Currency translation	2	-2	83	
Provisions and other liabilities	71	13	0	85
Other	12	-33	0	2
Tax losses	11,766	-1,270	0	10,538
	12,832	**-1,657**	**83**	**11,258**

15. Inventories

in EUR thousands	2020	2019
Raw materials and supplies	33,944	30,717
Work in process	35,718	40,393
Contract balances - work in process	2,051	2,120
Inventories at customers' locations	7,374	5,792
	79,087	**79,022**

in EUR thousands	Note	2020	2019
Inventories recognised as an expense during the period	3	113,801	106,064
Reversals of write-downs recognised during the year	3	-1,029	-646
		112,772	**105,418**
Write-down of inventories during the year	3	1,918	4,627
Inventories measured at net realisable value		196	1,094

The reversal of write-downs recognized during the year in both 2020 and 2019 mainly relates to inventories which had been written down to their net realizable value and subsequently were sold.

Contract balances - work in process relates to work performed at the customers' site, typically to install equipment or to upgrade customers' existing equipment. Variations in the level of contract balances - work in process in the year have occurred because of the normal variations in the stage of completion of the work on individual contracts. 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	2020	2019
Trade receivables	38,598	26,082
Contract assets receivable	2,732	3,245
Allowances for doubtful accounts	-26	-124
Trade receivables - net	**41,304**	**29,203**
Prepaid expenses	964	803
Reimbursement of research and development costs	2,088	1,575
Advance payments to suppliers	1,210	135
VAT recoverable	1,665	1,521
Other assets	1,244	1,100
Total other current assets	**7,171**	**5,134**
Total trade receivables and other current assets	**48,475**	**34,337**

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	2020	2019
Allowance at January 1	124	214
Translation adjustments	-2	0
Impairment losses recognised	12	80
Used	-108	0
Impairment losses reversed	0	-170
Allowance at December 31	**26**	**124**

Ageing of past due but not impaired receivables

in EUR thousands	2020	2019
1-90 days past due	3,756	3,413
More than 90 days past due	355	2,919

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.

At the balance sheet date, net trade receivables of kEUR 41,304 represent the equivalent of 18 days sales outstanding (2019: kEUR 29,203 30 DSO).

In 2020 three customers accounted for 16%, 11% and 10% of net trade receivables respectively. In 2019 at the balance sheet date one customer accounted for 13% of net trade receivables. In determining concentrations of credit risk the Group defines counterparties as having similar characteristics if they are connected entities.

Included in the Group's trade receivable balance are debtors with a carrying amount of kEUR 4,111 (2019: kEUR 6,332) 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 general provision rate for lifetime expected credit loss of 0%, 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 counter-parties to perform their obligations.

17. Other financial assets

In 2020 other financial assets comprise fund investments. In 2019 other financial assets are fixed deposits with banks with a maturity of more than three months and less than twelve months at inception of the contracts.

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

In EUR thousands	2020	2019
Financial assets measured at FVTPL	62,422	0
Fixed deposits with a maturity up to 180 days	0	27,500
	62,422	**27,500**

The fair value 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	2020	2019
Cash-in-hand	3	3
Bank balances	187,256	270,816
Cash and Cash equivalents	**187,259**	**270,819**

Cash and cash equivalents comprise short-term bank deposits with an original maturity of 3 months or less. The carrying amount and fair value are the same.

Bank balances included kEUR 0 given as security (2019: kEUR 0) at December 31, 2020.

19. Shareholders' Equity

Fully paid capital

in EUR	2020	2019
January 1	112,927,320	112,927,320
Shares issued during the year	0	0
Issued and fully paid capital at December 31, including Treasury Shares	112,927,320	112,927,320
Treasury shares	-1,084,105	-1,087,305
Issued and fully paid share capital at December 31 under IFRS	111,843,215	111,840,015

The share capital of the Company consists of no-par value shares and was fully paid-up during 2020 and 2019. 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 201,284,934 (2019: 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 2020 and 2019 no new shares were issued. 3,200 treasury shares were transferred in 2020 as part of the share-based payments scheme (2019 nil).

The Group regards its shareholders' equity as capital for the purpose of managing capital. Changes in Shareholders' equity are shown in the Consolidated Statement of Changes in Equity. 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 2020 an expense of kEUR 21 (2019 expense kEUR 47; 2018 income kEUR 8) was recorded from the remeasurement of defined benefit obligations.

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.

	2020	2019	2018
Earnings per share			
Net profit attributable to the shareholders of AIXTRON SE in kEUR	34,879	32,833	45,862
Weighted average number of common shares and ADS for the purpose of Earnings/Loss Per Share	111,840,146	111,840,015	111,824,022
Basic earnings per share (EUR)	0.31	**0.29**	**0.41**
Earnings per share (diluted)			
Net profit attributable to the shareholders of AIXTRON SE in kEUR	34,879	32,833	45,862
Weighted average number of common shares and ADS for the purpose of Earnings/Loss Per Share	111,840,146	111,840,015	111,824,022
Dilutive effect of share options	47,015	0	0
Weighted average number of common shares and ADS for the purpose of Earnings/Loss Per Share (diluted)	111,887,161	111,840,015	111,824,022
Diluted earnings per share (EUR)	**0.31**	**0.29**	**0.41**

The following securities issued were not included in the computation of the diluted earnings per share, as their effect would be anti-dilutive:

Number of shares	2020	2019	2018
Share options	0	995,450	1,338,000

21. Employee benefits

Defined contribution plan

The Group grants retirement benefits to qualified employees through various defined contribution pension plans. In 2020 the expense recognized for defined contribution plans amounted to kEUR 1,248 (2019: kEUR 1,083, 2018: kEUR 995).

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.

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. The fair value of the shares and stock options is determined on the basis of a mathematical model.

AIXTRON stock option plan 2007

In May 2007, options were authorized to purchase 3,919,374 shares of common stock. 50% of the granted options may be executed after a waiting period of not less than two years, further 25% after three years and the remaining 25% after at least four years. The options expire 10 years after they have been granted. Under the terms of the 2007 plan, options were 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 20%. Options to purchase 8,000 common shares were outstanding under this plan as of December 31, 2020.

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 593,600 common shares were outstanding under this plan as of December 31, 2020.

Summary of Stock Option Transactions

AIXTRON share options	Number of shares 2020	Average exercise price (EUR) 2020	Number of shares 2019	Average exercise price (EUR) 2019
Balance at January 1	995,450	17.84	1,338,000	16.60
Forfeited during the year	393,850	25.01	342,550	23.78
Outstanding at December 31	**601,600**	**13.15**	**995,450**	**17.84**
Exercisable at December 31	**601,600**	**13.15**	**995,450**	**17.84**

AIXTRON Stock Options as of December 31, 2020

	Exercise price per share (EUR)	Underlying shares represented by outstanding options	Average option life (in years)
2011	12.55	8,000	1.0
2014	14.01	11,000	4.0
2014	13.14	582,600	4.0
		601,600	

Long-term incentive

The following table shows the main parameters of the valuation model for the long-term variable remuneration of the Executive Board (LTI):

LTI Tranche 2020	I	II
Grant date	26.02.20	08.05.20
Share price at grant date	9.96 €	9.52 €
Risk-free interest rate	-0.72%	-0.80%
Volatility AIXTRON	52.66%	54.77%
Volatility Peer Group	33.91%	39.40%
Correlation AIXTRON/Index	0.37	0.39
Fair Value TSR	15.07 €	14.18 €
Fair Value Plain-Tranche	9.96 €	9.25 €

In 2020 there were two grant dates, 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.

In 2020, the personnel expenses from share-based payments, all of which were equity settled share-based payments, were kEUR 1,129 (2019: kEUR 889; 2018: kEUR 1,524). Share-based payments include the expense of stock options and that part of bonus payments which is paid in shares (see note 29).

As of December 31, 2020 all amounts relating to stock options granted prior to that date had been recognized as a personnel expense.

23. Provisions

Development and breakdown of provisions

in EUR thousands	01.01. 2020	Exchange rate differences	Usage	Reversal	Addition	31.12. 2020	Current	Non-current
Personnel expenses	7,242	-435	5,627	336	6,159	7,003	7,003	
Warranties	5,005	-17	3,309	0	6,035	7,714	3,960	3,754
Onerous contracts	81	-4	31	0	0	46	39	7
Other	5,732	-185	3,132	142	3,131	5,404	5,186	218
Total	**18,060**	**-641**	**12,099**	**478**	**15,325**	**20,167**	**16,188**	**3,979**

Personnel expenses

These include mainly provisions for holiday pay, payroll 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.

For provisions existing at both December 31, 2020 and December 31, 2019, 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 non-current provisions.

24. Trade payables and other current liabilities

The liabilities consist of the following:

in EUR thousands	2020	2019
Trade payables	**10,846**	**19,367**
Liabilities from grants	4,819	1,481
Short term lease liabilities	734	864
Payroll taxes and social security contributions	1,004	797
VAT and similar taxes	204	697
Other liabilities	618	358
Other current liabilities	**7,379**	**4,197**
Trade payables and other current liabilities	**18,225**	**23,564**

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 90 days of receipt of the relevant goods or services.

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; and the risk management system is in accordance with the corporate governance recommendations specified in the German Corporate Governance Code.

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 at December 31, 2020 the Group did not have any borrowings (2019 nil). Financial liabilities, all due within one year, of kEUR 18,225 (2019: kEUR 23,564) 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 kEUR 2,245 (2019: kEUR 2,251) together with an analysis of their maturity are shown in note 26. Other non-current payables of kEUR 372 (2019: kEUR 297) are due after more than one year.

As at December 31, 2020 the Group had kEUR 309,681 (2019: kEUR 298,319) 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, investments and bank deposits.

The Group's bank deposits and 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 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 except for the investment in funds in 2020 and its associated market risks.

Foreign currency risk

The Group may 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.

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	2020	2019	2020	2019
US Dollars	60,895	66,578	22,340	34,613
GB Pounds	14,708	5,485	4,414	2,179
Chinese Renminbi	13,803	33,294	1,302	2,249

Exposures are reviewed on a regular basis and are managed by the Group through sensitivity analysis.

Foreign currency sensitivity analysis

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 and other equity, a negative number indicates a reduction in profit and other equity.

Increase in value of Euro by 10%	USD Currency Effect		GBP Currency Effect		RMB Currency Effect	
In EUR thousands	2020	2019	2020	2019	2020	2019
Profit or loss	-2,634	-2,005	12	36	-676	-2,628
Other comprehensive income	856	800	844	297	431	358

Decrease in value of Euro by 10%	USD Currency Effect		GBP Currency Effect		RMB Currency Effect	
In EUR thousands	2020	2019	2020	2019	2020	2019
Profit or loss	2,634	2,005	-12	-36	676	2,628
Other comprehensive income	-856	-800	-844	-297	-431	-358

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 Renminbi by 10%. It does not represent the effect of a 10% change in exchange rates sustained over the whole of the financial 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 2020 comprise financial assets measured at FVTPL. Contract assets are outside the scope of IFRS 9.

Contract liabilities – Advance payments

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. 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.

The changes in contract liabilities for advance payments in the year reflects the changing level of outstanding customer orders.

Trade receivables/payables

For trade receivables/payables due within less than one year, measured at amortized cost, the fair value is taken to be the carrying amount.

Financial assets 2020

in EUR thousands	At Amortized Cost	At Fair Value	Total Carrying amount and fair value
Cash and cash equivalents	187,259	0	187,259
Other financial assets	0	62,422	62,422
Other non-current financial assets	60,497	0	60,497
Trade receivables (excluding contract assets)	38,572	0	38,572
Contract assets included in trade receivables (not in scope of IFRS 9)	0	2,732	2,732
Total	**286,328**	**65,154**	**351,482**

Financial liabilities 2020

in EUR thousands	At Amortized Cost	At Fair Value	Total Carrying amount and fair value
Trade payables	10,846	0	10,846
Contract liabilities - Advance payments from customers (not in scope of IFRS 7)	50,824	0	50,824
LT Lease and other liabilities	2,617	0	2,617
Total	**64,287**	**0**	**64,287**

Financial assets 2019

in EUR thousands	At Amortized Cost	At Fair Value	Total Carrying amount and fair value
Cash and cash equivalents	270,819	0	270,819
Other financial assets	27,500	0	27,500
Other non-current financial assets	446	0	446
Trade receivables (excluding contract assets)	27,500	0	27,500
Contract assets included in trade receivables (not in scope of IFRS 9)	0	1,703	1,703
Total	**326,265**	**1,703**	**327,968**

Financial liabilities 2019

in EUR thousands	At Amortized Cost	At Fair Value	Total Carrying amount and fair value
Trade payables	19,367	0	19,367
Contract liabilities - Advance payments from customers (not in scope of IFRS 7)	51,051	0	51,051
LT Lease and other liabilities	2,548	0	2,548
Total	**72,966**	**0**	**72,966**

26. Leases

Leases as lessee

Lease liabilities are payable as follows:

in EUR thousands	2020	2019
Not later than one year	829	864
Later than one year and not later than five years	1,595	1,661
Later than five years	825	590
	3,249	**3,115**

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	2020	2019
Expenses for:		
Short term and low value leases	249	650
Payments made in respect of:		
Short term and low value leases	249	650
Lease liabilities	877	1,097
Interest on lease liabilities	69	87
Total cash outflow for leases	**1,195**	**1,834**

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.

The expenses for operating leasing contracts prior to the adoption of IFRS 16 on 1 January 2019 were kEUR 2,080 for 2018.

27. Capital commitments

Purchase commitments in EUR thousands	2020	2019
Capital expenditures	2,337	1,009
Other expenditures	76,392	25,550
Total commitments with suppliers at Dec 31	78,729	**26,559**

28. Contingencies

AIXTRON is involved in various 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.

29. Identity of related parties

Related parties of the Group are members of the Executive Board and members of the Supervisory Board and their close relatives.

The disclosures of key management personnel compensation are as follows:

in EUR thousands	2020	2019	2018
Executive Board:			
Short-term employee benefits	1,884	1,597	1,936
Share-based payments	1,073	862	1,197
	2,957	**2,459**	**3,133**
Supervisory Board:			
Short-term benefits (incl. attendance fee)	470	484	495
	470	**484**	**495**
Total	**3,427**	**2,943**	**3,628**

Share-based payments refer to the fair value of share options at grant date and also includes that portion of bonus agreements which is settled in shares.

Individual amounts and further details regarding the remuneration of the members of the Executive Board and Supervisory Board are disclosed in the Remuneration Report which is an integral part of the Group Management Report.

30. Consolidated entities

AIXTRON SE controls the following subsidiaries:

Wholly owned subsidiaries	Place of incorporation and operation	Percentage control 31 December 2020	Percentage control 31 December 2019
AIXTRON Ltd.	England & Wales	100%	100%
AIXTRON Korea Co Ltd.	South Korea	100%	100%
AIXTRON KK	Japan	100%	100%
AIXTRON China Ltd	China	100%	100%
AIXTRON Taiwan Co Ltd	Taiwan	100%	100%
AIXTRON Inc.	USA	100%	100%
AIXinno Ltd	England & Wales	100%	100%

Non-Wholly Owned Subsidiaries	Place of incorporation and operation	Percentage control 31 December 2020	Percentage control 31 December 2019
APEVA Holdings Ltd	England & Wales	87%	87%
APEVA SE	Germany	87%	87%
APEVA Co Ltd	South Korea	87%	87%

Proportion of voting rights and ownership interests held by non-controlling interests	Profit (loss) allocated to non-controlling interests	Profit (loss) allocated to non-controlling interests	Accumulated non-controlling interests	Accumulated non-controlling interests
APEVA GROUP	2020 kEUR	2019 kEUR	2020 kEUR	2019 kEUR
13%	-409	-355	992	1,422

The effect on the equity attributable to the owners of AIXTRON SE of the change in ownership interest in 2019 of the APEVA Group (Apeva Holdings Ltd, Apeva Co Ltd and Apeva SE) is shown in the Consolidated Statement of Changes in Equity. There was no change in ownership in the APEVA Group in 2020. In 2019 transactions with Non-controlling Interests in Subsidiaries resulted in a reduction in the equity attributable to the owners of AIXTRON SE of kEUR 687.

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 the UK. Service and distribution takes place at all locations.

31. 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.

32. Auditors' fees

Fees expensed in the income statement for the services of the Group auditor, Deloitte, are as follows:

in EUR thousands	2020	2019
for audit	494	613
for other confirmation services	31	25
for tax advisory services	161	87
for other services	2	0
	688	**725**

Included in the total amount of fees are fees for the Group auditor Deloitte GmbH Wirtschaftspruefungsgesellschaft, Duesseldorf, in the amount of kEUR 399 for audit (2019: kEUR 413), kEUR 31 for other confirmation services (2019: kEUR 25), kEUR 41 for tax services (2019: kEUR 50) and kEUR 2 for other services (2019: kEUR nil).

The amounts for other confirmation services include fees for audits on EEG (renewable energy law) and KWKG (act on combined heat and power generation) as well as the non financial report.

33. Employees

Compared to last year, the average number of employees during the current year was as follows:

	2020	2019
Sales	53	53
Research and Development	248	233
Manufacturing and Service	299	278
Administration	83	80
Employees (§ 314 HGB)	**683**	**644**
Executive board members	2	2
	685	**646**
Apprentices	17	16
Total Employees	**702**	**662**

34. Supervisory Board and Executive Board

Supervisory Board

- **Kim Schindelhauer**
  Chairman of the Supervisory Board since 2002
  Businessman

- **Frits van Hout**
  Vice Chairman of the Supervisory Board since 2019
  Chief Strategy Officer and Executive Vice-President ASML Holding NV

  Membership of supervisory boards and controlling bodies:

  - Bambi Belt Holding BV, Eindhoven/Netherlands (Member of the supervisory board)

- **Prof. Dr. Andreas Biagosch**
  Member of the Supervisory Board since 2013
  Entrepreneur

  Membership of supervisory boards and controlling bodies:

  - Ashok Leyland Limited, Chennai/India (Non-executive director)
  - Wacker Chemie AG, Munich (Member of the Supervisory Board)

- Hinduja Leyland Finance Limited, Chennai/India (Non-executive director)
- Athos Service GmbH, Munich (Member of the Advisory Board and Chairman since June 15, 2020)
- Lürssen Maritime Beteiligungen, Bremen (Member of the Advisory Board, until November 12, 2020)

- **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)

- **Prof. Dr. Anna Gersbacher**
  Member of the Supervisory Board since 2019
  Professor for Economics esp. external financial accounting

Executive Board

The composition of the Company's Executive Board in 2020 is:

- **Dr. Bernd Schulte**
  Aachen, member of the Executive Board since 2002

  Membership of supervisory boards and controlling bodies:

  - Süss Microtec SE, Garching (Member of the supervisory board since November 6, 2020)

- **Dr. Felix Grawert**
  Aachen, member of the Executive Board since 2017

- **Dr. Jochen Linck**
  Aachen, member of the Executive Board since October 1, 2020

35. Critical accounting judgments and key sources of estimation and uncertainty

The preparation of AIXTRON's Consolidated Financial Statements requires the Group 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)). The Group believes, based on past experience, that this method of recognizing revenue fairly states the revenues of the Group. 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 is disclosed in note 15.

As disclosed in notes 3 and 15, during the years 2020, 2019 and 2018 the Group incurred expenses of kEUR 1,918, kEUR 4,627 and kEUR 3,018 respectively arising mainly from changes to past assumptions concerning net realizable value of inventories and excess and obsolete inventories. In future periods, write-downs of inventory may be necessary due to (1) reduced demand in the markets in which the Group operates, (2) technological obsolescence due to rapid developments of new products and technological improvements, or (3) changes in economic or other events and conditions that impact the market price for the Group's products. 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 recorded amount of total deferred tax assets could be reduced if estimates of projected future taxable income are lowered, 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.

COVID-19

Effects of COVID-19 on the business are discussed in the Management Report. The effects on the financial statements of 2020 are immaterial and it is similarly expected that the effects in 2021 will be immaterial.

Herzogenrath, February 22, 2021
AIXTRON SE

Executive Board

Dr. Jochen Linck **Dr. Bernd Schulte** **Dr. Felix Grawert**

FURTHER INFORMATION

Responsibility Statement by the Executive Board

Responsibility Statement required by §§ 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 22, 2021
AIXTRON SE

Executive Board

Dr. Jochen Linck **Dr. Bernd Schulte** **Dr. Felix Grawert**

Independent Auditor’s Report

To AIXTRON SE, Herzogenrath/Germany

REPORT ON THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND OF THE COMBINED

Audit Opinions

We have audited the consolidated financial statements of AIXTRON SE, Herzogenrath/Germany, and its subsidiaries (the Group) which comprise the consolidated statement of financial position as at 31 December 2020, and the consolidated statement of profit and loss, the consolidated statement of comprehensive income, the consolidated statement of changes in equity and the consolidated statement of cash flows for the financial year from 1 January to 31 December 2020, and the notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the combined management report for the parent and the group of AIXTRON SE, Herzogenrath/Germany, for the financial year from 1 January to 31 December 2020. In accordance with the German legal requirements, we have not audited the content of the corporate governance statement pursuant to Sections 289f and 315d German Commercial Code (HGB), including the further reporting on corporate governance included therein, nor the content of the consolidated non-financial report pursuant to Sections 315b and 315c HGB, each of which is referred to in the combined management 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 IFRS as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) HGB and, in compliance with these requirements, give a true and fair view of the assets, liabilities and financial position of the Group as at 31 December 2020 and of its financial performance for the financial year from 1 January to 31 December 2020, 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 audit opinion on the combined management report does not cover the content of the corporate governance statement pursuant to Sections 289f and 315d HGB, including the further reporting on corporate governance included therein, nor the content of the consolidated non-financial report pursuant to Sections 315b and 315c HGB referred to above.

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 Audit 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 (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) point (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 audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit 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 judgement, were of most significance in our audit of the consolidated financial statements for the financial year from 1 January to 31 December 2020. These matters were addressed in the context of our audit of the consolidated financial statements as a whole and in forming our audit opinion thereon; we do not provide a separate audit opinion on these matters.

In the following we present the key audit matters we have determined in the course of our audit:

1. Revenue Recognition for Multiple-element Arrangements Including Cut-off
2. Measurement of Deferred Tax Assets

Our presentation of these key audit matters has been structured as follows:

a) description (including reference to corresponding information in the consolidated financial statements)

b) auditor's response

1. Revenue Recognition for Multiple-element Arrangements Including Cut-off

a) The revenue as stated in the consolidated statement of profit and loss amounts to kEUR 269,247.

A substantial proportion of this revenue comprises the settlement of customer contracts that include multiple performance obligations. These arrangements primarily deal with the customer-specific manufacturing and supply of semiconductor equipment and its installation at the customer's site. Furthermore, in specific cases, the Group and the customer agree on the supply of related spare parts and/or the provision of services such as maintenance services and/or certain rights of return. These services are to be measured separately. As part of the technical acceptance process with regard to the equipment, any additional services may be required. These additional services also have to be considered when recognising revenue. Generally, the contract with the customer provides for a transaction price for the equipment and the remaining elements such as installation, spare parts packages, services and specific rights of return. Consequently, the transaction price needs to be allocated to each performance obligation based on a relative stand-alone selling price basis. Except for certain rights of return that exceed the common periods, the performance obligations are satisfied at a certain point in time and the related revenue is realised. The determination of the time of revenue recognition regarding arrangements comprising multiple performance obligations and the cut-off as part of revenue recognition are subject to the executive directors' judgement and assumptions due to the highly individual customer contracts and complex equipment. As a consequence, we considered this issue to be a key audit matter.

The information of the executive directors on revenue is provided in section 2 "Significant Accounting Polices" in note N "Revenue" as well as in section 3 "Group Segment Information and Revenue" in the notes to the consolidated financial statements.

b) First, we recorded and assessed the major processes from order confirmation until settlement including the audit of the design, implementation and effectiveness of the accounting-related controls regarding revenue recognition. In this context, our audit primarily covered the effectiveness of the controls regarding the allocation of the transaction price to the individual performance obligations, the complete provision of the supply and installation services and the recognition of the supplied equipment and installation services on an accrual basis.

We performed the following audit procedures based on a stratified and random selection of a sample taken from equipment supplies and installation services by means of a representative sampling method:

- equipment supplies: audit of an existent customer contract, evaluation of the allocation of the transaction price on a relative stand-alone selling price basis to the individual supply and service elements by verifying the underlying contract, reviewing the time of revenue recognition pursuant to contract terms, primarily the incoterms based on the acceptance test records and based on the acceptance and supply records of the dispatch company.
- installation services: audit of an existent final acceptance record signed by the customer including the review of estimations made by the executive directors regarding work to be done yet as well as any additional agreements to the contract with the customer as regards additional services to be rendered and review of the related cut-off of revenue.

- assessment of the completeness and appropriateness of the corresponding information provided in the notes to the consolidated financial statements.

2. Measurement of Deferred Tax Assets

a) Total deferred tax assets of kEUR 14,415 (accounting for 2.4% of the Group's total assets) are stated as "Deferred tax assets" in the consolidated statement of financial position. These deferred tax assets were determined based on the Group's tax planning and mainly result from tax loss carry-forwards (kEUR 13,918) and deductible differences between IFRS carrying values and their tax base to be reversed in the following years (kEUR 497). The majority of the deferred tax assets (kEUR 12,138) results from the parent company AIXTRON SE, which has comprehensive tax loss carry-forwards. The executive directors are of the opinion that for the parent company a reasonable derivation of an estimation of taxable results beyond a period of twelve months after the reporting date is not possible for a technology company characterised by highly fluctuating demand and volatile results. Accordingly, deferred taxes on tax loss carry-forwards and temporary differences concerning the parent company AIXTRON SE were only recognised insofar as they are expected to be used in 2021. The deferred tax assets concerning the parent company AIXTRON SE are measured using a tax rate of 32.8%, which is the currently applicable income tax rate. The other deferred tax assets result from tax loss carry-forwards and deductible differences concerning the foreign subsidiaries of AIXTRON SE. As they are largely secured by cost-plus agreements with the parent company, which bears the major risks, these deferred tax assets are based on tax planning strategies over a period of three years using the corresponding local tax rates.

The result of the computation of the deferred tax assets depends on whether tax benefits can be realised from tax loss carry-forwards according to estimations and assumptions of the executive directors and, therefore, are subject to uncertainties. Accordingly, we considered the measurement of deferred taxes to be a key audit matter.

Information on deferred taxes is provided by the executive directors of the parent company in note 14 to the consolidated financial statements.

b) As part of our audit, we used the knowledge and audit results gained in previous years. For the purpose of risk assessment, we obtained an understanding of the past adherence to the budget. First, we assessed whether the measurement methods applied are appropriate. General and industry-specific market expectations of the executive directors of AIXTRON SE were compared with external sources.

As part of our examination of the tax matters, we consulted internal tax experts, who were involved in the audit team. They supported us in assessing the installed processes and controls for validating the budget estimations and recognising tax matters. In addition, with respect to the tax planning, we queried the recognition of the deferred taxes and the explanations of the executive directors. We assessed the recoverability of the deferred tax assets on tax loss carry-forwards on the basis of corporate forecasts and the budget prepared by the executive directors concerning the future taxable profits of AIXTRON SE and its major subsidiaries and reviewed the appropriateness of the basis used for the budget. Furthermore, we obtained an understanding of the reconciliation between the expected tax expense, which was determined by applying the weighted group tax rate, and the recognised tax expense.

Other Information

The executive directors and the supervisory board are responsible for the other information. The other information comprises

- the corporate governance statement pursuant to Sections 289f and 315d HGB, including the further reporting on corporate governance included therein, referred to in the section "Legal Information" of the combined management report,
- the consolidated non-financial report pursuant to Sections 315b and 315c HGB referred to in section 1.1.6 in the section "Legal Information" of the combined management report,
- the report of the supervisory board,
- the executive directors' confirmation regarding the consolidated financial statements and the combined management report pursuant to Section 297 (2) sentence 4 and Section 315 (1) sentence 5 HGB, respectively, and
- all other parts of the annual report, with the exception of the audited consolidated financial statements and combined management report and our auditor's report.

The supervisory board is responsible for the report of the supervisory board. The executive directors and the supervisory board as well are responsible for the declaration according to Section 161 German Stock Corporation Act (AktG) including the further reporting on corporate governance, which is part of the corporate governance statement, and which is referred to in the combined management report. Apart from that, the executive directors are responsible for the other information.

Our audit 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 audit opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information mentioned above and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the audited content of the combined management report or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

Responsibilities of the Executive Directors and the Supervisory Board for the Consolidated Financial Statements and the Combined Management Report

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRS 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, the executive directors are 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 or error.

In preparing the consolidated financial statements, the executive directors are 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, the executive directors are 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, the executive directors are 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 audit 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 judgement and maintain professional scepticism 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 audit opinions. The risk of not detecting a material misstatement resulting from fraud is higher than for one 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 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 audit opinion on the effectiveness of these systems.
- evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.
- conclude on the appropriateness of the executive directors' 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 audit 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 IFRS as adopted by the EU and with 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 audit 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 audit 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 the executive directors in the combined management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors 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 audit 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 related safeguards.

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 the auditor's report unless law or regulation precludes public disclosure about the matter.

OTHER LEGAL AND REGULATORY REQUIREMENTS

Report on the Audit of the Electronic Files of the Consolidated Financial Statements and of the Combined Management Report prepared for Publication pursuant to Section 317 (3b) HGB

Audit Opinion

In accordance with Section 317 (3b) HGB, we have assessed with reasonable assurance whether the electronic files of the consolidated financial statements and of the combined management report (hereafter referred to as "ESEF files") prepared for publication, contained in the accompanying file, which has the SHA-256 value 33D5CE7041BD1E9BF42737C1A476C6A94A8840E88B435B5B-BA3522C51E479113, meet, in all material respects, the requirements concerning the electronic reporting format ("ESEF format") pursuant to Section 328 (1) HGB. In accordance with the German legal requirements, this audit only covers the transfer of the consolidated financial statements' and the combined management report's information into the ESEF format, and therefore covers neither the information contained in these electronic files nor any other information contained in the file stated above.

In our opinion, the electronic files of the consolidated financial statements and of the combined management report prepared for publication contained in the accompanying file stated above meet, in all material respects, the requirements concerning the electronic reporting format pursuant to Section 328 (1) HGB. Beyond this audit opinion and our audit opinions on the accompanying consolidated financial statements and on the accompanying combined management report for the financial year from 1 January to 31 December 2020 contained in the above "Report on the Audit of the Consolidated Financial Statements and of the Combined Management Report", we do not express any audit opinion on the information contained in these electronic files and on any other information contained in the file stated above.

Basis for the Audit Opinion

We conducted our audit of the electronic files of the consolidated financial statements and of the combined management report contained in the accompanying file stated above in accordance with Section 317 (3b) HGB and on the basis of the IDW Draft Auditing Standard: Audit of the Electronic Files of the Annual Financial Statements and of the Management Report prepared for Publication pursuant to Section 317 (3b) HGB (IDW Draft AuS 410). Our responsibilities in this context are further described in the section "Group Auditor's Responsibilities for the Audit of the ESEF Files". Our audit firm has applied the Quality Assurance Standard: Quality Assurance Requirements in Audit Practices (IDW QS 1) promulgated by the Institut der Wirtschaftsprüfer (IDW).

Responsibilities of the Executive Directors and the Supervisory Board for the ESEF Files

The executive directors of the parent are responsible for the preparation of the ESEF files based on the electronic files of the consolidated financial statements and of the combined management report according to Section 328 (1) sentence 4 no. 1 HGB and for the tagging of the consolidated financial statements according to Section 328 (1) sentence 4 no. 2 HGB.

In addition, the executive directors of the parent are responsible for such internal control as they have determined necessary to enable the preparation of ESEF files that are free from material violations against the requirements concerning the electronic reporting format pursuant to Section 328 (1) HGB, whether due to fraud or error.

The executive directors of the parent are also responsible for the submission of the ESEF files together with the auditor's report and the accompanying audited consolidated financial statements and the audited combined management report as well as other documents to be filed with the publisher of the Federal Gazette.

The supervisory board is responsible for overseeing the preparation of the ESEF files as part of the financial reporting process.

Group Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the ESEF files are free from material violations, whether due to fraud or error, against the requirements pursuant to Section 328 (1) HGB. We exercise professional judgement and maintain professional scepticism throughout the audit. We also

- identify and assess the risks of material violations against the requirements pursuant to Section 328 (1) HGB, 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 audit opinion.
- obtain an understanding of internal control relevant to the audit of the ESEF files in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an audit opinion on the effectiveness of these controls.
- assess the technical validity of the ESEF files, i.e. whether the file containing the ESEF files meets the requirements of the Delegated Regulation (EU) 2019/815 in the version applicable as of the reporting date as to the technical specification applicable to this file.
- evaluate whether the ESEF files enable the preparation of a XHTML copy of the audited consolidated financial statements and of the audited combined management report whose content is identical with these documents.
- evaluate whether the ESEF files have been tagged using inline XBRL technology (iXBRL) in a way that enables an appropriate and complete machine-readable XBRL copy of the XHTML copy.

Further information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor by the annual general meeting on 20 May 2020. We were engaged by the supervisory board on 21 September 2020. We have been the group auditor of AIXTRON SE, Herzogenrath/Germany, without interruption since the financial year 1996.

We declare that the audit 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).

GERMAN PUBLIC AUDITOR RESPONSIBLE FOR THE ENGAGEMENT

The German Public Auditor responsible for the engagement is André Bedenbecker.

Düsseldorf/Germany, 24 February 2021

Deloitte GmbH
Wirtschaftsprüfungsgesellschaft

André Bedenbecker	Dr. Peter Dittmar
Wirtschaftsprüfer	Wirtschaftsprüfer
(German Public Auditor)	(German Public Auditor)

Financial Calendar

April 29, 2021	Publication of the results for the 1st quarter of 2021
May 19, 2021	Annual General Meeting 2021, virtual
July 29, 2021	Publication of the results for the 1st half of 2021
November 4, 2021	Publication of the results for the 3rd quarter of 2021

Imprint

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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.

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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.

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