



Annual Report 2015

**AIXTRON**

# Company Profile

## About AIXTRON

AIXTRON SE (FSE: AIXA, ISIN DE000A0WMPJ6; NASDAQ: AIXG, ISIN: US0096061041) 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 opto-electronic applications based on compound, silicon, or organic semiconductor materials. Such components are used in a broad range of innovative applications, technologies and industries. These include LED applications, display technologies, data storage, data transmission, energy management and conversion, communication, signalling and lighting as well as a range of other leading-edge technologies.

AIXTRON SE's securities are listed on the Prime Standard market segment of the Frankfurt Stock Exchange and NASDAQ's Global Select Market<sup>SM</sup> in form of ADRs. The securities are included in many important indices, such as the TecDAX<sup>®</sup> or the NASDAQ Composite<sup>®</sup> Index. In addition, it is included in sustainability indices, such as the Dow Jones Sustainability Index and the Natur-Aktien-Index.

Additional information is available on AIXTRON's website at [www.aixtron.com](http://www.aixtron.com).

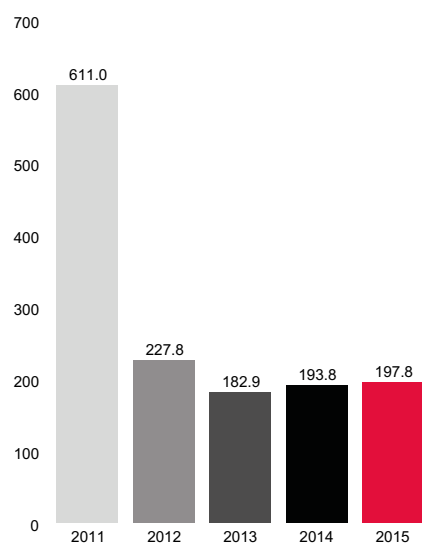
# At a Glance

## Key Financials in EUR million

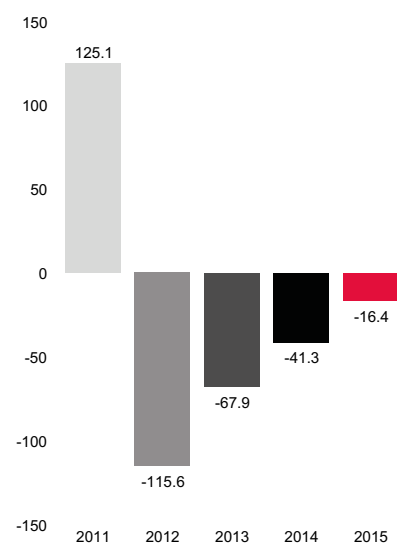
	2015	2014	2013	2015-2014
	Full Year	Full Year	Full Year	YoY
Revenues	197.8	193.8	182.9	2%
Gross profit	49.8	39.7	-21.8	25%
Gross margin	25%	20%	-12%	5 pp
EBITDA	-16.4	-41.3	-67.9	60%
Operating result (EBIT)	-26.7	-58.3	-95.7	54%
EBIT margin	-14%	-30%	-52%	16 pp
Net result	-29.2	-62.5	-101.0	53%
Net result margin	-15%	-32%	-55%	17 pp
Net result per share - basic (EUR)	-0.26	-0.56	-0.98	54%
Net result per share - diluted (EUR)	-0.26	-0.56	-0.98	54%
Free cash flow*	-57.3	-47.0	-1.1	-22%
Equipment Order Intake	167.1	198.7	133.2	-16%
Equipment Order Backlog (end of period)	42.9	65.2	59.6	-34%

\* Operating CF + Investing CF + Changes in Cash Deposits, adjusted for acquisition effects (upfront payments and loans)

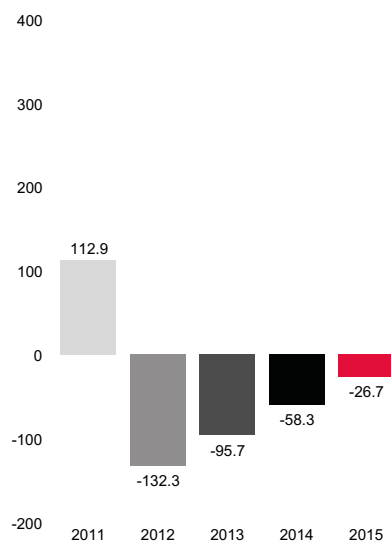
## REVENUES in EUR million



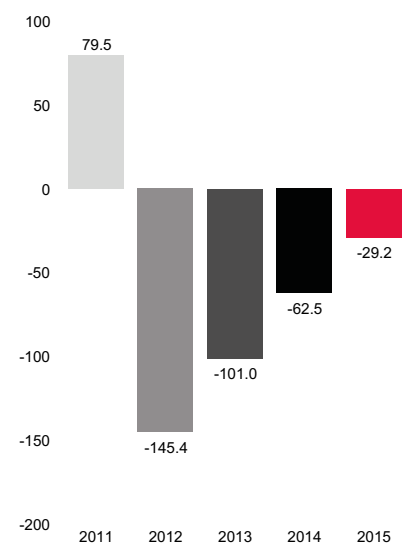
## EBITDA in EUR million



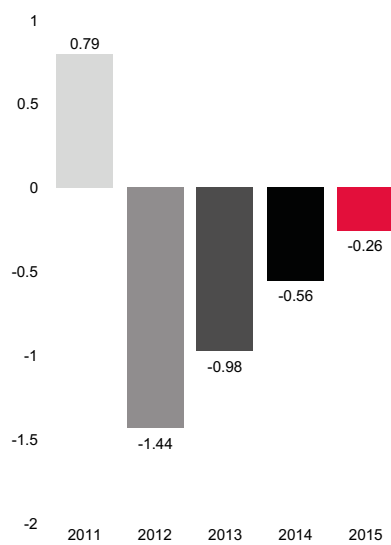
### OPERATING RESULT (EBIT) in EUR million



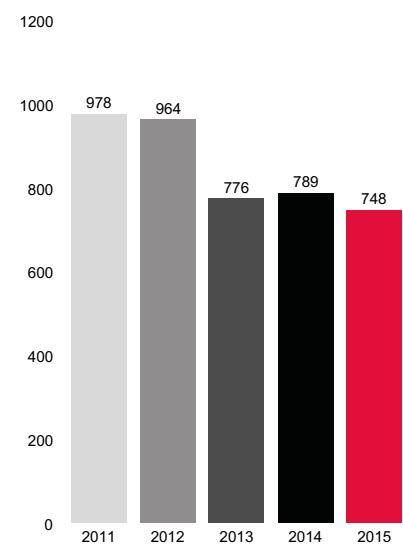
### NET RESULT in EUR million



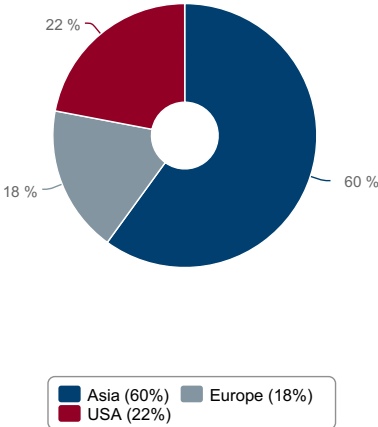
### NET RESULT PER SHARE in EUR



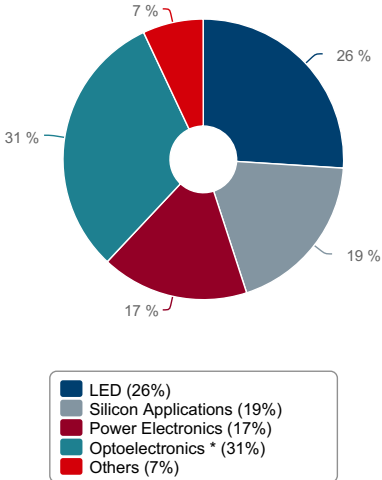
### NUMBER OF EMPLOYEES



**REVENUES BY REGION IN 2015**

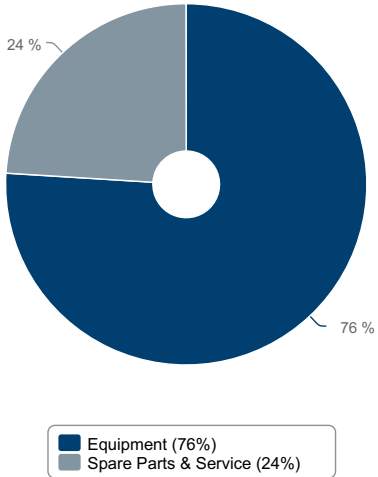


**REVENUES BY APPLICATION IN 2015**



\* Optoelectronics, Solar, Telecom/Datacom, Consumer Electronics

**REVENUES BY EQUIPMENT AND SERVICE IN 2015**



# Letter to the Shareholders

Dear shareholders,

On the way back to profitability, we were able to reach important, but not all milestones in the past year. As planned, we thus generated positive earnings before interest, taxes, depreciation and amortization (EBITDA) for the second half of 2015. Our operating costs were also roughly in line with our target of around EUR 80 million. Furthermore, we successfully continued to diversify our technology and product portfolio: year-on-year, we doubled overall revenues from systems for power electronics and the silicon industry and nearly tripled revenues from optoelectronics systems (excluding LED).

Contrary to expectations, San'an Optoelectronics did not qualify the new AIX R6 system, and we were not able to reach our original revenue target. In spite of this, we nevertheless increased our revenues slightly to EUR 197.8 million in 2015. This was because we made up for lower revenues in the LED area with significant growth in other technology areas.

The evolving product mix, the favorable currency performance and the increase in productivity were reflected in the earnings figures. Even if we did not operate in the black for the full year, our positive EBITDA of EUR 5.4 million for the second half of 2015 was a significant improvement from the first half of the year as well as year-on-year.

## Continued focus on costs and margins

Effective cost management is and will remain an important aspect on the road to stable earnings in the long run. Despite our investments in future technologies, we once again reported considerable progress in the reduction of operating costs across all functional areas in fiscal year 2015. The structured product development process we have implemented in research and development is a basic prerequisite for ensuring efficiency and effectiveness.

Furthermore, we also made progress in the gross margin, which increased from 20% in 2014 to 25% in 2015. This trend was not only driven by higher product margins and currency effects, but also from lower material costs as a result of the initial success of our internal design-to-cost and procurement projects. We are gradually expanding these activities to other product groups. We have also seen substantial enhancements in our logistics and service workflows.

These outcomes are accompanied by a continuous improvement of our existing finance and analysis tools, including tools for calculating margins, product costs and relevant performance indicators. This way, we are enhancing the basis on which we reach decisions and set targets.

## Successful diversification

We still generate most of our revenues from MOCVD systems used to manufacture LEDs. Having said this, the share of 2015 revenues attributable to technologies for applications in optoelectronics (excluding LED), power electronics or systems for the silicon industry also increased, in some cases substantially. Business in the carbon nanostructures area (graphene, nanotubes) also underwent positive development, even though it is still in a very early phase. The figures for the 2015 fiscal year bear witness to the initial success of this diversification strategy. Not only that, we also made progress along our roadmap in order to launch our system technologies for the production of organic electronics in good time.

## Expanding future technologies

We maintained our research and development spending at a high level of more than EUR 55 million. We invested more than half of our development costs in future technologies. This way, we aim to ensure that these technologies are introduced to the market at the right time.

The market environment for **LEDs** remains difficult. Once again in 2015, demand for equipment was subdued due to excess capacities and very intense competition between the LED manufacturers, particularly in China. Despite the ongoing transformation in the global light market from traditional lighting to LED lighting, a quick change in this market situation is not anticipated. This also makes it difficult to clearly predict the size and timing of large orders for new LED production systems. Moreover, qualification for our AIX R6 Closed Coupled Showerhead<sup>®</sup> system, which was especially designed for the Asian market, is taking longer than planned at several customers.

On the up side, we are seeing solid demand with an upward trend for our Planetary Reactor<sup>®</sup> systems that are used primarily outside of China to manufacture components for optoelectronics and power electronics. In this area, we offer our customers considerable advantages when it comes to homogeneity and quality requirements, which makes it possible for some manufacturers to significantly cut costs when processing the manufactured wafers. In terms of our systems for applications such as laser, infrared LEDs and photovoltaics, 2015 was the best year in a long time.

**Power electronics** production systems are another area in which we substantially increased our revenues in 2015. For the current fiscal year, we expect demand for our AIX G5 Planetary Reactor<sup>®</sup> systems to remain solid. The reason is that we are currently seeing the first manufacturers transition from the R&D phase to the production phase. We anticipate that demand for production systems will rise consistently over the next few years thanks to the increased demand for energy-efficient components based on gallium nitride and silicon carbide, for example, in the next generation of electric cars or in the increased integration into a broad range of applications. AIXTRON can build on a solid base of nearly 50 customers in this area, including some of the leading companies in this market.

In the **silicon semiconductor** industry, our ALD technology is one of the keys to efficient memory chip production. We have reported strong growth in the business with our main customer in 2015. Our success here in 2016 will crucially depend on completion of the qualification processes now underway at two potential new customers and on developments in the currently challenging DRAM memory market.

Our MOCVD technology for **III-V-on-silicon (TFOS)** applications boosts the performance of new types of future processors even more. Also very positive in the past year was the delivery of another TFOS system to a major international logic manufacturer following a development project across different locations and functions. Our systems are now viewed as the benchmark technology in the market, enabling logic manufacturers to keep pace with Moore's Law in the future. The timing of the introduction of these new materials into next-generation logic processor production will be key to AIXTRON's success.

We were also able to make advances in organic electronics in the past fiscal year: on the one hand with the commissioning of our Gen8 demo system, which is designed to show our industrial customers the cost-effective and efficient production of organic thin films on large areas for **OLED** displays and OLED lighting applications. Here, qualification at key customers is the decisive prerequisite for customer orders to be received in the months ahead. On the other hand, the receipt of the first order placed for the OPTACAP™ encapsulation technology just recently acquired through the takeover of PlasmaSi in April 2015 was a major step, and one that should be followed by further orders by the middle of 2016.

**Graphene** and nanomaterials such as **carbon nanotubes** and **carbon nanowires** will have the potential to be used in applications such as displays, batteries, semiconductors and many more. Last year, we successfully reinforced our global leadership in academic and industrial research. One example here is the BM Spider, a system to deposit graphene on metal foils, which we added to our product portfolio in 2015. The consistently good demand for our PECVD systems shows that our customers see our system technology as an important key to the production and use of these forward-looking materials.

### **Change processes successfully pursued**

Looking back at 2015 as a whole, we were able to strengthen key cornerstones of the company: we further developed and diversified our technology portfolio, made considerable progress in company productivity, consistently pursued effective cost management and thus strengthened our earnings base. The design-to-cost project rolled out at the beginning of 2015 to achieve material savings in our systems is just as important in this context as the process and productivity improvements in all functional areas.

Dear shareholders,

First, I would like to express my sincere thanks again this year to our company's employees for their incredible dedication to ensuring the success of AIXTRON and for working with us to drive the necessary changes in the company. This process will also place high demands on everyone in the future. I would like to thank the Supervisory Board for its active support and close collaboration also on behalf of Dr. Schulte.

Special thanks go to you, our shareholders, who have supported and accompanied the ongoing process of change at AIXTRON for several years. The past year's figures, and particularly the distribution of revenues and positive EBITDA in the second half of 2015, offer evidence that we are on the right path with our diversification strategy. Provided that we achieve revenues at the high end of our revenue guidance range, the market launches of new technologies and qualification projects for our customers succeed, we expect to see a further albeit slight improvement of our earnings in 2016. Our most important goal remains to ensure AIXTRON's sustainable profitability. Pursuing that goal, we have our sights set firmly on achieving a positive EBITDA in 2017.

Yours sincerely,  
Martin Goetzeler

## The Executive Board



A handwritten signature in black ink, appearing to read 'M. Goetzler', written in a cursive style.

**Martin Goetzler**  
Chief Executive Officer

A handwritten signature in black ink, appearing to read 'B. Schulte', written in a cursive style.

**Dr. Bernd Schulte**  
Chief Operating Officer



# Supervisory Board Report

The Supervisory Board fully satisfied its responsibilities and duties as stipulated by law, in the Articles of Association and by-laws in fiscal year 2015.

We continuously monitored the Executive Board's management activities and advised it on all matters important to the company so that we were assured at all times that the Company was managed in a legal, orderly, proper and cost-effective manner.

During the reporting year, the Supervisory Board did not make use of the option to inspect the books and documentation of the Company (Section 111 (2) German Stock Corporation Act (AktG)). This was not necessary due to the regular, intensive and satisfactory reporting by the Executive Board, the audit by and discussions with the Auditor (German Public Auditors) and the supplementary monitoring measures described.

## Composition of the Supervisory Board and Executive Board

The Executive Board fully satisfied its verbal and written reporting duty to the Supervisory Board. It involved us and our specialist committees in all material business transactions and highly significant decisions for the Company.

**At the meetings** (both in plenary sessions as well as in the committees) with the Executive Board, we had in-depth discussions about the information presented to us. Cooperation with the Executive Board was characterized in all respects by responsible and targeted activities.

**Outside of the meetings** we regularly consulted within the Supervisory Board, and the Executive Board informed us of important events in the AIXTRON Group in a timely manner.

**Between meetings** I met regularly – also in my role as a member of the Capital Market Committee – with the Chief Executive Officer, Martin Goetzeler. In addition to talking about the current business situation, we also talked about issues related to strategic alignment, the risk situation, risk management and compliance. Between meetings, the Chairman of the Audit Committee, Prof. Dr. Blättchen, and the Chairman of the Technology Committee, Prof. Dr. Denk, maintained active dialogue with the respective responsible Executive Board members.

All Supervisory Board members also received detailed quarterly reports on the status of the Company as well as other information such as internal control reports, meeting minutes, company presentations, research analyst reports, consensus reports, press releases and AIXTRON's financial reports.

As in every year, we also consulted with the Executive Board on the risk situation, risk management and compliance in the Company and carefully checked the corresponding developments and measures.

The Executive Board presented all transactions subject to approval to the Supervisory Board in a timely manner. After thorough consultation and review we gave our consent where appropriate.

## Focus of plenary sessions

During 2015, the Supervisory Board held four ordinary Supervisory Board meetings on February 23, May 19, September 16 and December 2. All six Supervisory Board members were present at the first three meetings, while only Dr. Komischke was absent with valid excuse at the fourth meeting on December 2, 2015.

In the **four ordinary meetings**, we regularly discussed in detail the development of the business of the AIXTRON Group, particularly in light of the continuing market weakness and the price/competition pressure. During these meetings we were able to form a sufficient picture of the current business situation using the current financial figures and the updated forecast reports and development plans (orders, revenues, competition, market shares). Deviations from the budget plan during the course of business were explained in detail and justified.

In the ordinary Supervisory Board meetings in February, May, September and December 2015, we were informed of the progress of various projects, relevant product developments, new technologies (examples: OLED, power electronics), key customer orders (example: San'an, a major contract from China), relevant projects, key developments in the regions (example: integration of Plasma Si) as well as internal reorganization processes (examples: sub-division into three technology groups, further layoffs, new career and remuneration structures).

A particular focus in all four meetings was the longer than expected qualification processes for the AIX R6 MOCVD system and the associated modification costs and cost inefficiencies as well as the impact on other customers. The risks associated with the major contract awarded for this system were also discussed in detail. After the customer informed the Executive Board on December 9, 2015 that the customer specifications had not been met, an ad-hoc announcement was published without undue delay.

In view of various cost-cutting programs that have already been implemented, our discussions and evaluations in the 2015 fiscal year once again concentrated on the market environment and the market opportunities for the various AIXTRON technology groups. In this context, we also explored possible M&A opportunities, particularly with a view to targeted improvement of market access.

In addition, the following topics were addressed in the individual meetings:

### Supervisory Board meetings in 2015

The meeting on **February 23, 2015** concentrated on the Annual and Consolidated Financial Statements for the 2014 fiscal year and the respective discussions and resolutions on the agenda. We reported on this information in detail in our report for the 2014 fiscal year. We also discussed in detail the existing horizontal and vertical comparison of Board remuneration and came to the conclusion that remuneration, both horizontally and vertically, is appropriate. In addition, we looked at the agenda of the 2015 Annual General Meeting and the resolutions it proposed. In view of the significant increase in takeover activities on the capital market, we discussed the relevance and potential alternatives in the event of a takeover bid.

At the meeting on **May 19, 2015** we discussed, in addition to the recurring issues mentioned above, the possibilities for dissolving the Genus Trust which expired in March 2015. It was formed as part of the takeover of Genus, Inc. to secure claims arising from the stock option plans which were part of the acquisition. We asked the Executive Board to assess a transfer of the assets to Germany. We also talked about various ways to use or convert the property on Kaiserstrasse at the headquarters in Herzogenrath.

At the meeting on **September 16, 2015** we discussed with the Executive Board, among other things, the definition of the relevant management levels in relation to the *law on the equal participation of men and women in executive management positions* in force since May 2015 and passed or confirmed the target quotas to be set by the Supervisory Board (Executive Board: 0%; Supervisory Board: approx. 20%). Due to the upcoming elections for a new Supervisory Board during the 2016 Annual General Meeting, we decided that the Nomination Committee should take up its work again.

The Supervisory Board of AIXTRON SE convened for its last ordinary meeting of the year on **December 2, 2015**. We discussed in detail the 2016 budget adjusted to the current business forecast which was presented by the Executive Board. This budget was approved after the meeting by circular resolution and is once again subject to the condition that the planned expenditures are reviewed on a regular basis and adjusted to the development of the business. The 2016 budget includes detailed sales revenues, income, financial and investment plans, as well as the planned personnel development at AIXTRON. We discussed new laws, guidelines and specifications and revised the by-laws for the Supervisory Board. The Executive Board reported on the definition of target quotas for the percentage of women at the two management levels below the Executive Board which the Executive Board defined as follows with the resolution on September 29, 2015: first management level: 0% (current: 0%); second management level: 8.3% (current: 8.3%). The deadline for achieving these targets is June 30, 2017.

Finally, in the last meeting of the year, we conducted a self-evaluation of our activities using an extensive questionnaire distributed to the members of the Supervisory Board in advance of the meeting which found that the Supervisory Board and its committees are working efficiently.

## Committees

The Supervisory Board currently has four committees: an Audit Committee, a Technology Committee, a Nomination Committee and a Capital Market Committee.

The **Audit Committee** addresses, in particular, monitoring of the accounting process, compliance, the effectiveness of the internal control system, the risk management system, the internal audit system and the implementation of the rules in accordance with Section 404 Sarbanes-Oxley Act (SOA 404). The Chairman of the Audit Committee, Prof. Dr. Blättchen, is an independent Supervisory Board member whose area of expertise is reporting and audits (as required by law: Section 107 (4); Section 100 (5) AktG and who has particular knowledge and experience in the application of internal control processes. In the reporting year as well, the Audit Committee was responsible for auditing the financial statements and monitored in particular the required independence of the auditor and any additional services performed by the auditor. Finally, it issued the mandate to the auditor, identified the focal points of the audit and handled the fee arrangements. The Committee Chair reported regularly on the work of the Audit Committee to the Supervisory Board.

The Audit Committee convened four times in 2015; each meeting was attended by all three Committee members. In addition to accounting issues related to the financial and earnings situation, the Audit Committee looked at the following issues, among others:

- The engagement of the auditing firm Deloitte & Touche GmbH to audit the Individual Financial Statements of AIXTRON SE and the Consolidated Financial Statements of the AIXTRON Group as of December 31, 2015, the US Annual Report in the 20-F form, the risk screening system in the meaning of Section 91 (2) AktG and the internal controls for the financial reporting in the meaning of SOA 404 and the preparation of a Management Letter and findings in accordance with Section 7.2.3 DCGK (German Code of Corporate Governance) at AIXTRON SE
- Review of the Statement of Independence and the "Management Letter" written by the Auditor (main conclusions from 2014 audits of the Individual Financial Statements and the Consolidated Financial Statements of the AIXTRON Group and of the internal control system)
- Regular discussion of the quarterly reports and the semi-annual report in telephone conferences
- Audit focal points for Deloitte & Touche GmbH for the audit of the 2015 AIXTRON Individual Financial Statements and Consolidated Financial Statements
- 2016 audit focal points of the German Financial Reporting Enforcement Panel (DPR)
- Integration of the accounting system of Plasma Si following its acquisition and discussions on how to handle accounting for the major contract awarded by San'an
- Dissolution of the Genus Trust
- Update of the Compliance Manual and transfer to an e-learning system
- Quarterly risk management report (ordinary risk management of the Executive Board pursuant to Section 91 (2) AktG)
- Improved performance of the risk management system as well as its direct incorporation into the internal forecast and business planning
- Reduction of the SOX inspections
- Adoption of an anti-corruption guideline
- Internal R&D audit in a separate teleconference
- Information security as well as the implementation of software to improve the information security
- Update of the report on the use of "conflict minerals"
- New relevant guidelines, laws and regulations

The **Technology Committee** focuses in particular on issues related to the technology market positioning of AIXTRON, patents, product planning (product roadmaps) and technology developments, possible technology acquisitions and other issues related to diversification. The current level of technical development of the MOCVD system technology AIX R6 was additionally discussed. The Committee also heard reports about the core processes in the area of development. The focus of the Technology Committee's work, in addition to the status reports from the individual technology areas, was on further developments of products and their critical assessment.

The Committee Chair, Prof. Dr. Denk, regularly reported to the Supervisory Board on the activities of the Technology Committee in the plenary meetings. In fiscal year 2015, the Technology Committee convened in four meetings which were all attended by all three committee members.

The **Nomination Committee**, consisting of three members, makes nomination proposals to the Supervisory Board if Supervisory Board positions need to be replaced; in doing so, it also takes into account its own targets defined in 2010 for its future composition as well as the requirements of the German Corporate Governance Code (DCGK) for appropriate diversity and an appropriate number of independent Supervisory Board members. Due to the upcoming election for the entire Supervisory Board in 2016, the Nomination Committee convened once in the 2015 fiscal year on December 1, 2015.

To evaluate M&A opportunities and strategy options with possible capital market relevance, the **Capital Market Committee** with its two members held a total of six conference calls in 2015 (on June 2, 5 and 19, on September 8 as well as on October 1 and 29).

## Corporate Governance and Declaration of Conformity

The Supervisory Board regularly follows the development of the Corporate Governance Standards and, together with the Executive Board, issues a joint **Corporate Governance report**. We will continue to support the Executive Board in its efforts to remain in full compliance with the German Corporate Governance Code recommendations.

In the latest **Declaration of Conformity** in accordance with Section 161 AktG dated February 2016, with the exception of the deviations stated, the Executive and Supervisory Boards certified full compliance with the recommendations of the German Corporate Governance Code.

No conflicts of interest were reported by the members of the Supervisory or Executive Board.

## Composition of the Executive and Supervisory Board

There were no changes in the composition of the Executive and Supervisory Boards in fiscal year 2015.

## Audit and Annual Financial Statements

Following the resolution passed at the Company's Annual General Meeting on May 20, 2015, the Supervisory Board awarded the mandate to audit the Financial Statements of AIXTRON SE and the Consolidated Financial Statements of the AIXTRON Group for fiscal year 2015 to Deloitte & Touche GmbH Wirtschaftsprüfungsgesellschaft, Düsseldorf.

The auditors also reviewed the Company's Annual Report in Form 20-F and the internal control system in accordance with the Sarbanes-Oxley Act, as well as measures implemented by the Executive Board to detect, at an early stage, business risks that could potentially jeopardize the performance and existence of the Company. It was also agreed that the auditors would, if necessary, inform the Supervisory Board or make a note in the audit report of any facts found during their examination which conflict with the Declaration of Conformity under Section 161 AktG issued by the Executive Board and the Supervisory Board. As in previous years, the auditors did not make note of any such findings for fiscal year 2015.

The Financial Statements of AIXTRON SE as of December 31, 2015 and the Management Report were prepared in accordance with the requirements of the German Commercial Code (HGB), while the Consolidated Financial Statements as of December 31, 2015 and the Group Management Report were prepared in accordance with Section 315a HGB on the basis of the International Financial Reporting Standards (IFRS). Deloitte & Touche GmbH, an independent registered public accounting firm, has audited the 2015 Financial Statements of AIXTRON SE and the Consolidated Financial Statements of the AIXTRON Group, both of which were given an unqualified audit opinion. The auditors found that the Management Reports of both AIXTRON SE and the AIXTRON Group present a true and fair view of the current position and prospects of AIXTRON SE and the AIXTRON Group. The audit team with auditor in charge Dr. Holger Reichmann has audited the Financial Statements of the Company since 2012.

The Annual Financial Statement documents (Annual Financial Statements of AIXTRON SE and the Consolidated Financial Statements of the AIXTRON Group as of December 31, 2015, including the Management Report of the Company and the Group) and the audit reports by the auditors were submitted to the Audit Committee and the Supervisory Board for examination in a timely manner. We **examined these documents** in detail. The Annual Financial Statements of AIXTRON SE and the Consolidated Financial Statements of the AIXTRON Group, as well as the respective Management Reports, were **discussed in detail** with the Company's auditors at the meeting of the Audit Committee and entire Supervisory Board on February 22, 2016, with due consideration given to the auditor's reports. The auditor, who participated in both the meeting of the Audit Committee as well as the subsequent Supervisory Board meeting, reported on the key audit results, which also covered the internal control and risk management system as they relate to the accounting process. The auditor was available to answer any additional questions raised by the Audit Committee or Supervisory Board. The Supervisory Board also discussed the 2015 Annual Report "Form 20-F" as required by the U.S. Securities and Exchange Commission (SEC).

Following our own examination, we had no objections to the single-entity or consolidated financial statements submitted. The respective Management Reports matched our own assessment of the Company and the Group's situation. We fully concurred with the auditor's results and opinion and consequently, in a resolution **passed** on February 22, 2016, we approved both the Annual Financial Statements of AIXTRON SE and the Consolidated Financial Statements of the AIXTRON Group prepared by the Executive Board for fiscal year 2015. The Annual Financial Statements of AIXTRON SE are therefore **formally adopted**. Form 20-F for fiscal year 2015 was approved for filing with the SEC.

## Note of thanks from the Supervisory Board

We would like to thank the Executive Board and all employees around the world. We would also like to thank the employee representatives for their constructive work with various boards and councils within the Company. Also, we would like to express our appreciation to the shareholders for their support and their ongoing confidence in AIXTRON SE.

Herzogenrath, February 2016

AIXTRON SE



Kim Schindelhauer  
Chairman of the Supervisory Board

# Corporate Governance Report

## 1. Declaration on Corporate Governance

### 1.1 Declaration of Conformity

In accordance with Section 161 German Stock Corporation Act (AktG), the Executive Board and the Supervisory Board of AIXTRON SE declare:

AIXTRON SE meets all recommendations of the Government Commission on the German Corporate Governance Code (Regierungskommission "Deutscher Corporate Governance Kodex") published by the Federal Ministry of Justice (Bundesministerium der Justiz) in the official section of the German Federal Gazette (Bundesanzeiger), in the version dated May 5, 2015, with the exception of the deviations declared below:

#### **Consideration of the relationship between the remuneration of the Executive Board and the remuneration of senior management and staff overall at the present time and over the course of its historical development (Section 4.2.2 (2) Sentence 3 German Corporate Governance Code (DCGK))**

The German Corporate Governance Code (DCGK) recommends in Section 4.2.2 (2) Sentence 3 that the Supervisory Board should take into account the relationship between the remuneration of the Executive Board and senior management and staff overall at the present time and over the course of its historical development when determining the total remuneration of individual members of the Executive Board, with the Supervisory Board specifying how the senior management and the relevant staff are to be differentiated for the comparison. The Supervisory Board did not explicitly specify at the time of the conclusion of the current contracts with the Executive Board how the senior management and the relevant overall staff are to be differentiated from the Executive Board. The relationship between the remuneration of the Executive Board and the remuneration of senior management and the relevant overall staff, however, is used as a basis to assess the appropriateness of the remuneration of the Executive Board pursuant to Section 4.2.2 (2) Sentence 2 DCGK.

#### **Upper limits for remuneration of the Executive Board (Section 4.2.3 (2) Sentence 6 DCGK)**

The German Corporate Governance Code (DCGK) recommends in Section 4.2.3 (2) Sentence 6 that the remuneration of the Executive Board members in total and with respect to their performance-based salary components should have upper limits in terms of amounts. The total remuneration of Executive Board members at AIXTRON SE includes both a fixed salary and various performance-based salary components. The performance-based remuneration is limited to a maximum of EUR 6.5 million with respect to the performance-based bonus for the entire Executive Board. Half of the performance-based remuneration is awarded in the form of Company stock options. The amount of the respective stock option is subject to the aforementioned upper limit at the time of its awarding. In this respect, the recommendation has been complied with. The shares are only transferred to the entitled recipient three years after being awarded. Within this time frame, the members of the Executive Board benefit to an unlimited extent from the potential rise in the price of the shares, which may be viewed as a deviation from the wording of the recommendation. A further limit on the performance-based remuneration with respect to the time of the transfer of the shares does not seem to be in the interests of the parties, since the essential incentive of share-based remuneration – to work toward increasing corporate value – would be counteracted and the Executive Board members would be placed at a disadvantage above such an upper limit in the event of a further increase in the stock price. An upper limit in terms of amounts for the total remuneration is thus not explicitly included in the current contracts for the Executive Board members.

#### **Control limits for length of term on the Supervisory Board (Section 5.4.1 (2) DCGK)**

In Section 5.4.1 (2) DCGK, it is recommended that the Supervisory Board designates specific objectives for its composition, while considering the specifics of the company, by taking into consideration a definable control limit for the length of term on the Supervisory Board. It is difficult to define an ideal length of term, and it in the light of the current situation of the company the Supervisory Board considers it to be advantageous to maintain the current expertise on the board. This includes, for example, long-standing knowledge of the company and the niche markets the company is focused on as well as comprehensive knowledge of capital markets and financial-related topics for a company dual listed in Germany and the United States. Given these factors, the Supervisory Board has determined at this time to not set a limit for the length of term on the Supervisory Board.

Since the last Declaration of Conformity was issued in February 2015, AIXTRON SE has fully complied with the recommendations laid out in the German Corporate Governance Code (DCGK), in the version of June 24, 2014, and the recommendations in DCGK, in the version of May 5, 2015, since being announced in the official section of the Federal Gazette, with the exception of the deviations mentioned above.

Herzogenrath, February 2016  
AIXTRON SE

For the Executive Board of AIXTRON SE

*Martin Goetzeler*  
Chairman & Chief Executive Officer

For the Supervisory Board of AIXTRON SE

*Kim Schindelbauer*  
Chairman of the Supervisory Board

## 1.2 Information regarding Corporate Governance Practices

AIXTRON SE has had a **Code of Ethics** since 2006 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 Investors/Corporate Governance.

In addition, AIXTRON has issued a **Compliance Code of Conduct** applicable to the Executive and Supervisory Boards, as well as all employees throughout the world, which holds them accountable for conscientious conduct in conformity with the law. Amongst the topics addressed, this Code covers the following issues: responsibility and respect towards society 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, safety 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. In addition, due to particular requirements set by NASDAQ, AIXTRON SE has a separate NASDAQ Code of Conduct. The full texts of the Compliance Code of Conduct and the NASDAQ Code of Conduct can also be downloaded from the AIXTRON website in the Investors/Corporate Governance section under "Code of Conduct".

In 2010, AIXTRON issued a Compliance Manual which applies to all members of the 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 and on the resulting conduct requirements applicable to the Executive Board, the Supervisory Board and the employees. Regular training is held for employees to reinforce these requirements. This manual is regularly updated to reflect amended statutory requirements and was therefore also amended in fiscal year 2015. The content of the manual was transferred to an e-learning platform at the end of the year. This makes it possible to verify on a regular basis that AIXTRON employees are aware of and understand the requirements. Each quarter, the senior managers declare in writing that the compliance requirements of AIXTRON SE 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. Management principles were defined for the company's senior managers which include what is required of managers when dealing with employees.

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 and tin) within the AIXTRON supply chain. The code includes information on U.S. rules regarding the use of conflict minerals, the process of due diligence in the supply chain, the expectations for supply chain partners and suppliers and the consequences in the event of non-compliance. The complete text of the Vendor Code of Conduct can be accessed on the AIXTRON website in the Investor/Corporate Governance section under "Conflict Minerals Regulations".

## 1.3 Executive Board and Supervisory Board Operating Procedures; Composition and Mode of Operation of Committees

As a European company (Societas Europaea), AIXTRON SE is subject not only to the German Stock Corporation Act, but also to the superordinate European SE regulations and the German SE Implementation Act. The Company has a dual management and supervisory 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 is responsible for the appointment of the Executive Board members and oversees and advises the Executive Board in its management duties. For certain transactions and measures specified in the Articles of Association of AIXTRON SE or the Executive Board's by-laws, 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 material agreements that do not require approval under the Articles of Association or the Executive Board's by-laws. The Executive Board is also required to notify the Supervisory Board of all material events, even those that do not require the approval of the Supervisory Board.

As in previous years, the Executive Board and the Supervisory Board worked closely together throughout 2015 for the benefit of the Company. The common goal continues to be the return to profitability.

## Executive Board

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.

AIXTRON SE's Executive Board is comprised of two members:

Name	Position	First Appointment	End of Term
Martin Goetzeler	Chief Executive Officer	March 1, 2013	February 28, 2017
Dr. Bernd Schulte	Chief Operating Officer	April 1, 2002	March 31, 2018

Notwithstanding the Executive Board's statutory joint and several liability and the obligation of its 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 schedule of responsibilities:

The Chief Executive Officer coordinates the tasks of the Executive Board and is additionally responsible for the operating business of the AIXTRON Group, focusing in particular on Strategic Planning, Investor Relations Management & Communications, Procurement, Human Resources, Finances and Reporting, Corporate Governance, Compliance & Risk Management, Information Technology, Legal and Quality Management as well as Environment, Social and Governance. The Chief Operating Officer is responsible for the Group's Research and Development, Marketing, Sales, Customer Service, Production and Logistics and Facility Management.

With the Supervisory Board's approval, the Executive Board has adopted by-laws that are regularly reviewed to ensure they are appropriate and up to date. They include a list of matters that are of fundamental or substantial importance and about which the Executive Board is required to make formal resolutions. Examples of such material decisions requiring formal resolutions are: decisions on strategies, corporate plans and budgets; significant changes in the organization of the Company and Group; the commencement or discontinuation of areas of activity within the Company; the acquisition and sale of land and land rights; the conclusion, amendment, and termination of intercompany or significant license or cooperation agreements; the commissioning of material external consulting and research projects; fundamental questions in the area of human resources and human resources policy; determination of the principles governing representation in business organizations and associations; appointments to the management and supervisory bodies of subsidiaries and associated companies; important publications and information for the public above and beyond normal reporting requirements; the initiation of lawsuits and legal disputes; the granting of collateral and assumption of guarantees.

The Executive Board's by-laws and the Articles of Association each contain a list of material transactions and measures which require the prior approval of the Supervisory Board. Transactions and measures requiring approval pursuant to the Articles of Association or by-laws include, but are not limited to, decisions to build or dispose of operating sites or land; the starting or ending of business activities; granting or taking out of loans, etc.

According to the by-laws, meetings of the Executive Board are to be held at least twice a month or whenever the Company's interests shall so dictate. Executive Board meetings are convened and directed by the Chairman of the Executive Board. Any member of the Executive Board may request an Executive Board meeting be convened for a specific issue. If the Chairman cannot attend, the meeting shall be chaired by a Board member appointed by the Chairman or the oldest member of the Executive Board in terms of age. The Executive Board shall be deemed to have quorum if all members have been invited and more than half of the members are able to participate in person, via telephone link or by video conference, when resolutions are being voted on. The Executive Board makes decisions by a simple majority of the votes cast by the members involved in the meeting unless otherwise provided by law, the Articles of Association or by-laws. In the case of a tie, the Executive Board Chairman casts the deciding vote. With two Executive Board members, the Supervisory Board Chairman shall be asked to mediate in the event of a tie.

Every Executive Board member must immediately disclose conflicts of interest to the Supervisory Board and other members of the Executive Board. Members of the Executive Board may only take on part-time activities, especially posts on company and supervisory boards outside of the Group, after receiving Supervisory Board approval.



## Supervisory Board

Pursuant to Article 11 of AIXTRON SE's Articles of Association, the Supervisory Board consists of six members. The Annual General Meeting can specify any other number of Supervisory Board members, providing that the total is divisible by three. 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. The term of office of the Supervisory Board members listed below ends after the Annual General Meeting in 2016.

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.

At the end of fiscal year 2015, AIXTRON'S Supervisory Board consisted of the following six members:

Name	Position	Member since	Term ends
Kim Schindelhauer 1) 2) 3) 4) 5)	Chairman of the Supervisory Board	2002	AGM 2016
Prof. Dr. Wolfgang Blättchen <sup>1) 4)</sup>	Deputy Chairman of the Supervisory Board, Chairman of the Audit Committee, Independent Financial Expert <sup>6)</sup>	1998	AGM 2016
Dr. Andreas Biagosch <sup>2)</sup>		2013	AGM 2016
Prof. Dr. Petra Denk <sup>2) 3)</sup>	Chair of the Technology Committee	2011	AGM 2016
Dr. Martin Komischke		2013	AGM 2016
Prof. Dr. Rüdiger von Rosen <sup>1) 3)</sup>	Chairman of the Nomination Committee	2002	AGM 2016

1) Member of the Audit Committee

2) Member of the Technology Committee

3) Member of the Nomination Committee

4) Member of the Capital Market Committee

5) Former Executive Board member of AIXTRON AG

6) Since 2005

The Company is in compliance with the requirement for diversity on the Supervisory Board (Section 5.4.1 DCGK) due to the broad range of skills that individual Supervisory Board members have (in the areas of finance, capital markets, M&A, technology and market experience). Already in 2010, a target of approx. 20% women on the Supervisory Board was set at AIXTRON SE. The Supervisory Board has one female member, Prof. Dr. Denk, representing a share of close to 17% in arithmetical terms. Against this background, the Supervisory Board continues to think that the above mentioned goal is worthwhile and therefore confirms the target of approx. 20% (Section 5.4.1 (2) DCGK) which also complies with the new legal requirements (Section 111 (5) AktG (German Stock Corporation Act)) for the share of women on the Supervisory Board.

The Supervisory Board shall include what they consider to be an adequate number of independent members. Within the meaning of Section 5.4.2 DCGK, a Supervisory Board member will not be considered independent, in particular, if he or she has personal or business relations with the Company, its executive bodies, a controlling shareholder or an enterprise associated with the latter which may cause a substantial and not merely temporary conflict of interest. The Supervisory Board's goal is that at least half of its members are independent. Since the Supervisory Board consists solely of elected representatives of shareholders who are to be viewed as independent members according to DCGK, the Company has complied with this objective.

The Supervisory Board shall not have more than two former members of the Executive Board (Section 5.4.2 DCGK).

Prior to the Supervisory Board Meeting on December 2, 2015, each Supervisory Board member received the annual questionnaire from the Chairman examining the efficiency of the Supervisory Board's activities. Based on its evaluation of the returned questionnaires, the Supervisory Board resolved that it is acting efficiently in accordance with Section 5.6 DCGK.

Other directorships held by Executive and Supervisory Board members are listed under Item 36 "Supervisory Board and Executive Board" in the Notes to the Consolidated Financial Statements.

The Company did not initiate or conclude any material transactions with related parties during the 2015 fiscal year.

The Supervisory Board has adopted its own set of by-laws, governing Supervisory Board duties, rights, obligations and organization procedures for meetings and resolutions, including the formation of appropriate committees. The Audit Committee and the Technology Committee both operate according to separate by-law requirements approved by the Supervisory Board. The Supervisory Board's by-laws were revised in 2015.

An independent and expert member of the Supervisory Board has chaired the Audit Committee since 2005 in accordance with Section 5.3.2 DCGK. The Technology Committee was created on May 19, 2011. To evaluate M&A opportunities and strategy options with possible capital market relevance, the Supervisory Board formed a Capital Market Committee as of April 12, 2014.

The Supervisory Board, like the Audit Committee and Technology Committee, generally holds four ordinary meetings per year. The Nomination and Capital Market Committees convene as necessary.

As requested by the Chairman of the Supervisory Board, the Executive Board participates in all Supervisory Board meetings (usually four times a year), gives written and oral reports on the various points on the agenda and proposed resolutions, and answers questions posed by individual Supervisory Board members. Between meetings, detailed quarterly reports on the status of the Company from the Executive Board are made available to all Supervisory Board members. Furthermore, in numerous telephone calls and face-to-face meetings, the Supervisory Board Chairman, the Chairman of the Audit Committee and the Chair of the Technology Committee are informed by the Executive Board about relevant material developments and forthcoming decisions on material issues.

Resolutions of the Supervisory Board and its committees are generally passed during formally convened meetings. In exceptional cases, Supervisory Board members may, if justified, participate in a board or committee meeting remotely via telephone or video conference. The Supervisory Board and its committees are deemed to have a quorum if two-thirds, but at least three of its members, are able to participate in person for the adoption of a resolution (outside of formal meetings, if no objections are raised by any member, it is possible by casting votes in writing, by fax, telephone, e-mail or a combination of these communication media). Resolutions are adopted if a majority of the votes are cast in favor. In the case of a tie, the Chairman of the meeting casts the deciding vote.

Every member of the Supervisory Board must disclose conflicts of interest to the Supervisory Board, especially those conflicts arising from a consulting contract or board position for a customer, supplier, creditor or other business partner. If a material, not just temporary, conflict of interest involving a Supervisory Board member cannot be resolved to the satisfaction of the Supervisory Board, it will result in that member being required to resign.

### **Operating Procedures and Composition of Committees**

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

The Supervisory Board of AIXTRON SE currently has four committees: the Audit Committee, the Technology Committee, the Nomination Committee and the Capital Market Committee. The Supervisory Board is authorized to form other committees with its members.

The Audit Committee is composed of one chairman and two other members. The Chairman of the Audit Committee, Prof. Dr. Blättchen, is an independent member whose area of expertise is reporting and audits (as required by law: Section 107 (4); Section 100 (5) AktG) and who has particular knowledge and experience in the application of internal control processes. The Audit Committee addresses, in particular, the monitoring of the accounting process, compliance, the effectiveness of the internal control system, the risk management system, the internal audit system and the implementation of the rules in accordance with Section 404 Sarbanes-Oxley Act (SOA 404). In addition, the Audit Committee is responsible for auditing the financial statements and ensures in particular the required independence of the auditor and any additional services performed by the auditor. Finally, it issues the mandate to the auditor, identifies the focal points of the audit and handles the fee arrangements. The Committee Chair reports regularly on the work of the Audit Committee to the Supervisory Board.

The Technology Committee is composed of one chair and two other members. It deals, in particular, with questions of AIXTRON's market positioning in technology, patents, product planning (product roadmaps) and technology development, potential technology acquisitions and other topics relating to diversification. The Committee Chair, Prof. Dr. Denk, regularly reports to the Supervisory Board on the activities of the Technology Committee.

Due to the upcoming elections of the Supervisory Board as part of the 2016 Annual General Meeting, the Nomination Committee of the Supervisory Board convened once (on December 1) in fiscal year 2015. The Nomination Committee also consists of a chair and two other members. The Committee, chaired by Prof. Dr. von Rosen, makes nomination proposals to the Supervisory Board if a board member needs to be replaced.

To evaluate M&A opportunities and strategy options with potential capital market relevance, the Supervisory Board formed a Capital Market Committee consisting of two members as of April 12, 2014

The details on the interaction and cooperation of the Executive Board, the Supervisory Board and its committees during fiscal year 2015 can also be found in the Supervisory Board Report, which is part of this Company's Annual Report and can be downloaded from the AIXTRON corporate website.

## 2. Corporate Governance Report

### 2.1. Report on Corporate Governance from the Executive and Supervisory Boards

AIXTRON is committed to observing the principles of transparent and responsible conduct of its business aimed at creating value on a sustainable basis by employing appropriate corporate governance. We, the Executive and Supervisory Boards of AIXTRON SE, seek to further strengthen the trust placed in us by our shareholders, financial markets, customers, business partners, employees and the general public through appropriate management and supervision. We are convinced that good corporate governance is an essential element in our Company's success.

Both this Corporate Governance Report, prepared in accordance with Section 3.10 DCGK, and the joint Declaration of Conformity, issued by the Executive Board and the Supervisory Board pursuant to Section 161 AktG in February 2016 are published in the Annual Report and on the AIXTRON corporate website in German and English. AIXTRON also retains previous Declarations of Conformity on its website for a period of at least five years.

#### Isolated deviations

AIXTRON has complied with all the recommendations laid out in DCGK in the past and, with the exception of the deviations declared in the Declaration of Conformity, also fully complied with DCGK in fiscal year 2015. Our internal monitoring and control systems, which have been regularly tested and are continuously kept up to date, comply with Section 404 of the Sarbanes-Oxley Act and provide us with support in meeting our compliance responsibilities.

The Government Commission on the German Corporate Governance Code has made changes and additions to the Code in May 2015. The German Corporate Governance Code (DCGK) in the currently applicable version of May 5, 2015 was published by the Federal Ministry of Justice and for Consumer Protection on June 12, 2015.

#### Diversity

As stipulated by DCGK, AIXTRON has set clear targets with regard to appropriate diversity in the management of the Company (Sections 5.1.2 and 5.4.1 DCGK).

Pursuant to Sections 76 (4), 111 (5) AktG, the Supervisory Board and the Executive Board of listed companies or companies that are subject to co-determination, must set targets for the percentage of women on the Supervisory Board, Executive Board and at the two management levels below the Executive Board. These requirements are laid out in Sections 4.1.5 and 5.4.1 (2) (DCGK).

Against the backdrop of demographic change and the associated effect of a lack of sufficiently qualified staff in Germany, AIXTRON has consistently striven for further increases in the percentage of women and the international composition of its employees and management. Nevertheless, the Company's primary commitment is to ensure that the employees possess the required professional and social skills. The availability of qualified female applicants is very limited, particularly due to the low percentage of women still enrolled in technical degree programs.

In view of this, the Supervisory Board and the Executive Board have set the following targets for the percentage of women to be achieved by June 30, 2017:

Body/management level	Target percentage of women	Defined by
Supervisory Board	20%	Supervisory Board
Executive Board	0%	Supervisory Board
1st level below the Executive Board	0%	Executive Board
2nd level below the Executive Board	8.3%	Executive Board

## Composition of the Supervisory Board

As early as 2010, the Supervisory Board listed a set of required qualities for future appointments of Supervisory Board members. They were amended most recently in 2015. In fiscal year 2015, the Supervisory Board confirmed the target percentage of women of approx. 20% adopted in 2010 as well as all other existing targets. The targets for the composition of the Supervisory Board are shown in detail below:

- With respect to nominations of Supervisory Board members, the Nomination Committee shall ensure that the Supervisory Board at all times consists of members who, individually and collectively as a team, have the knowledge, skills and experience required to perform their tasks properly. In addition, the members should be independent. The Nomination Committee will strive to enhance the efficiency and transparency of the selection process. As a general rule, the Supervisory Board members are nominated for election for the longest possible period in compliance with the Company's Articles of Association.
- AIXTRON is heavily export-oriented. Experience in the electronics and lighting appliances markets specific to AIXTRON's areas of interest is of the greatest benefit to the Company.
- As a general rule, new members of the Supervisory Board should not be older than 70 when they retire from the Supervisory Board. When elected, they should be available to the Company for at least two election periods.
- The aim should be that the individual Supervisory Board members will have training, qualifications, expertise and international experience that are as diverse as possible so that collectively they will have the necessary knowledge, skills and experience required to perform their tasks properly. They should have company and product oriented relevant experience with an understanding of the business model, the specifics of the industry and the processes in the various departments of business management and administration, including more specifically accounting, audit of the annual financial statements, corporate development, capital markets, technology, special machine production, markets, sales, lighting market, etc.
- It is believed to be in the best interest of the Company to employ the full potential of well-trained and motivated people from different nationalities and both genders. The Supervisory Board thinks that it is appropriate to uphold the target of approx. 20% for the participation of women on the Supervisory Board.
- The Supervisory Board shall include what it considers to be an adequate number of independent members. A Supervisory Board member will not be considered independent, in particular, if he or she has personal or business relations with the Company, its executive bodies, a controlling shareholder or an enterprise associated with the latter that may cause a substantial and not merely temporary conflict of interest.
- At least half of the Supervisory Board members should be independent.
- The Supervisory Board shall not have more than two former members of the Executive Board amongst its members at any one time.
- The Supervisory Board members shall not hold any function as a board member in or act as a consultant for any material competitor of the Company.
- The Supervisory Board must have at least one independent member (as defined by the DCGK) with expertise in accounting, internal control processes and the auditing of annual financial statements. This Supervisory Board member is therefore also a member of the Audit Committee.
- Given the increased demands on the professionalization of Supervisory Board members and with a view to ensuring that their services will be provided as efficiently as possible, as in previous years, new Supervisory Board members should not hold more than five board memberships in other listed companies or other companies with similar demands. For reasons of convenience and efficiency, the aim is to give preference, but not exclusivity, to candidates who are based in Germany or in other parts of Europe.

Additional information regarding the composition of the Supervisory Board can also be found in the section "Supervisory Board" in Chapter 1.3 of this Annual Report.

The Executive Board and Supervisory Board of AIXTRON SE are convinced that the Supervisory Board fully complies with its own requirements as well as those for appropriate diversity laid out in DCGK and an appropriate number of independent Supervisory Board members.

For the purposes of continuing education, as part of further professionalization of the Supervisory Board, its members have taken part in advanced training related to their roles as Supervisory Board members and their other professional activities.

## Information on remuneration of the Executive Board in accordance with Section 4.2.5. DCGK

Detailed information on the remuneration structure and remuneration of the individual Executive Board members in accordance with Section 4.2.5. DCGK and for information on the remuneration of the Supervisory Board members as well as a detailed list of the outstanding Executive Board stock options can be found in the remuneration report as part of the Company's consolidated management report.

## Shareholders and Annual General Meeting

In fiscal year 2015, the Annual General Meeting was held in Aachen on May 20, 2015. The invitation to the Annual General Meeting was announced in a timely manner in the German Federal Gazette (Bundesanzeiger) in accordance with the legal requirements, and included the agenda, the proposed resolutions from the Executive and Supervisory Boards as well as the conditions for participation at the Annual General Meeting and the exercising of voting rights. Holders of the Company's ADS (American Depositary Shares) received special proxy voting forms within the required time frame. All reports and documentation required by law were available on AIXTRON's website, [www.aixtron.com](http://www.aixtron.com), from the date the Annual General Meeting was convened. Directly following the Annual General Meeting, the Company published attendance figures and the voting results in a press release, as well as on its website.

Three out of four agenda points required approval. All of the resolutions were approved with the support of more than 85% of the voters entitled to vote, with a good 46% of AIXTRON share capital being represented at the Annual General Meeting.

## Shares Held by Executive and Supervisory Board Members

The Company's share capital amounted to EUR 112,720,355 at the end of 2015. As of December 31, 2015, members of AIXTRON SE's Supervisory Board held, directly and indirectly, a total of 0.5% or 601,429 ordinary shares.

As of December 31, 2015, the AIXTRON Executive Board did not directly or indirectly hold any shares issued by the Company. The options held by Executive Board members under stock option plans and the share- and performance-based components of remuneration granted by the Company are set out and explained in the remuneration report in the Notes to the Annual Financial Statements.

Information regarding the purchase and sale of AIXTRON SE shares by persons performing managerial responsibilities according to Article 15a WpHG (German Securities Trading Act) is published on the AIXTRON website under the category of "Corporate Governance/Director Dealings" immediately after the notification is received. No transactions of this kind were published in fiscal year 2015.

## Transparency

In the interest of maximum transparency, shareholders, shareholder associations, potential investors, financial analysts and the media are regularly and promptly informed about the AIXTRON 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 interactive, electronic Annual Report with the Consolidated Financial Statements, the Group Management Report and the Supervisory Board Report
- The AIXTRON SE Annual Financial Statements and the related Management Report
- The annual report on Form 20-F for the United States Securities and Exchange Commission ("SEC")
- Interim financial reports
- (Quarterly) 6-K forms for the SEC
- Transcripts or audio files of quarterly conference calls for the press and analysts
- The form SD required by the SEC with the respective report on the usage of conflict minerals
- Company presentations
- Ad-hoc, company and IR announcements
- Press and marketing releases

Important recurring dates, such as the date of the Annual General Meeting or the publication dates of financial reports, are detailed in the Company's financial calendar published on the AIXTRON website under Investors/Events. This and the above-mentioned reports, speaker notes, presentations, webcasts and press releases are available on the AIXTRON's website for a limited period of time.

## Accounting and audit of the annual financial statements

The Group's interim financial reports as of March 31, June 30, and September 30, 2015 and the Consolidated Financial Statements for the period ending on December 31, 2015 were prepared in accordance with the IFRS (International Financial Reporting Standards). The Annual Financial Statements 2015 for AIXTRON SE were prepared in accordance with the German Commercial Code (HGB) and the requirements of the German Stock Corporation Act (AktG).

The Consolidated Annual Financial Statements and the parent company's Annual Financial Statements were audited by the appointed external auditor and approved by the Supervisory Board. The auditor agreed that the Chairman of the Supervisory Board and the Chairman of the Audit Committee would be informed without delay about any reasons for exclusion or exemption and any inaccuracies in the Declaration of Conformity arising in the course of the audit. No such material events were recorded in the current year.

### **Stock Option Plans**

AIXTRON has a total of five stock option plans, under which options are or have been issued for the acquisition of AIXTRON shares to members of the Executive Board, managers and Company employees.

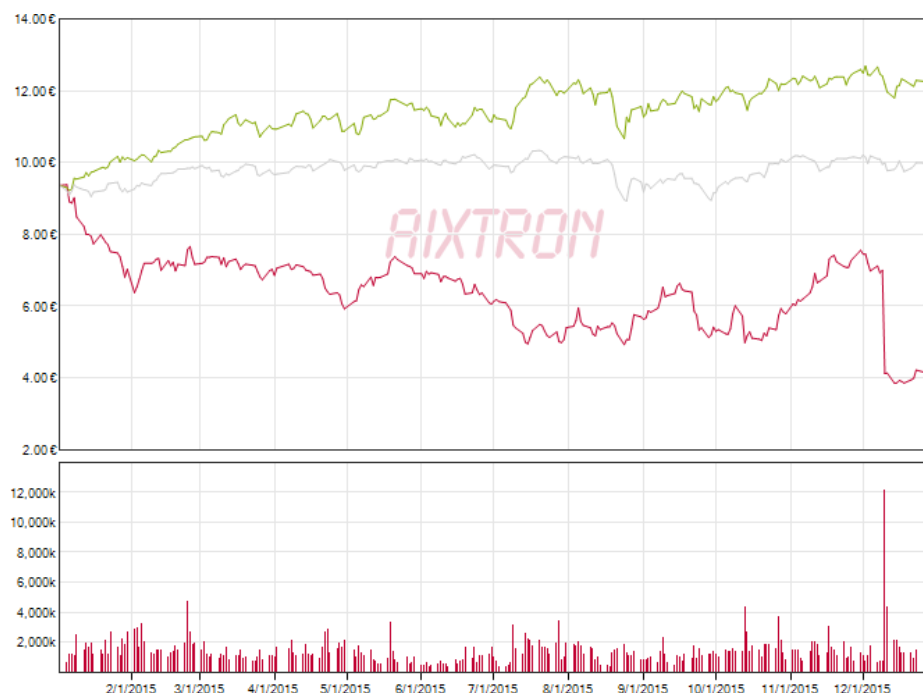
No stock options were issued in the reporting year. In accordance with the amended Section 193 (2) No. 4 AktG of the Act on the Appropriateness of Management Board Remuneration (VorstAG), the options under the 2012 Stock Option Plan can only be exercised, at the earliest point in time, after a waiting period of four years and include an absolute performance target. In addition, stock options issued to members of the Executive Board contain a relative exercise threshold with the TecDAX® as a comparison parameter. The maximum term of the stock options is ten years.

As of December 31, 2015, tranches 2014 and 2014\_I of the 2012 Stock Option Plan and the 2007, 2008, 2009, 2010, 2011 and 2012 tranches of the 2007 Stock Option Plan and the previous stock option plans (AIXTRON 1999 and 2002 Plans and the Genus Stock Option Plan 2000) still had outstanding options to acquire 2,891,815 AIXTRON shares for exercise.

A more detailed description of the individual stock option plans and a summary of all the stock option transactions can be found in Note 23 "Share-based payment", of the Notes to the Consolidated Financial Statements.

# The AIXTRON Share

Share Price and Volume Graph for AIXTRON SE from 01/01/2015 to 12/31/2015



Share  
■ AIXTRON

Peer group  
 Indices

■ TecDAX  
■ NASDAQ Composite

## AIXTRON Share Price Performance

AIXTRON's share price was under pressure in 2015. While demand from specialty LED, laser, power electronics, silicon or other applications posted effective growth throughout the year, the expectations of a meaningful short term recovery of LED related equipment demand and a successful production qualification of our AIX R6 showerhead tool at major customers remained the focus of the capital market. AIXTRON informed regularly about the challenges and delays in the qualification processes. Since February 2015, AIXTRON also emphasized the low visibility of the LED markets.

The share price reached a 2015 high of EUR 9.38 (USD 11.08) on January 5. Uncertainties based on the ongoing qualification process of the AIX R6 showerhead tool at the major Chinese customer San'an Optoelectronics triggered downwards corrections of the AIXTRON share price at the beginning of the year. During the FY/2014 results in February and the Q1/2015 results in April, Management discussed the ongoing qualification process and provided or reiterated the full-year 2015 guidance on revenues and EBITDA.

During Q1/2015, expectations of high utilization rates at many LED manufacturers to be extended into the mid of the year drove an AIXTRON share rebound in May. Nevertheless, muted order activities did not support the market's recovery projections. The share price declined again. Management's reiteration of the full-year 2015 guidance during the Q2/2015 results in July accounted for an optimistic sentiment on the AIXTRON share extending into September. It faded away partially due to accelerating LED chip price erosion and respective profitability concerns on the LED producers in late September.

In October, AIXTRON revised its full year revenue guidance downwards, which was in particular due to a shortfall of 2015 shipments to the major customer San'an. At the same time, AIXTRON reiterated its target to achieve a positive EBITDA in the second half of 2015. AIXTRON's positive Q3/2015 EBITDA results, the announcement of major investment plans by Osram and some positive analyst reports led to the share price rally in November. It significantly reversed after the Company's ad hoc release on December 9 of a substantial reduction in the order volume of AIX R6 MOCVD systems from San'an. The AIXTRON share hit a 2015 low of EUR 3.86 (USD 4.17) on December 18.

AIXTRON shares ended the year 2015 at EUR 4.13 (-55.9% year-on-year) in Germany and USD 4.36 (-61.1% year-on-year) in the U.S. (versus 2014 closing prices of EUR 9.37 and USD 11.21), resulting in a market capitalization of close to EUR 467 million. In comparison, the TecDAX® Index increased by 33.5% from 1,371.4 points to 1,830.7 over the year and the NASDAQ Composite® Index increased by 5.7% from 4,736.1 points to 5,007.4 points at the end of 2015.

## Investor Relations

AIXTRON shares are listed in the Prime Standard segment of the Frankfurt Stock Exchange and – in form of American Depositary Shares – on the NASDAQ® Global Select Market<sup>SM</sup>. In line with the US listing requirements, AIXTRON complies with strict American transparency guidelines. The AIXTRON shares are included in many important indices, such as the TecDAX® or the NASDAQ Composite® Index. In addition, it is included in sustainability indices, such as the Dow Jones Sustainability Index and the Natur Aktien Index.

Due to cost reduction and environmental benefits reasons, the Company does not routinely print and circulate the AIXTRON annual report. Instead, AIXTRON offers an online report which is available directly via the Company's website, providing additional features and functionalities for shareholders.

AIXTRON regularly published press releases and key financial figures informing shareholders and the capital markets on the current status, environment and perceived outlook for AIXTRON's business. In addition, AIXTRON regularly participates in numerous major investor conferences and road shows in the world's most important financial centers. Through these conferences, it hosts discussions on current financial results, strategies, products, as well as industry and market trends with institutional and private investors, journalists and financial analysts. At year-end 2015, a total of 32 analysts (2014: 37), of whom 27 are based in Europe and 5 in the United States, commented on the Company on a regular basis as part of their official coverage of the stock.

During fiscal year 2015, AIXTRON logged around 60 man-days reporting to the financial markets through Company visits, individual meetings, investor conferences and road shows worldwide, conducting close to 200 personal discussions and teleconferences with leading players in the financial markets. The Investor Relations department constantly maintained an active dialogue with many individual and institutional shareholders and stakeholders. AIXTRON is fully dedicated to providing accurate, timely and relevant information on both its own direct business and general market developments to shareholders and the capital markets. In addition, AIXTRON commits to compliance with the principles of good Corporate Governance.

More than 300 shareholders attended AIXTRON's Annual General Meeting which took place on May 20, 2015 in Aachen/Germany. The Company's Management provided them with a comprehensive report on the status and prospects of the Company.

## Shareholder Structure

As of December 31, 2015, approximately 36% of AIXTRON's shares were held by private individuals, most of which are situated in Germany. Around 64% of the outstanding AIXTRON shares are held by institutional investors. The majority of institutional investors (around 36%) are based in UK, followed by Germany (30%). The remaining investors are located in the U.S. (11%), the rest of Europe and the rest of the world. According to the latest announcement on voting rights, AIXTRON's largest, non-institutional shareholder in 2015 continued to be Camma B.V. (Renesse, Netherlands), holding 6.8% of AIXTRON stock. Around 93% of the shares were free float, according to the definition of the Deutsche Börse. As of December 31, 2015, AIXTRON's shares ranked number 21 of 30 in market capitalization (December 2014: 11) and number 9 of 30 in 2015 transaction turnover (2014: number 11) in the Deutsche Börse TecDAX® Technology Index Ranking.

At year-end, the following investors had equity shareholdings in AIXTRON SE exceeding the 3% reporting threshold (according to public filings or voting rights announcements, pursuant to Section 26 (1) of the German Securities Trading Act/WpHG):

- // Argonaut Capital Partners LLP, Edinburgh, UK, 7.7%
- // Baillie Gifford Overseas Limited, Edinburgh, UK, 5.2%
- // Generation Investment Management, London, UK, 5.2%
- // Allianz Global Investors GmbH, Frankfurt am Main, Germany, 4.8%
- // Caisse des Dépôts et Consignations, Paris, France, 3.1%
- // Vanguard International Growth Fund, Wayne, USA, 3.0%



# Group Management Report

## Group Management Report as of December 31, 2015

This Management Report relates to the Consolidated Financial Statements of AIXTRON SE including the following subsidiaries (collectively referred to as "AIXTRON", "the AIXTRON Group", "the Group" or "the Company"): AIXTRON, Inc., Sunnyvale, California (USA); AIXTRON Ltd., Cambridge (United Kingdom); AIXTRON AB, Lund (Sweden); AIXTRON Korea Co. Ltd., Seoul (South Korea); AIXTRON China Ltd., Shanghai (PR of China); AIXTRON KK, Tokyo (Japan) and AIXTRON Taiwan Co. Ltd., Hsinchu (Taiwan).

The Consolidated Financial Statements of the Company have been prepared in accordance with International Financial Reporting Standards ("IFRS") as adopted by the EU. All financial information contained in this Management Report, including comparable prior year numbers, is reported in accordance with IFRS.

In 2015, the Company has reclassified warranty expenses from Selling Expenses to Cost of Sales. This classification is the usual practice in the semiconductor equipment industry. The previous years' figures have been adjusted to reflect the reclassification. 2014 Selling Expenses have been reduced by EUR 1,836 k (2013: EUR 14,457 k) and Cost of Sales increased by the same amounts.

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.

## Forward-Looking Statements

This document may contain forward-looking statements regarding the business, results of operations, financial condition and earnings outlook of AIXTRON within the meaning of the safe harbor provisions of the US Private Securities Litigation Reform Act of 1995. 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 our current views and assumptions and are subject to risks and uncertainties. You should not place undue reliance on these forward-looking statements. Actual results and trends may differ materially from those reflected in our forward-looking statements. This could result from a variety of factors, such as actual customer orders received by AIXTRON, the level of demand for deposition technology in the market, the timing of final acceptance of products by customers, the condition of financial markets and access to financing for AIXTRON, general conditions in the market for deposition plants and macroeconomic conditions, cancellations, rescheduling or delays in product shipments, production capacity constraints, extended sales and qualification cycles, difficulties in the production process, the general development in the semi-conductor industry, increased competition, fluctuations in exchange rates, availability of public funding, fluctuations and/or changes in interest rates, delays in developing and marketing new products, a deterioration of the general economic situation and any other factors discussed in any reports or other announcements filed by AIXTRON with the U.S. Securities and Exchange Commission. Any forward-looking statements contained in this document are based on current expectations and projections of the Executive Board and on information currently available to it and are made as at the date hereof. 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.

## 1. Fundamental Information about the Group

### 1.1. Organizational Structure

The table below shows a list of the AIXTRON subsidiaries as of December 31, 2015:

Name	Jurisdiction of Incorporation	Ownership Interest in %
AIXTRON Ltd.	England & Wales	100
AIXTRON AB	Sweden	100
AIXTRON Korea Co. Ltd.	South Korea	100
AIXTRON KK	Japan	100
AIXTRON China Ltd.	China	100
AIXTRON Taiwan Co. Ltd.	Taiwan	100
AIXTRON, Inc.	USA	100
Genus Trust*	USA	n.a.

\* The shares in the Genus Trust are attributed to AIXTRON as the beneficial owner, as control exists due to the trust relationship with AIXTRON SE.

### 1.2. Management and Control

As of December 31, 2015, AIXTRON's Executive Board ("Management") consisted of the following two individuals:

Name	Position	First Appointment	End of Term
Martin Goetzeler	Chairman, President and Chief Executive Officer	March 1, 2013	February 28, 2017
Dr. Bernd Schulte	Executive Vice President and Chief Operating Officer	April 1, 2002	March 31, 2018

As of December 31, 2015, AIXTRON's Supervisory Board consisted of the following six individuals:

Name	Position	Member since	End of Term
Kim Schindelhauer <sup>1)2)3)4)5)</sup>	Chairman of the Supervisory Board	2002	AGM 2016
Prof. Dr. Wolfgang Blättchen <sup>1)4)</sup>	Deputy Chairman of the Supervisory Board, Chairman of the Audit Committee, Independent Financial Expert <sup>6)</sup>	1998	AGM 2016
Dr. Andreas Biagosch <sup>2)</sup>		2013	AGM 2016
Prof. Dr. Petra Denk <sup>2)3)</sup>	Chair of the Technology Committee	2011	AGM 2016
Dr. Martin Komischke		2013	AGM 2016
Prof. Dr. Rüdiger von Rosen <sup>1)3)</sup>	Chairman of the Nomination Committee	2002	AGM 2016

1) Member of the Audit Committee

2) Member of the Technology Committee

3) Member of the Nomination Committee

4) Member of the Capital Market Committee

5) Former AIXTRON Executive Board Member

6) Since 2005

Information to the collaboration between Supervisory and Executive Boards of AIXTRON SE as well as to the management procedures and corporate governance are explained in the Corporate Governance Report which is available on the AIXTRON website under [www.aixtron.com/en/investors/corporate-governance/](http://www.aixtron.com/en/investors/corporate-governance/).

### 1.3. Locations

The Company has its registered office in Herzogenrath, Germany, and had a total of 12 facilities worldwide owned or rented as of December 31, 2015:

Facility location	Use	Approx. size (m <sup>2</sup> )	Lease expiry
Herzogenrath, Germany (owned)	Manufacturing	12,457	-
Herzogenrath, Germany (owned)	Headquarters, R&D, Manufacturing, Engineering	16,000	-
Aachen, Germany (leased)	R&D	200	02/28/2017
Cambridge, UK (leased)	Manufacturing, Engineering, R&D	2,180	09/13/2019
Cambridge, UK (leased)	Service, Engineering	696	06/27/2020
Sunnyvale, CA, USA (leased)	Manufacturing, Sales, Service, Engineering, R&D	9,338	10/31/2017
Hwasung, South Korea (leased)	Sales, Service	1,151	08/09/2020
Shanghai, China (leased)	Sales, Service	755	07/31/2016
Suzhou, China (leased)	Application Laboratory	537	12/31/2017
Hsinchu, Taiwan (leased)	Sales, Service	1,417	12/31/2017
Tainan, Taiwan (leased)	Service	203	05/27/2016
Tokyo, Japan (leased)	Sales, Service	364	09/30/2016

### 1.4. Business Model

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

AIXTRON's business activities include developing, producing and installing equipment for the deposition of semiconductor and other complex materials, process engineering, consulting and training, including ongoing customer support and after-sales service. AIXTRON also offers a comprehensive range of peripheral equipment and services.

AIXTRON supplies its customers with both production-scale material deposition systems and small scale systems for Research & Development ("R&D") or small scale production.

Demand for AIXTRON's products is driven by increased processing speed, improved efficiency, energy storage and energy efficiency requirements and the necessity to reduce the cost of ownership for current and emerging microelectronic and optoelectronic components. The ability of AIXTRON's products to precisely deposit thin material films and the ability to control critical surface dimensions in these components, enables manufacturers to improve performance, yield and quality in the fabrication process of advanced microelectronic and optoelectronic devices

Environmental protection and the responsible use of resources are an essential part of AIXTRON's business strategy. The Company's engineers work on improving AIXTRON's systems continuously, both in terms of resource conservation and environmental-friendly design and function. AIXTRON SE's DIN EN ISO 50001:2011 certified energy management system and the EN ISO 14001:2004 certified environmental management system at AIXTRON, Inc. contribute to the efficient use of energy and the careful use of resources.

Please refer to chapter "Risk Report" for potential factors that could adversely affect the Company's business activities, model and strategy going forward.

### 1.5. Technology and Products

AIXTRON's product range includes customer-specific systems capable of depositing material films on a diverse range of different substrate sizes and materials.

The deposition technologies for opto and power electronics include Metal-Organic Chemical Vapor Deposition („MOCVD") for the deposition of compound materials to produce for instance LEDs, power electronics or other optoelectronic components.

For thin film deposition technologies for organic electronics applications including Organic Light Emitting Diodes (“OLED”), AIXTRON offers Polymer Vapor Phase Deposition (“PVPD<sup>®</sup>”) and Organic Vapor Phase Deposition (“OVPD<sup>®</sup>”). For thin film encapsulation, AIXTRON offers a Plasma Enhanced Chemical Vapor Phase Deposition (“PECVD”) technology. More information on this technology which was acquired in Q2/2015 can be found in Note 38 to the Company’s Consolidated Financial Statements “Acquisition of PlasmaSi, Inc.”. PECVD is also being employed for the deposition of complex Carbon Nanostructures (Carbon Nanotubes, Nanowires or Graphene).

For logic and memory applications, AIXTRON systems are capable of depositing material films on wafers of up to 300mm in diameter for the production of memory chips, by employing technologies such as: Chemical Vapor Deposition (“CVD”) and Atomic Layer Deposition (“ALD”). Additionally, MOCVD technology is applied to deposit compound materials for the development of future logic devices.

The following table summarizes the products and technologies AIXTRON offers to its customers for use in specific applications and devices:

<b>Technologies</b>	<b>Technologies for opto &amp; power electronics applications</b>	<b>Technologies for organic and carbon nano applications</b>	<b>Technologies for logic &amp; memory applications</b>
<b>Deposition Technologies</b>	MOCVD	OVPD <sup>®</sup>	CVD
		PVPD <sup>®</sup>	ALD
		OPTACAP <sup>™</sup> PECVD	MOCVD
		CVD/PECVD	
<b>Products</b>	Planetary Reactor <sup>®</sup> AIX G5+C AIX G5 WW AIX 2800G4-TM	OVPD <sup>®</sup> R&D and Production Systems	Lynx-iXP CVD
	Close Coupled Showerhead <sup>®</sup> AIX R6 Epilab R&D (3x2, 6x2)	PRODOS PVPD <sup>®</sup> R&D and Production Systems	QXP-8300 ALD Metal QXP-8300 ALD Oxide
		OPTACAP <sup>™</sup> R&D and Production Systems	CRIUS R MOCVD
		Nano CVD Reactors BM Series	
<b>Potential Applications/Devices</b>	LEDs	OLEDs for displays	CVD WSi Gate stacks for DRAM and 3D NAND
	Optoelectronics (photo diodes, lasers, modulators for telecom/datacom)	OLEDs for solid state lighting	DRAM Gate and Capacitor Metal Nitride, DRAM Capacitor high k Dielectric
	Laser devices for consumer electronics (CDs, DVDs)	Organic transparent thin film solar cells	2D and 3D NAND High k IPD (Inter Poly Dielectric)
	High-Frequency devices (such as Hetero Bipolar Transistors and High Electron Mobility Transistors) for wireless datacom	Electronic semiconductor structures, e.g. for flexible displays	ReRAM and PCRAM Material and Electrode
	Silicon Carbide (SiC) based High Power Devices	Functional polymer layers	Logic and MIM High k Gate stack and Metal
	Gallium Nitride (GaN) based Power Devices	Dielectric or passivating polymer layers	III-V High Mobility Channel for Logic Devices
	Solar cells	Carbon Nanostructures for electronic, display & heat sink applications	
		Graphene structures for electronic applications	

AIXTRON is constantly working on the improvement of existing technologies and products. In the course of the last three years, AIXTRON has introduced several new system generations and technologies, such as the CRIUS R MOCVD systems for logic & memory applications, the AIX R6 Close Coupled Showerhead® as well as the automated AIX G5+C for opto & power electronics applications. The OPTACAP™ line of systems was introduced for the encapsulation of organic materials.

## 1.6. Research and Development

In addition to the state-of-the-art R&D center at its headquarters in Herzogenrath, AIXTRON also operates R&D laboratories in Aachen (Germany), in Cambridge (United Kingdom) and in Sunnyvale (United States). Additionally, AIXTRON operates an application laboratory in Suzhou (China). 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.

AIXTRON's R&D activities in 2015 included development programs for new products as well as continual improvement programs for AIXTRON's existing products. Additionally, Design-to-Cost-Programs have been implemented in order to reduce material costs on a continuous basis e.g. by improving the design of externally procured components. AIXTRON is also working on customer-specific development projects and often does research within the framework of publicly funded projects.

The Company'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. Therefore, AIXTRON is committed to investing specifically in research and development projects to not only further pursue the Company's leading technology position in MOCVD equipment for applications such as LEDs and for the production of wide band gap materials for Power Electronics or next generation Logic & Memory applications. AIXTRON also targets to penetrate growth areas in the field of Organic Semiconductors. Key aspects of the Company's R&D activities in fiscal year 2015 comprised the launch of an automated AIX G5+C allowing a cassette-to-cassette operation, the development and delivery of a MOCVD tool for the deposition of compound materials for logic structures (Three-Five-On-Silicon TFOS) as well as the installation and startup of the Gen8 demonstration tool for organic material. These expenditures are monitored very closely. The Company's R&D program in 2015 comprised a team of an average of 265 dedicated and highly skilled R&D employees (2014: 285; 2013: 297).

For more information regarding R&D expenses from 2013 through 2015, refer to "Development of Results" in this report.

The following provides specific examples of AIXTRON's research and development activities in fiscal year 2015:

In early 2015, the new OLED research project "FLEXOLIGHTING", which has been approved by the European Commission at the end of 2014 was formally started. The aim of the program is to produce large area OLED devices with improved cost efficiency, high brightness, high uniformity and long lifetime, and thus bridging the gap between research prototypes and low cost mass production technologies. The three-year project, headed by Brunel University, involves various suppliers with AIXTRON as production equipment supplier, with the ultimate goal of establishing unique technology know-how in Europe covering the whole supply chain.

Additionally, AIXTRON was involved with a number of different publicly funded R&D projects, including the graphene-based research project "GRAPHICA" and the power electronic research project "ALMA", both funded by the European Commission and partially by the German government (GRAPHICA). The target of "GRAPHICA" is to develop a Silicon-technology compatible graphene synthesis method. The "ALMA" project plans to enable the development of heat management strategies and models for applications in power electronics. Moreover, AIXTRON is partner in a project of the Marie Skłodowska-Curie Initial Training Network "EXCILIGHT" in the course of the "Horizon 2020" program of the European Commission. The project aims to research new materials for easy-to-tailor, ultra-efficient OLED lighting.

## 1.7. Patents

AIXTRON aims to secure its technology by patenting and protecting inventions, provided it is strategically expedient and possible for the Company to do so. As of December 31, 2015, the Company had 189 patent families available (December 31, 2014: 196 patent families), of which 97 were patent protected and patents were pending for the remaining 92. For 17 patent families, patent protection was applied for within fiscal year 2015. Patent protection for inventions is usually applied for in those sales markets relevant for AIXTRON, specifically in Europe, China, Japan, South Korea, Taiwan and the United States. Patents are maintained and renewed annually and will expire between 2016 and 2035.

AIXTRON also has exclusive and non-exclusive licenses to patents owned by others covering certain AIXTRON's products, as well as SAP Software licenses

AIXTRON is the licensee of certain patents owned by Centre National de la Recherche Scientifique and Universal Display Corporation which are important to the Company's operations in the fields of complex material deposition. AIXTRON sells certain reactor technologies under the terms of those licenses, which apply to the principles of delivering precursor material into a vacuum vapor deposition chamber.

## 1.8. Manufacturing and Procurement

The AIXTRON Manufacturing operation is principally involved in the final assembly stage of production, including equipment configuration and tuning as well as the final inspection. The Company purchases all of the components and most of the assemblies required to manufacture the equipment from third-party suppliers and contractors. AIXTRON's contractors and suppliers are carefully selected and qualified to be able to source, supply and/or partially assemble and test individual equipment parts and sub-assemblies. For strategic reasons, there are typically several suppliers for each AIXTRON equipment component/assembly. However, AIXTRON single sources some key components for its systems and is therefore dependent on contracts with the specific supplier of such components. AIXTRON's own staff manages the whole manufacturing process and in conjunction with external contractors executes the final manufacturing steps.

All AIXTRON manufacturing facilities have an ISO 9001 certified process oriented management system. The certification was confirmed at AIXTRON SE in November 2015 following a successful certification audit without any deviation. In 2014, the energy management system of AIXTRON SE was certified according to DIN EN ISO 50001:2011. Also in 2014, the environmental management system on AIXTRON, Inc. was certified according to EN ISO 14001:2004.

The Company complies with national and international standards and procedures for the equipment industry that are applicable to AIXTRON products.

The "CE" marking confirms the conformity of AIXTRON products with the applicable European directives and standards. Moreover, relevant US American standards for admission of AIXTRON products to the US market and the recommended requirements of the SEMI organization are also complied with. When developing new AIXTRON products, among other things, the European Directive RoHS "Restriction of Hazardous Substances" is strictly adhered to. The certifications from independent institutions, such as "TÜV" and "ETL" also confirm compliance of AIXTRON's products with national and international requirements and specifications.

AIXTRON commits itself and its suppliers to ethical and moral standards for the purchase and usage of conflict minerals (gold, tantalum, tin and tungsten). AIXTRON is continuously striving for transparency regarding the origin of these minerals to comply with the rules and regulations of the U.S. Dodd-Frank Act for Conflict Minerals (Section 1502). Therefore, a process has been established where a due-diligence is carried out based on the OECD guidelines. The result of the vendor related due-diligence is filed annually with the Securities and Exchange Commission on AIXTRON's Form SD.

## 1.9. Sales and Service

The AIXTRON Group markets and sells its products worldwide, principally through its own direct sales organization, but also through appointed dealers and sales representatives.

AIXTRON's own Sales and Service Organization provides a full range of customer services, from the initial support of the customized development of an AIXTRON system, through to the final installation and the ongoing customer training as well as the operational support of its systems (after-sales service).

A team of so called Key Customer Satisfaction Managers supports AIXTRON customers with the target to improve their competitiveness. This measure aims at the enhancement of the customer relationships.

## 1.10 Employees

AIXTRON's success very much depends on the achievements and motivation of the Company's staff. The employees are recruited on the basis of professional and personal qualifications and experience. 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.

As a global Company with an international corporate culture, AIXTRON places great value on diversity and sees it also as a competitive advantage. The overall aim is to create a productive work environment, to prevent social discrimination of any kind, and to cultivate equal opportunities.

As part of its innovation management process, AIXTRON has an employee suggestion scheme to encourage all employees to submit their ideas to improve processes, save cost, improve products, etc.

Management and leadership quality of an organization also have great impact on the success of a company. AIXTRON promotes these qualities within a specific leadership program, coaching members of the management team in management and team building techniques.

In 2015, the total number of employees decreased by 5%, from 789 employees at the end of 2014 (2013: 776) to 748 at December 31, 2015. Manufacturing & Service as well as R&D positions still comprise the largest group of permanent employees.

Employees by Function	2015		2014		2013		2015-2014	
	Dec-31	%	Dec-31	%	Dec-31	%	abs.	%
Sales	62	8	65	8	66	8	-3	-6
Research & Development	257	34	292	37	264	34	-35	-12
Manufacturing & Service	324	44	323	41	338	44	1	0
Administration	106	14	110	14	108	14	-4	-3
<b>Total</b>	<b>748</b>	<b>100</b>	<b>789</b>	<b>100</b>	<b>776</b>	<b>100</b>	<b>-41</b>	<b>-5</b>

As of December 31, 2015, the majority of AIXTRON's worldwide permanent employees were based in Europe.

Employees by Region	2015		2014		2013		2015-2014	
	Dec-31	%	Dec-31	%	Dec-31	%	abs.	%
Asia	138	18	154	20	168	22	-16	-10
Europe	475	64	521	66	491	63	-46	-9
USA	135	18	114	14	117	15	21	18
<b>Total</b>	<b>748</b>	<b>100</b>	<b>789</b>	<b>100</b>	<b>776</b>	<b>100</b>	<b>-41</b>	<b>-5</b>

## 1.11. Customers and Geographic Regions

Among other areas of activity, AIXTRON's semiconductor device customers are engaged in the manufacturing of LEDs, wireless devices, power electronics, other optoelectronic devices, as well as logic and memory and logic chips. Some of these customers are vertically integrated device manufacturers who serve the entire value chain down to the end consumer. Others are independent component suppliers who deliver chips and components produced 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" for a breakdown of revenues by technology and region.

## 1.12. Competitive Positioning

AIXTRON's main competitor in MOCVD applications remains Veeco Instruments Inc. (USA) ("Veeco"). AIXTRON also competes with a number of Asian manufacturers including Taiyo Nippon Sanso (Japan). Further companies continue to attempt to qualify their own MOCVD tools with customers. For example, Jusung Engineering Co. Ltd. (South Korea) or Nuflare Technology Inc. (Japan) are known to have been active in the development of in-house equipment solutions for the production of LEDs. Some local Chinese companies, such as Advanced Micro-Fabrication Equipment Inc. or Tang Optoelectronics Equipment (Shanghai) Corporation Limited are also working on the development and production of MOCVD equipment, supported by respective government initiatives.

Based on the latest published market share research by Gartner Dataquest (Forecast: Semiconductor Manufacturing Equipment, Worldwide, April 2015), it was estimated that the share of the worldwide MOCVD equipment market (estimated 2014 total market value: USD 413 million) held by AIXTRON in 2014 was around 41%. Particularly due to lower LED related revenues, the market share is expected to decline in 2015. In the same report, the Company's strongest competitor in terms of sales, Veeco Instruments Inc., had an estimated market share of approximately 53%. Viewed in the mid- to long-term, AIXTRON continues to target retaining a market leading position in the global MOCVD market.

For CVD-, MOCVD- and ALD-technologies for Silicon applications, AIXTRON competes with a variety of other equipment companies, including LAM Research, Inc. (USA), Applied Materials, Inc. (USA), Tokyo Electron Ltd. (Japan), ASM International N.V. (Netherlands), IPS Technology (South Korea), Jusung Engineering Co. Ltd. (South Korea), and Hitachi Kokusai Electric Co. Inc. (Japan). With the Company's currently available silicon semiconductor manufacturing technologies and thin film processes, AIXTRON is potentially well positioned to offer advanced films for 21nm node and below for Memory and Logic Integrated Circuits (ICs). AIXTRON technologies enable extremely high precision in depositing very thin material layers and facilitate the consistent coating of complex three-dimensional microelectronic device structures. Moreover, they offer new material deposition possibilities for next generation semiconductor devices, and, in AIXTRON's opinion, present high development potential for the future.

However, as AIXTRON only addresses a specific niche, market share of the total Silicon Semiconductor market is not considered meaningful at this point in time.

For emerging Organic Semiconductor applications, AIXTRON competes with established manufacturers such as Ulvac, Inc. (Japan), Tokki Corporation (Japan), SNU Precision (South Korea), Sunic System (South Korea) and a number of other smaller companies. While these competitors use the vacuum thermal evaporation ("VTE") or polymer technologies to produce organic light emitting diodes (OLEDs), AIXTRON offers OLED manufacturers its own highly innovative organic vapor phase deposition (OVPD<sup>®</sup>) and PVPD<sup>®</sup> large area deposition technologies. In AIXTRON's opinion, due to a perceived superior process technology enabling a reduction of OLED manufacturing costs, these technologies have the potential to compete successfully with VTE and polymer technologies, especially in the field of large area displays. AIXTRON is positioning itself as an alternative deposition system supplier for next generation OLEDs and large area deposition applications such as displays, future lighting, solar cells, and other electronic OLED applications.

On April 1st, 2015, the AIXTRON acquired the California, USA based PlasmaSi, Inc. The acquired technology enables the encapsulation of organic thin-films by applying Plasma Enhanced Chemical Vapor Deposition ("PECVD"), depositing ultra-thin, light weight and flexible barrier films. For thin film encapsulation applications, AIXTRON's PECVD technology competes with manufacturers such as Ulvac, Inc. (Japan), SNU Precision (South Korea), Applied Materials Inc. (USA) and a number of other smaller companies applying PECVD or ALD technology.

As AIXTRON's organic material deposition and encapsulation technologies as well as most customer applications are still in the market entry phase, Organic Semiconductor market share information is considered not meaningful at this point in time.

### 1.13. Financial and Other Performance Indicators

The Executive Board has implemented dedicated control systems and procedures to manage, monitor, analyze, and document Company risks and opportunities, including a key performance indicator system addressing relevant business areas, with a primary focus on the "Market", "Finance" and "Technology Development" control areas.

In the "Market" control area, using third party reports and direct customer dialog, AIXTRON pursues a customer- and market-led product development strategy through the careful examination of market trends and customer requirements. The objective of this strategy is to ensure the timely market availability of new and appropriately competitive product generations in line with customer requirements.

In the "Finance" control area, the Executive Board uses a range of internal and external financial and non-financial performance indicators with particular focus on: order intake, revenues, margin contributions, operating result and free cash flow. The objective of these controls is to ensure that profitable revenue growth is matched with cost and asset efficiency to achieve sustainable value generation.

In the "Technology Development" control area, the Executive Board again uses a range of performance indicators to evaluate the progress of key research and development projects. The Management regularly reviews compliance with project plans, pre-defined targets and quality gates, such as timelines, quality, cost and margin targets. Following the release of new products for example, the Management monitors closely the development of the respective revenues and related returns. The objective of this review process is to ensure that ongoing technological developments retain not only the necessary level of technological standards but also commercial competitiveness throughout the life of the product.

### 1.14. Government Regulation

Due to the nature of AIXTRON's products, the shipment of some products to customers in certain countries requires the Company to obtain an export license from statutory authorities in Germany, the UK and the US, including, for example, the Bundesamt für Wirtschaft und Ausfuhrkontrolle, BAFA in Germany, the Department for Business, Innovation and Skills in the UK as well as the Department of State and the Department of Commerce in the US. Following external audits, it was confirmed by the relevant German authorities in 2015, that the management system AIXTRON uses for the control of import and export activities is effective to comply with applicable regulations.

Research and development activities, as well as the manufacturing and demonstration of the Company's products involve the use of potentially harmful chemical and hazardous materials and radioactive compounds and as a result, AIXTRON is subject to stringent environmental and safety regulations in connection with its business operations (such as industrial safety regulations, the ordinance on hazardous substances, labor protection laws or the workplaces ordinance).

The Company is also subject to the rules and regulations promulgated by the SEC, including those defined under the Sarbanes-Oxley Act of 2002 and the Dodd Frank-Act of 2010. In addition, AIXTRON is subject to other regulations, for example the provisions of the US Foreign Corrupt Practices Act and the UK Bribery Act relating to the maintenance of books and records and anti-bribery controls. AIXTRON has a specific anti-corruption guideline in place which is mandatory for every AIXTRON employee.



## 2. Report on Economic Position

### 2.1. Global Economy

As a producer of capital goods the AIXTRON Group is affected by the global economic development as far as it has an effect on its own supply chain and cost of sales as well as on its customers' sales projections and therefore also on their investment behavior.

Global economic development throughout the year 2015 was worse than originally expected, especially in the emerging and developing countries, including China. The main reasons for the reduced growth dynamics in these countries were lower commodity prices, tighter financial conditions, structural bottlenecks and geopolitical factors. Additionally, markets in the Middle East have struggled due to decreasing oil prices throughout 2015 as well as increased uncertainty related to geopolitical tensions in Middle East. On the other hand, the major growth drivers in the advanced economies, such as easy financial conditions, more neutral fiscal policy in the euro area, lower fuel prices, and improving confidence and labor market conditions, remained intact and led to stable growth in these countries. Therefore, as expected the Federal Reserve (Fed) has turned to a slightly tighter monetary policy with the first interest rate increase since 2006 taking place in December 2015. In total, the International Monetary Fund (IMF), in the January 2016 update of its World Economic Outlook, saw global growth in 2015 slightly below the previous year's level at an estimated 3.1% (2014: 3.4%), with growth in the advanced economies for 2015 now being projected at 1.9% (2014: 1.8%) and in the emerging and developing countries at 4.0% (2014: 4.6%).

However, this global economic environment had no specific effects on AIXTRON's business development in fiscal year 2015 as AIXTRON is more dependent on innovation-driven industry business cycles such as the progressing technology changes in semiconductor markets.

With the positive economic development in the U.S. and the continued expansive monetary policy of the European Central Bank, the US dollar saw a further significant improvement in the first quarter of 2015 against the Euro, reaching a peak of approximately 1.05 USD/EUR in mid-March. In the second quarter, based on some weaker than expected economic data from the U.S., the exchange rate saw a rebound up to approximately 1.15 USD/EUR. In the second half of the year, the exchange rate moved sideways, mostly within a relatively small range. The prospect of the imminent reversal in interest rates became reality with the Fed's interest rate increase on December 16, 2015, strengthened the US dollar again. Thus, at the end of fiscal year 2015, the US dollar exchange rate improved by approximately 11% from USD/EUR 1.217 at the end of 2014 to 1.0892 USD/EUR. The average exchange rate used by AIXTRON to translate income and expenses denominated in US dollars in fiscal year 2015 was 1.11 USD/EUR (Q1/2015: 1.16 USD/EUR; Q2/2015: 1.10 USD/EUR; Q3/2015: 1.11 USD/EUR; Q4/2015: 1.09 USD/EUR) which was a significant improvement on the previous year (2014: 1.33 USD/EUR). This development had a respectively positive effect on AIXTRON's US dollar denominated revenue and earnings in fiscal year 2015.

AIXTRON Management continues to carefully monitor the developments of the global economy and the financial markets, and regularly examines what can potentially be done to mitigate negative exogenous effects on AIXTRON's business.

### 2.2. The Semiconductor Equipment Market

The total ALD market of which AIXTRON addresses only a specific niche with its system technologies, was estimated by Gartner Dataquest in its latest forecast of December 2015 (Forecast: Semiconductor Manufacturing Equipment, Worldwide, 4Q15 Update) to be valued at USD 901 million for 2015.

In 2015, the electronics equipment industry in total declined by 4% (according to Gartner Dataquest, Forecast: Semiconductor Manufacturing Equipment, Worldwide, 4Q15 Update, December 2015) which was below the estimated 2015 global GDP growth of 3.1% (according to the IMF World Economic Outlook January 2016 update). In comparison, the subset, semiconductor capital spending is expected to have declined by 3.5% in 2015. A further subset, specific spending on Wafer Fab Equipment (WFE), which includes spending on deposition tools supplied by AIXTRON for the production of specialized applications such as gate stacks and capacitors, is expected to have remained flat year on year (according to Gartner Dataquest, Forecast: Semiconductor Manufacturing Equipment, Worldwide, 4Q15 Update, December 2015).

Compared to 2014, AIXTRON's equipment revenues for memory and logic applications nearly doubled to EUR 29.3 million (2014: EUR 16.7 million) in fiscal year 2015.

## 2.3. The LED Market

The market for Gallium nitride based, LED devices which can be produced with AIXTRON's compound semiconductor MOCVD equipment, was expected to have grown by 20% measured in units in 2015 according to a report from IHS (an independent semiconductor market research institute), published in December 2015. However, according to industry sources, LED prices have again dropped significantly throughout the year. Concurrently, the market for Gallium nitride based, high brightness LED devices was predicted to grow in 2016 by only 4% to USD 16.8 billion from USD 16.2 billion in 2015 (IHS).

According to the market research institute IHS (December 2015), the market for LEDs for general lighting is expected to grow from 1.2 billion shipped units in 2015 to 3.4 billion shipped units in 2020. The penetration of LED-lamps relative to total lamps is expected to rise from 7% in 2015 to 25% in 2020, supported by the increasing availability of attractively priced, quality LED lighting products.

In the more recent forecast "Semiconductor Manufacturing Equipment, Worldwide, 4Q14 Update" (December 2015) Gartner Dataquest anticipated that the total value of the 2015 MOCVD equipment market would increase to approximately USD 446 million which is at the high end of other analysts' expectations (USD 250 to 450 million). Veeco and AIXTRON are expected to remain the main players in this market.

Mainly due to the reduction of order volume at San'an, AIXTRONs 2015 revenues of MOCVD manufacturing equipment for LEDs dropped from EUR 100.3 million in 2014 to EUR 39.7 million. However, AIXTRONs revenues for MOCVD equipment to manufacture other optoelectronic devices increased from EUR 14.5 million in 2014 to EUR 46.7 million in 2015.

## 2.4 The Wide Band Gap (WBG) Gallium nitride and Silicon Carbide power semiconductor market

According to the market research institute IHS (November 2014), the market for WBG Gallium nitride (GaN) and Silicon Carbide (SiC) based power management devices is expected to grow from 281 million shipped units in 2015 to 1.9 billion shipped units in 2020. Based on the opinion of both market research institutes IHS and Gartner, the penetration of WBG devices relative to total power device market is expected to rise from low single digit in 2015 to low double digit in 2020.

The growing demand for more efficient power management and switching applications as well as governmental policy changes and efforts from the supply chain, have all contributed positively to increasing the momentum for wide band gap development activities across automotive, commercial, industrial and consumer segments.

The revenues of AIXTRONs MOCVD equipment for the manufacturing of WBG Gallium nitride (GaN) and Silicon Carbide (SiC) based power management devices more than doubled to EUR 25.8 million in 2015 from EUR 10.2 million in 2014.

## 2.5 The OLED market

The market for large OLED displays is the most imminent opportunity for AIXTRONs Organic Semiconductor deposition and encapsulation technologies. The TV market is predicted to increasingly adopt OLED displays within the next 2-3 years, at which point, it is expected that OLEDs will have the potential to penetrate the high end of the volume TV market. With its thin film encapsulation technology, AIXTRON additionally targets the market for flexible displays which offer the best solution for small and medium size displays used in mobile and wearable applications.

According to the market research institute IHS (July 2015), the market for OLED TV is expected to grow from 510 thousand shipped units in 2015 to 6.9 million shipped units in 2019. The penetration of OLED TV relative to the total flat panel display TV market is expected to rise from 0.2% in 2015 to 2.6% in 2019. The market research institute DisplaySearch (September 2014) predicted that the flexible OLED Display market will grow from 0.2 million square meters in 2015 to 3 million square meters in 2020.

## 2.6. Results of Operations

### 2.6.1. Development of Revenues

In fiscal year 2015, AIXTRON recorded total revenues of EUR 197.8 million, an increase of EUR 4.0 million, or 2%, compared to EUR 193.8 million in 2014 (2013: EUR 182.9 million). Though the underlying demand volume has declined, a better price mix and positive currency effects have more than offset this effect. The 2015 equipment revenues increased to EUR 151.0 million (2014: EUR 148.5 million; 2013: EUR 138.0 million), with demand for MOCVD Equipment for LED manufacturing remaining the largest contributor to AIXTRON's equipment revenues, representing 26%. Total equipment sales generated 76% of total revenues in 2015 (2014: 77%; 2013: 75%).

24% of total revenues in 2015 were generated by sales of spare parts and service, which is virtually stable compared to the same figure in 2014 (2014: 23%; 2013: 25%). In absolute terms, sales of spare parts and service were at EUR 46.8 million also largely stable in 2015 compared to 2014 (2014: EUR 45.3 million; 2013: EUR 44.8 million).

Revenues by Equipment, Spares & Service	2015		2014		2013		2015-2014	
	m EUR	%	m EUR	%	m EUR	%	m EUR	%
Equipment revenues	151.0	76	148.5	77	138.0	75	2.5	2
Other revenues (service, spare parts, etc.)	46.8	24	45.3	23	44.8	25	1.5	3
<b>Total</b>	<b>197.8</b>	<b>100</b>	<b>193.8</b>	<b>100</b>	<b>182.9</b>	<b>100</b>	<b>4.0</b>	<b>2</b>

In 2015, the major part of total revenues, 60%, continued to be generated by sales to customers in Asia, which was 23 percentage points lower than in the previous year (2014: 83%; 2013: 78%). 22% of total revenues in 2015 were generated in the Americas (2014: 4%; 2013: 9%) and the remaining 18% in Europe (2014: 13%; 2013: 13%), reflecting an increased demand of AIXTRON equipment for various applications from non-Asian customers while LED-based demand from Asian customers decreased at the same time.

Revenues by Region	2015		2014		2013		2015-2014	
	m EUR	%	m EUR	%	m EUR	%	m EUR	%
Asia	118.4	60	160.2	83	141.8	78	-41.8	-26
Europe	35.8	18	25.2	13	24.2	13	10.6	42
Americas	43.6	22	8.4	4	16.9	9	35.2	419
<b>Total</b>	<b>197.8</b>	<b>100</b>	<b>193.8</b>	<b>100</b>	<b>182.9</b>	<b>100</b>	<b>4.0</b>	<b>2</b>

## 2.6.2. Development of Results

### Cost Structure

	2015		2014		2013		2015-2014	
	Full Year		Full Year		Full Year			
	m EUR	% Rev.	m EUR	% Rev.	m EUR	% Rev.	m EUR	%
<b>Cost of sales</b>	<b>147.9</b>	<b>75</b>	<b>154.1</b>	<b>79</b>	<b>204.7</b>	<b>112</b>	<b>-6.2</b>	<b>-4</b>
<b>Gross profit</b>	<b>49.8</b>	<b>25</b>	<b>39.7</b>	<b>21</b>	<b>-21.8</b>	<b>-12</b>	<b>10.1</b>	<b>25</b>
<b>Operating costs</b>	<b>76.5</b>	<b>39</b>	<b>98.0</b>	<b>51</b>	<b>73.9</b>	<b>40</b>	<b>-21.5</b>	<b>-22</b>
Selling expenses	11.5	6	14.1	7	14.5	8	-2.6	-18
General and administration expenses	16.3	8	19.3	10	18.2	10	-3.0	-16
Research and development costs	55.4	28	66.7	34	57.2	31	-11.3	-17
Net other operating income and expenses	(6.7)	3	(2.2)	1	(16.0)	9	4.5	205

#### Cost of Sales

In 2015, cost of sales decreased year on year by 4% or EUR 6.2 million from EUR 154.1 million to EUR 147.9 million (2013: EUR 204.7 million). This was mainly due to lower material cost and higher efficiencies in logistics and service. Consequently, 2015 cost of sales relative to revenues decreased to 75% (2014: 79%; 2013: 112%).

#### Gross Profit, Gross Margin

Against this background and due to a better product and price mix as well as currency, the Company's gross profit in 2015 increased year-on-year to EUR 49.8 million (2014: EUR 39.7 million; 2013: EUR -21.8 million), resulting in an improved gross margin of 25% after 21% in 2014 (2013: -12%).

#### Operating Costs

With EUR 76.5 million, total **operating costs** in 2015 were significantly below the previous year's figure of EUR 98.0 million (2013: EUR 73.9 million), mainly due to better cost control as well as higher other operating income, stemming from positive currency related effects and higher R&D funding. The operating costs were in line with the targeted annual cost level of approximately EUR 80 million. Operating costs relative to revenues were 39% in 2015, 12 percentage points lower than the 51% in 2014 (2013: 40%).

This development was influenced by the following factors:

Due to lower depreciation costs, **selling expenses** in 2015 decreased in absolute terms from EUR 14.1 million to EUR 11.5 million (2013: EUR 14.5 million). Selling expenses relative to revenues were stable at 6% (2014: 7%; 2013: 8%).

Mainly due to a lower headcount and less use of external services, **general and administration expenses** in fiscal year 2015 decreased by 16% in absolute terms and improved by 2 percentage points in relative terms to EUR 16.3 million or 8% of revenues (2014: EUR 19.3 million or 10% of revenues; 2013: EUR 18.2 million or 10% of revenues).

Key R&D Information	2015	2014	2013	2015-2014
R&D expenses (in EUR million)	55.4	66.7	57.2	-17%
R&D expenses, % of sales	28	34	31	
R&D employees (period average)	265	285	297	-7%
R&D employees, % of total headcount (period average)	35	36	35	

**Research and development costs** decreased by 17% year-on-year from EUR 66.7 million in 2014 (2013: EUR 57.2 million) to EUR 55.4 million in 2015, which was mainly due to reductions as a result of the previously initiated restructuring program. The future-oriented OLED and the silicon industry related R&D activities increased at the same time.

Personnel Costs	2015	2014	2013	2015-2014	
	m EUR	m EUR	m EUR	m EUR	%
Cost of Sales	23.8	22.3	25.7	1.5	7%
Selling, General and Administrative expenses	15.6	16.1	17.8	-0.5	-3%
Research and Development costs	23.6	28.1	24.0	-4.5	-16%
<b>Total</b>	<b>63.0</b>	<b>66.5</b>	<b>67.5</b>	<b>-3.5</b>	<b>-5%</b>

In the course of the progressing restructuring program, the average number of Group employees in 2015 declined from 785 in 2014 to 757 (2013: 847), resulting in 5% lower **personnel costs** of EUR 63.0 million compared to EUR 66.5 million in 2014 (2013: EUR 67.5 million). In 2015, personnel costs included no restructuring charges (2014: EUR 5.8 million; 2013: EUR 5.2 million) with local currency effects partially offsetting the reduction of personnel costs. As of December 31, 2015, the number of employees, decreased from 789 as of December 31, 2014 to 748 (December 31, 2013: 776).

**Net other operating income and expenses** for fiscal year 2015 resulted in an income of EUR 6.7 million (2014: EUR 2.2 million income; 2013: EUR 16.0 million income including insurance proceeds), mainly due to positive currency effects, higher R&D grants and a contractual compensation payment received in Q3/15.

In 2015, the Company recorded a **net currency income** of EUR 2.7 million (2014: EUR -0.3 net expense; 2013: EUR 0.5 million net income) resulting from currency transaction and translation differences of balance sheet positions.

The EUR 3.0 million of **R&D grants** received in 2015 (2014: EUR 1.8 million; 2013: EUR 2.5 million), were recorded as "other operating income".

#### EBITDA

At EUR -16.4 million EBITDA in the fiscal year 2015 improved significantly against the previous year by 60% or EUR 24.9 million (2014: EUR -41.3m; 2013: EUR -67.9 million), mainly due to the above-mentioned effects. In the second half of the year, AIXTRON beat the targeted EBITDA break-even with H2/2015 EBITDA coming in at positive EUR 5.4 million (H2/2014: EUR -27.9 million).

(In EUR million)	Year ended December 31,		
	2015	2014	2013
<b>EBITDA</b>	<b>-16.4</b>	<b>-41.3</b>	<b>-67.9</b>
Depreciation, amortization and impairment expense	-10.3	-17.0	-27.8
<b>Operating Result (EBIT)</b>	<b>-26.7</b>	<b>-58.3</b>	<b>-95.7</b>

#### Operating Result (EBIT)

The absolute **operating result** (EBIT) improved in a year-on-year comparison by EUR 31.6 million and came in at EUR -26.7 million in 2015 (2014: EUR -58.3 million; 2013: EUR -95.7 million) resulting in an EBIT margin of -14% (2014: -30%; 2013: -52%). This is attributable chiefly to the afore-mentioned cost effects.

#### Result Before Taxes

**Result before taxes** improved year-on-year by EUR 31.1 million from EUR -57.1 million in 2014 (2013: EUR -95.2 million) to EUR -26.0 million in 2015, with a net finance income of EUR 0.8 million (2014: EUR 1.2 million; 2013: EUR 0.5 million income).

Interest & Taxes	2015	2014	2013	2015-2014	
	m EUR	m EUR	m EUR	m EUR	%
<b>Net Interest Income/Expense</b>	<b>0.8</b>	<b>1.2</b>	<b>0.5</b>	<b>-0.4</b>	<b>-33%</b>
Interest Income	0.8	1.2	0.8	-0.4	-33%
Interest Expenses	0.0	0.0	-0.3	0.0	0%
<b>Tax Expenses</b>	<b>-3.2</b>	<b>-5.4</b>	<b>-5.8</b>	<b>2.2</b>	<b>-41%</b>

In 2015, AIXTRON recorded a country specific **tax expense** of EUR 3.2 million (2014: tax expense of EUR 5.4 million; 2013: tax expense of EUR 5.8 million). Unrecognized **deferred tax assets** related to tax losses at December 31, 2015 totaled EUR 161.2 million (2014: 129.5 million; 2013: EUR 88.7 million).

**Profit/Loss Attributable to the Equity holders of AIXTRON SE (after taxes)**

The 2015 **after-tax result** attributable to the equity holders of AIXTRON SE was EUR -29.2 million or -15% of revenues, and EUR -62.5 million (-32% of revenues) in 2014 (2013: EUR -101.0 million or -55% of revenues).

**Net Result AIXTRON SE – Use of Results**

AIXTRON SE, the parent company of the AIXTRON Group, recorded a net accumulated loss in accordance with German generally accepted accounting principles, (German GAAP) based on the German Commercial Code, HGB, of EUR -87.3 million for 2015 (2014: loss of EUR -53.6 million; 2013: loss of EUR -1.1 million).

The 2015 loss will be carried forward and consequently no dividend payment will be made for 2015 (2014: no dividend; 2013: no dividend).

### 2.6.3. Development of Orders

Orders	2015	2014	2013	2015-2014	
	(in EUR million)			m EUR	%
Total order intake incl. spares & service	167.1	198.7	178.0	-31.6	-16
Equipment order backlog (end of period)	42.9	65.2	59.6	-22.3	-34

As a matter of internal policy, the 2015 US dollar based **order intake and backlog** were recorded at the 2015 budget exchange rate of 1.25 USD/EUR (2014: 1.35 USD/EUR; 2013: 1.30 USD/EUR). In order to better reflect industry practice, Management has decided to report total order intake including spares & service from 2015 rather than continuing to report equipment order intake only. For comparison reasons, previous years' figures have been adopted to this policy. Due to the generally quick turnaround of spares & service into revenues, the equipment order backlog figures will remain unchanged and continue to include equipment orders only.

In 2015, **total order intake** including spares & service was 16% lower year-on-year at EUR 167.1 million (2014: EUR 198.7 million; 2013: EUR 178.0 million). This was due to lower overall market demand as well as the effect from the longer than expected qualification process of the AIX R6.

The total **equipment order backlog** of EUR 42.9 million at December 31, 2015 was 34% lower than the EUR 65.2 million at the same point in time in 2014 (December 31, 2013: EUR 59.6 million) and 38% lower than the 2015 opening backlog of EUR 69.0 million, revalued as of January 1, 2015, at the US-Dollar exchange rate of 1.25 USD/EUR valid at that time. The 2015 year-end order backlog was revalued at the 2016 budget rate of 1.10 USD/EUR as per January 1, 2016, leading to an opening equipment order backlog of EUR 46.7 million for 2016.

In December 2015, AIXTRON SE and San'an Optoelectronics agreed on a substantial reduction in the order volume for AIX R6 MOCVD systems ordered in September 2014 by 47 tools from 50 down to three which have already been delivered. Following the Company's internal recognition policy, these 47 tools were not recorded in order intake and order backlog. Consequently, the 2015 order backlog was not affected by this reduction of order volume. However, AIXTRON recorded additional provisions in Q4/2015 which resulted in an impact on operating results of EUR 2.6 million.

As a matter of strict internal policy, AIXTRON follows clear internal requirements before recording and reporting received equipment orders as order intake and order backlog. These requirements comprise of all of the following minimum criteria:

1. the receipt of a firm written purchase order,
2. the receipt of the agreed deposit,
3. accessibility to the required shipping documentation,
4. a customer confirmed agreement on a system specific delivery date.

In addition and reflecting current market conditions, the Company's Management reserves the right to assess whether the actual realization of each respective system order is sufficiently likely to occur in a timely manner according to Management's opinion. When Management concludes, that there is sufficient likelihood of realizing revenue on any specific system or that there is an unacceptable degree of risk of not realizing revenue on any specific system, Management will include or exclude the order, or a portion of the order, into or from the recorded order intake and order backlog figures, regardless of compliance with requirements of the points 1-4 above. The backlog is being regularly assessed and adjusted to reflect potential execution risks if necessary.

## 2.7. Financial Position

### 2.7.1. Corporate Financial Management

AIXTRON has a central financial management system to control its global liquidity, interest and currency management.

Due to the volatile nature of the semiconductor business, a sufficient level of cash is essential to expeditiously finance potential business needs. The Company's need for cash is generally provided for through operating cash flows. In order to secure future financing and support the indispensable R&D activities, the Company has access to a strong equity capital base. Furthermore, approved by the Annual General Meeting, and subject to Supervisory Board approval, the Company has the authority to issue equity instruments to be able to raise additional liquidity on the capital market if required.

AIXTRON conducts a large part of its business in foreign currencies, i.e. in currencies other than the Euro. The most prevalent foreign currency relevant to AIXTRON is the US Dollar. Unfavorable exchange rate movements, especially the US Dollar/Euro exchange rate, will adversely affect the Company's results of operation. In order to manage foreign exchange risks, the Company routinely monitors if and to what extent currency hedging instruments should be used. In 2015, no currency hedging instruments were used.

### 2.7.2. Funding

AIXTRON SEs stated **share capital** as of December 31, 2015 amounted to EUR 112,720,355 (December 31, 2014: EUR 112,694,555 December 31, 2013: EUR 112,613,445) divided into 112,720,355 registered shares with a proportional interest in the share capital of EUR 1.00 per no-par value registered share. All registered shares are fully paid in. AIXTRON has an American Depositary Share ("ADS") program. The Company's ADSs (each representing one ordinary share) trade on the NASDAQ Global Select Market.

The Company has a number of **stock option programs** in place that grant the members of the Executive Board and employees the right to purchase AIXTRON shares or ADS under certain conditions. In fiscal year 2015, 25,800 stock options (2014: 81,100; 2013: 415,289) were exercised, resulting in delivery of in total 25,800 ordinary shares. In fiscal year 2015, no new stock options were granted (2014: 1,150,400; 2013: 0).

AIXTRON ordinary shares	Dec 31, 15	Exercised	Expired/Forfeited	Allocation	Dec 31, 14
Stock options	2,891,815	25,800	374,281	0	3,291,896
Underlying shares	2,891,815	25,800	604,024	0	3,521,639

A more detailed description of the different stock option plans and a summary of all the stock option transactions can be found in Note 23 to the Company's Consolidated Financial Statements "Share-based payments".

The Company recorded no **bank borrowings** as of December 31, 2015, 2014 and 2013.

Where necessary, AIXTRON SE provides loans and financial security facilities to its subsidiaries to enable the business to continue to operate efficiently. The Company has granted no security interests in its own land and buildings.

The **equity ratio** was 82% as of December 31, 2015, compared to 78% as of December 31, 2014 (December 31, 2013: 83%). This development was principally attributable to the structural effect of lower advanced payments from customers and the resulting lower shareholders' equity.

In 2015, the **return on equity** (ROE) based on the negative 2015 Group's net result in proportion to the average total shareholders' equity at the start and end of the year was -7% (2014: -15%; 2013: -22%).

In order to finance future developments, the Company regularly explores and assesses on an ongoing basis, potential funding opportunities available in the market.

### 2.7.3. Investments

The AIXTRON Group's total capital expenditures in fiscal year 2015 amounted to EUR 13.3 million (2014: EUR 13.4 million; 2013: EUR 10.1 million).

In 2015, EUR 12.5 million (2014: EUR 12.6 million; 2013: EUR 9.6 million) were related to property, plant and equipment (including testing and laboratory equipment). The remaining EUR 0.7 million in 2015 (2014: EUR 0.8 million; 2013: EUR 0.5 million) were related to intangible assets including software licenses.

In 2016, investments will again be made mainly for laboratory and test equipment.

The decrease of EUR 60.5 million in bank deposits with a maturity of at least three months in 2015 was recorded as cash inflow from investing activities. In 2014 bank deposits with a maturity of at least three months increased by EUR 9.9 million which was recorded as cash outflow from investing activities (2013: increase of 30.4 million).

All 2015, 2014 and 2013 expenditures were funded out of operating cash flow and available cash resources.

#### 2.7.4. Liquidity

Cash and cash equivalents including cash deposits with a maturity of at least three months, most of which is held in Euros (also see "Investments"), decreased by 22% or EUR 58.7 million to EUR 209.4 million (EUR 93.1 million + EUR 116.3 million financial assets) as of December 31, 2015 (December 31, 2014: EUR 268.1 million, equaling EUR 116.6 million + EUR 151.5 million; December 31, 2013: EUR 306.3 million, equaling EUR 167.5 million + EUR 138.9 million).

Specific items that lowered the 2015 year-end liquidity compared to 2014 came predominantly from the acquisition of PlasmaSi and the partial return of the previously received advance payment to San'an following an agreed reduction of order volume from this customer. The second half of the return payment was made in Q1/2016 and was recorded in other liabilities as of December 31, 2015.

There are currently no restrictions on the Company's use of cash resources.

#### 2.7.5. Development of Cash Flows

In fiscal year 2015, a cash flow from operating activities of EUR -45.7 million (2014: EUR -33.8 million; 2013: EUR 8.2 million) was recorded. The decrease in operating cash flow in 2015 was mainly caused by the partial return of the previously received advance payment to San'an.

A **cash flow from investment activities** of EUR 41.2 million was recorded in 2015 (2014: cash flow of EUR -23.2 million; 2013: cash flow of EUR -39.7 million). Factors which mainly influenced this were the liquidation of money market deposits in the amount of EUR 60.5 million (2014: EUR 9.9 million added; 2013: EUR 30.4 million added), which were previously classified as "other financial assets". This effect was only partially offset by the previously mentioned capital expenditures (2015: EUR 13.3 million; 2014: 13.4 million; 2013: 10.1 million) and cost related to the acquisition of PlasmaSi, Inc. in Q2/2015.

In 2015, the **cash flow from financing activities** of EUR -145 thousand (2014: cash flow of EUR 193 thousand, 2013: cash flow of EUR 101.6 million) was recorded from the acquisition of own shares being partially offset by proceeds from the issue of new shares. In 2015, no dividends were paid to AIXTRON shareholders (2014: 0; 2013: 0).

Including the previously mentioned capital expenditures, the free cash flow (adjusted for acquisition effects), amounted to EUR -57.3 million (2014: EUR -47.0 million; 2013: EUR -1.1 million).

## 2.8. Assets

### 2.8.1. Property, Plant and Equipment

The value of property, plant and equipment was higher at EUR 81.3 million as of December 31, 2015 (EUR 77.3 million as of December 31, 2014; EUR 79.9 million as of December 31, 2013) mainly due to additions to laboratory equipment.

### 2.8.2. Goodwill

The value of goodwill was at EUR 75.9 million as per December 31, 2015 (EUR 64.8 million as per December 31, 2014; EUR 64.1 million as per December 31, 2013). The difference was mainly related to the acquisition of PlasmaSi, Inc. in April 2015 and to exchange rate fluctuations. There were no impairments in fiscal year 2015. For further information on the impairment of goodwill, refer to Note 12 to the Company's Consolidated Financial Statements "Intangible assets".

### 2.8.3. Other Intangible Assets

The value of other intangible assets also increased to EUR 6.4 million as per December 31, 2015 (EUR 2.5 million as per December 31, 2014; EUR 3.1 million as per December 31, 2013) mainly due to the technology acquired in April 2015.

### 2.8.4. Inventories

Inventories, including raw materials, unfinished and finished goods, decreased to EUR 70.8 million as per December 31, 2015, compared to EUR 81.7 million as of December 31, 2014 (EUR 66.2 million as per December 31, 2013), reflecting the lower backlog as well as write downs of inventory.

### 2.8.5. Trade Receivables

Trade receivables remained largely stable in line with the business volume (December 31, 2014: EUR 26.3 million; December 31, 2013: EUR 27.7 million) at EUR 26.0 million as of December 31, 2015.

### 2.8.6. Liabilities

**Trade payables** as of December 31, 2015 decreased by 40% year-on-year to EUR 9.8 million compared to EUR 16.4 million as of December 2014 (December 31, 2013: EUR 13.5 million), reflecting year-end market demand for AIXTRON products and related supplier orders. **Provisions** (current and non-current) decreased from EUR 29.3 million as of December 31, 2014 to EUR 21.5 million as of December 31, 2015 (December 31, 2013: EUR 32.1m). The reduction is largely reflecting the execution of the restructuring program. **Advance payments from customers** as of December 31, 2015 decreased to EUR 24.0 million compared to EUR 67.0 million as of December 31, 2014 (December 31, 2013: EUR 46.2m), mainly attributable to the high shipments towards the end of 2015, the return of previously received advance payments to San'an and the lower order backlog. **Other current liabilities** increased from EUR 3.2 million as of December 31, 2014 to EUR 25.0 million as of December 31, 2015 mainly due to the second installment of the agreed refund to San'an having been recorded in other liabilities (December 31, 2013: EUR 2.9 million). The actual payment of the second installment was made in Q1/16.

## 2.9. Management Assessment of Company Situation

Throughout fiscal year 2015, AIXTRON executed its strategy to consistently invest into or further develop future business fields including deposition technologies for Power Electronics, OLED, Memory, Logic and Carbon Nanomaterials including Graphene. The Company has seen market interest and demand from customers in all of these fields supporting the Companies' diversification strategy.

Demand for LED chips has grown less than anticipated by market research institutes, while additional production capacity was taken online, resulting in comparatively low utilization rates of LED producers. Consequently, market demand for LED production equipment has gone down as well. The current overcapacity will have to be absorbed again before meaningful market driven demand for capacity might return – notwithstanding potential strategic capacity investments. For AIXTRON, lower high volume market demand in combination with a longer than expected and further ongoing qualification process for the new generation MOCVD showerhead tool AIX R6 at several customers led to low demand for LED production tools from AIXTRON. Consequently, revenues for LED-related MOCVD equipment decreased in the reporting period from EUR 100.3 million in 2014 to EUR 39.7 million in 2015.

For MOCVD equipment to manufacture power management devices, revenues have more than doubled within the reporting period compared to 2014 from EUR 10.2 million in 2014 to EUR 25.8 million in 2015. Further future growth in this area is expected.

Revenues for AIXTRONs logic and memory tools have increased by 75% to EUR 29.3 million in 2015 compared to EUR 16.7 million in 2014. The Company expects future growth potential in this area.

The market entry is the focus in the area of OLED deposition and encapsulation technologies. The OLED R&D Cluster has demonstrated AIXTRONs deposition capabilities in this space. The Gen8 Demonstrator for large area deposition was installed and put into operation in preparation to run customer demonstrations in order to prove the scalability of the organic deposition technology on very large substrates. The successful market entry of this highly innovative technology against the incumbent technologies is depending on customer commitments to adopt the OVPD large area technology for high volume manufacturing. The short term win of a customer contract is decisive for the further development of the OVPD technology. Following the acquisition of an OLED thin film encapsulation (TFE) technology in April of 2015, AIXTRON is on track with the first R&D order received in Q3/2015 and ongoing active discussions with other display manufacturers.

In parallel, AIXTRON is executing improvement projects addressing the further reduction of material costs as well as further improvements in Supply Chain, Service and Production processes. Management will continue to execute on its productivity programs in all areas of the Company to further optimize the cost structure whilst sustaining the targeted investments into the defined business fields. In light of changing market dynamics including customers' time-to-market and specification requirements, Management continuously reviews the performance and prospects of the Companies' product portfolio.

The business development in all areas except for LED volume manufacturing was in line with Management's expectations. However, the Company's Management continues to consider this development as not satisfactory. Further improvements will depend on the continuous execution of the operating programs and the market entry of new technologies such as OVPD.

The Company continues to have a strong balance sheet and a strong liquidity without any bank borrowings.

The earnings guidance for fiscal year 2015, which was published in the Annual Report 2014, was achieved with the exception of Free Cash Flow due to the partial return of advance payments to San'an. The original revenue guidance for fiscal year 2015 had to be revised in October 2015 mainly due to a shortfall of originally anticipated shipments to San'an. The revised revenue guidance was achieved.



### 3. Report on Post-Balance Sheet Date Events

On January 4, 2016, a U.S.-based law firm specialized in class action suits filed a complaint on behalf of a shareholder of the Company, naming AIXTRON as a defendant in a putative class action commenced in the United States District Court for the Southern District of New York. Service was not yet effected on AIXTRON SE at the time of publication of this report. The claim refers to the ad hoc announcement published on December 9, 2015, citing that AIXTRON has reached an agreement with its Chinese customer San'an Optoelectronics regarding a substantial reduction in the volume of AIX R6 MOCVD systems ordered from 50 down to three which caused a strong decline of the price of the Companies' shares and ADS's. The complaint claims in part that the Company made false and/or misleading statements, as well as failed to disclose material adverse facts about the Company's business, operations and prospects. AIXTRON disputes the allegations and intends to contest the allegations vigorously.

Based on an initial assessment from legal counsel, AIXTRON believes that the above mentioned claim will not be successful. However, it cannot be ruled out that decisions of the above mentioned court as well as settlements could potentially cause expenses, which may have a material adverse effect on AIXTRON's business, financial condition and results of operations.

### 4. Remuneration Report

The remuneration report summarizes the principles of the remuneration system for the members of the Executive Board and Supervisory Board of AIXTRON SE explains the structure and amount of the remuneration paid. The remuneration of each member of the Executive Board and Supervisory Board for fiscal year 2015 is presented on an individual basis. The remuneration report is based on the recommendations of the German Corporate Governance Code and includes the disclosures required by the German Commercial Code (Handelsgesetzbuch - HGB) and the International Financial Reporting Standards (IFRS). The remuneration report is part of the Group Management Report.

#### 4.1. Principles of Management Compensation

##### 4.1.1. Executive Board

The Supervisory Board as a whole is responsible for establishing the structure of the remuneration system and for the total remuneration for individual members of the Executive Board. It regularly discusses and reviews remuneration for appropriateness and to ensure that Management is not taking unreasonable risks.

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

The current remuneration system was approved by AIXTRON's shareholders at the Annual General Meeting held on May 23, 2013.

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

##### 4.1.1.1. Fixed remuneration

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 on a monthly basis (13 times a year) as a salary. Additional payments in kind are made, chiefly consisting of company car usage and payments for private pension insurance.

##### 4.1.1.2. Variable bonus

The limited variable bonus 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 modified consolidated net income for the year, but not to exceed EUR 6.5 million in total. The modified consolidated net income for the year is obtained from the Company's Consolidated Financial Statements (IFRS) certified by the auditor, less a consolidated loss carry forward figure and those amounts that are to be allocated to retained earnings in the Annual Financial Statements of AIXTRON by law or in accordance with the Articles of Association. The consolidated loss carry forward is obtained from consolidated net losses from previous years, less consolidated net income from subsequent fiscal years.

The variable bonus – paid out of the above mentioned “accrued internal bonus pool” – will be paid half through a monetary element and half in shares. That part of the variable bonus payable in shares will be converted into whole numbers of shares of the Company and will be deferred until the third bank working day following the ordinary General Meeting in the third fiscal year after having been granted to the Board members. The number of the shares to be granted for the part of the variable bonus payable in shares will be determined in accordance with the closing price of the share of the Company on the third bank working day following the ordinary General Meeting, which is presented with the annual financial statements of the Company and the consolidated financial statements for the fiscal year for which the bonus is granted. The shares will be delivered from treasury shares. Thus, during the multi-year waiting period, the Executive Board members will take part in both positive and negative developments of the Company's share price so that the variable compensation structure is clearly oriented toward a sustainable business development.

#### **4.1.1.3. Stock-based remuneration**

In addition, as a variable component acting as a long-term incentive with an element of risk, the members of the Executive Board may receive a share-based payment in the form of options that are granted under AIXTRON's stock option plans. The stock option plans, including the exercise thresholds, are adopted at the Companies' General Meeting. The number of options granted to the Executive Board is stipulated by the Supervisory Board. Further details on the outstanding stock options of the Executive Board as well as comments on the respective stock option plans are set out further in this report.

#### **4.1.1.4. Commitments in connection with the termination of Executive Board membership**

If the tenure of any Executive Board member ends prematurely as result of a revocation of the appointment, such member of the Executive Board will receive a severance payment in an amount equal to the fixed and variable compensation expected to be owed by the Company for the remaining term of the employment contract, however, not exceeding an amount equal to twice the annual compensation (severance cap). Any payments beyond this severance payment shall be excluded.

If the tenure of any Executive Board member ends prematurely because the employment contract is terminated by mutual agreement, the total amount of any payments agreed to be paid by the Company to the Executive Board member as part of such an agreement may not exceed the amount of the severance payment which the Executive Board member would receive in the event of a revocation of the appointment with due regard to the severance cap.

If the tenure of any Executive Board member ends prematurely because the employment contract is terminated after a change of control, such member of the Executive Board will receive a severance payment in an amount equal to the fixed and variable compensation expected to be owed by the Company for the remaining term of the employment contract, however, not exceeding the severance cap, i.e. an amount equal to twice the annual compensation. Any payments beyond this severance payment shall be excluded. A change of control situation exists if a third party or a group of third parties who contractually combine their shares in order to act subsequently as a third party, directly or indirectly holds more than 50% of the Company's registered share capital.

#### **4.1.1.5. Other**

The current Executive Board members have no individual Company pension benefits, which would result in pension provisions being required to be made by AIXTRON, and receive no loans from the Company.

#### **4.1.2. Supervisory Board**

Remuneration of the Supervisory Board is regulated in Article 17 of AIXTRON's Articles of Association. Accordingly, the annual fixed compensation for individual members of the Supervisory Board is EUR 25,000. The Chairman's compensation is three times this amount and the Deputy Chairman's one and a half times the amount received by a regular member of the Supervisory Board.

The members of the Supervisory Board also receive, in aggregate, a limited variable compensation of 1% of the Company's net income, less an amount corresponding to 4% of the paid-in contributions to the share capital. The Chairman of the Supervisory Board receives 6/17, the Deputy Chairman 3/17, and each other member of the Supervisory Board 2/17 of the variable remuneration. The variable compensation is limited to fourfold the annual fixed compensation of each Supervisory Board member. In addition, committee members receive an attendance fee of EUR 2,000 for attending a committee meeting, with the Chairman of the committee receiving triple this amount. The total annual attendance fee per Supervisory Board member is limited to one-and-a-half times that individual's fixed remuneration.

The Supervisory Board members receive no loans from the Company.

#### **4.1.3. D&O insurance**

The Company has a D&O insurance contract in place, covering the activities of members of the Executive Board and members of the Supervisory Board. Pursuant to the amended § 93, Section 2 AktG following the Act on the Appropriateness of Executive Board remuneration (VorstAG), as well as to the amended recommendation in chapter 3.8. German Corporate Governance Code, the deductible for members of the Executive Board and member of the Supervisory Board is equal to a minimum of 10% of the respective, potential loss incurred. The deductible cannot exceed a factor of 1.5 of the respective annual fixed remuneration.

## 4.2. Individual remuneration structure

### 4.2.1. Executive Board remuneration

The total Executive Board remuneration in fiscal year 2015 amounted to EUR 1,040,631 (2014: EUR 2,014,775; 2013: EUR 2,584,834). The success-independent, fixed remuneration of the Executive Board in 2015 was at EUR 1,040,631 (2014: EUR 1,136,774; 2013: EUR 2.084.834).

No variable bonus was paid for fiscal year 2015. For each of the years 2013 and 2014, Mr Goetzeler received a contractually guaranteed bonus of EUR 500,000 which was paid half in cash and half in shares. That part of the bonus payable in shares was converted into whole numbers of shares of the Company and will be deferred until the third bank working day following the ordinary General Meeting in the third fiscal year after having been granted (2015: 35,053 shares; 2014: 24,594 shares). During the past fiscal year, no stock options were granted to the Members of the Executive Board (2014: 100,000; 2013: 0).

## 4.3. Information according to Nr 4.2.5 German Corporate Governance Code (DCGK)

### 4.3.1. Value of benefits granted displayed according to DCGK

The following table according to DCGK shows the value of benefits granted to the individual members of the Executive Board in fiscal year 2015 as well as the minimum and maximum values that can be achieved.

For the one-year variable compensation, in line with the requirement of the DCGK, the target value (i.e. the value in the event of 100% goal achievement) granted for the year under review is stated. The multi-year variable compensation granted in the year under review is broken down into different plans are stated.

Benefits granted	Martin Goetzeler				Dr. Bernd Schulte				Wolfgang Breme			
	Chief Executive Officer				Chief Operating Officer				Chief Financial Officer			
	Member of the Executive Board since March 1, 2013				Member of the Executive Board since March 7, 2002				Member of the Executive Board from March 1, 2005 until May 31, 2014			
	2014	2015	2015 (min)	2015 (max)	2014	2015	2015 (min)	2015 (max)	2014	2015	2015 (min)	2015 (max)
Fixed compensation	600,000	600,000	600,000	600,000	365,000	415,000	415,000	415,000	141,667	0	0	0
Fringe benefits	13,104	13,104	13,104	13,104	12,527	12,527	12,527	12,527	4,477	0	0	0
<b>Total</b>	<b>613,104</b>	<b>613,104</b>	<b>613,104</b>	<b>613,104</b>	<b>377,527</b>	<b>427,527</b>	<b>427,527</b>	<b>427,527</b>	<b>146,144</b>	<b>0</b>	<b>0</b>	<b>0</b>
One-year variable compensation	250,000	0	0	4,000,000	0	0	0	2,500,000	0	0	0	0
Multi-year variable compensation	439,000	0	0	0	189,000	0	0	0	0	0	0	0
<i>Deferral from one-year variable compensation</i>	250,000	0	0	0	0	0	0	0	0	0	0	0
<i>Stock option program 2012 (blackout period: 4 years)</i>	189,000	0	0	0	189,000	0	0	0	0	0	0	0
<i>Stock option program 2007 (blackout period: 2 years)</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Stock option program 2002 (blackout period: 2 years)</i>	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>689,000</b>	<b>0</b>	<b>0</b>	<b>4,000,000</b>	<b>189,000</b>	<b>0</b>	<b>0</b>	<b>2,500,000</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Service cost	0	0	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>1,302,104</b>	<b>613,104</b>	<b>613,104</b>	<b>4,613,104</b>	<b>566,527</b>	<b>427,527</b>	<b>427,527</b>	<b>2,927,527</b>	<b>146,144</b>	<b>0</b>	<b>0</b>	<b>0</b>

### 4.3.2. Allocation displayed according to DCGK

As the benefits granted to the members of the Executive Board in a fiscal year does not always result in a corresponding payment in the respective fiscal year, the following table shows severally - in line the relevant recommendation of the DCGK - the value of the actual allocation (amount disbursed) in fiscal year 2015.

According to the recommendations of the DCGK, for the fixed compensation and the one-year variable compensation the allocation (amount disbursed) for the respective fiscal year is entered. For subscription rights and other share-based payments, the time of allocation and the allocation amount is deemed to be the relevant time and value under German tax law.

Benefits allocated	Martin Goetzeler Chief Executive Officer Member of the Executive Board since March 1, 2013		Dr. Bernd Schulte Chief Operating Officer Member of the Executive Board since March 7, 2002		Wolfgang Breme Chief Financial Officer Member of the Executive Board from March 1, 2005 until May 31, 2014	
	2014	2015	2014	2015	2014	2015
	Fixed compensation	600,000	600,000	365,000	415,000	141,667
Fringe benefits	13,104	13,104	12,527	12,527	4,477	0
<b>Total</b>	<b>613,104</b>	<b>613,104</b>	<b>377,527</b>	<b>427,527</b>	<b>146,144</b>	<b>0</b>
One-year variable compensation	250,000	0	0	0	0	0
Multi-year variable compensation	0	0	108,640	0	74,100	0
<i>Deferral from one-year variable compensation</i>	0	0	0	0	0	0
<i>Stock option program 2012 (blackout period: 4 years)</i>	0	0	0	0	0	0
<i>Stock option program 2007 (blackout period: 2 years)</i>	0	0	0	0	74,100	0
<i>Stock option program 2002 (blackout period: 2 years)</i>	0	0	108,640	0	0	0
Other	0	0	0	0	0	0
<b>Total</b>	<b>250,000</b>	<b>0</b>	<b>108,640</b>	<b>0</b>	<b>74,100</b>	<b>0</b>
Service cost	0	0	0	0	0	0
<b>Total</b>	<b>863,104</b>	<b>613,104</b>	<b>486,167</b>	<b>427,527</b>	<b>220,244</b>	<b>0</b>

As of December 31, 2015, the AIXTRON Executive Board held a total of 395,500 options for the purchase of 395,500 shares of the Company (December 31, 2014: 398,140; December 31, 2013: 505,116). The number of shares underlying the options is set out below. The actual profits from exercising the stock options may differ significantly from the figures shown in the table.

Executive Board Member	Allocation date	Outstanding	Exercisable	Grant Date	Option Value	Exercise price	Maturity	Total Outstanding Shares
		(Shares)	(Shares)		(EUR)			
Martin Goetzeler	Oct 2014	50,000	0		189,000	13.14	Oct 2024	<b>50,000</b>
Dr. Bernd Schulte	Oct 2014	50,000	0		189,000	13.14	Oct 2024	
	Nov 2010	52,000	26,000		461,240	26.60	Nov 2020	
	Nov 2009	52,000	39,000		448,240	24.60	Nov 2019	
	Nov 2008	52,000	52,000		92,040	4.17	Nov 2018	
	Dec 2007	52,000	52,000		225,680	10.09	Dec 2017	
	Nov 2006	55,000	55,000		84,150	3.83	Nov 2016	
	May 2002	27,500	0		152,625	7.48	May 2017	
	May 2001	5,000	0		106,500	26.93	May 2016	345,500
<b>Total</b>		<b>395,500</b>	<b>224,000</b>					<b>395,500</b>

In accordance with IFRS 2, the "grant-date fair value of the options" is also used as the basis for recognizing options issued after November 7, 2002 under expenses on the Income Statement. For stock options issued prior to November 7, 2002, the fair value was determined using the Black-Scholes model.

The expenses for share based compensation of each individual member of the Executive Board are as follows:

in EUR thousands	2015	2014	2013
Martin Goetzeler	47	263	250
Dr. Bernd Schulte	53	53	118
Paul Hyland	0	0	-532
Wolfgang Breme	0	-76	118

In 2015, options to acquire 2,640 AIXTRON shares expired (2014: 158,976; 2013: 207,000). The expenses for the unvested expired options have been reversed in accordance with IFRS 2.

In fiscal year 2015, current Executive Board members exercised no options (2014: 48,000; 2013: 211,500).

	Date of exercise	Weighted average share price at date of exercise	Number of shares
<b>2014</b>			
Dr. Bernd Schulte	November 21, 2014	9.57	35,000
Wolfgang Breme	August 28, 2014	9.88	13,000
<b>2013</b>			
Paul Hyland	November 21, 2013	9.84	39,000
Paul Hyland	November 18, 2013	9.81	117,500
Wolfgang Breme	May 31, 2013	13.71	55,000

The current Executive Board members have no individual company pension benefits which would result in pension provisions being required to be made by the company. Instead, the Executive Board annual pension allowance is paid by AIXTRON and included in the fixed remuneration, and is transferred by the Executive Board members into independent insurance contracts with a benevolent fund or similar plan. In the years 2015, 2014 and 2013, payments of € 80,000 per annum (in 2013: 10 months pro rata since start of appointment) were made to Martin Goetzeler. The allowance amounts to EUR 40,000 for other members of the Executive Board. In the years 2015, 2014 and in 2013, payments of EUR 40,000 per year were made to Dr. Bernd Schulte, Wolfgang Breme (in 2014: five months pro rata until termination of appointment) and Paul Hyland (in 2013: two months pro rata until termination of appointment) respectively.

### 4.3.3. Supervisory Board Remuneration

In fiscal year 2015, the remuneration of the Supervisory Board totaled EUR 302,500 (2014: EUR 292,500; 2013: EUR 290,042). The division between the individual members of the Supervisory Board for the years 2013 to 2015 is presented in the table below:

Supervisory Board Member	Year	Fixed	Variable	Attendance	Total
		(EUR)	(EUR)	Fee	
		(EUR)	(EUR)	(EUR)	(EUR)
Kim Schindelhauer <sup>1/2/3/4/5</sup> (Chairman of the Supervisory Board)	2015	75,000	0	18,000	93,000
	2014	75,000	0	16,000	91,000
	2013	75,000	0	20,000	95,000
Prof. Dr. Wolfgang Blättchen <sup>1/4</sup> (Deputy Chairman of the Supervisory Board since Feb 27, 2013) (Chairman of the Audit Committee)	2015	37,500	0	24,000	61,500
	2014	37,500	0	24,000	61,500
	2013	37,556	0	24,000	59,556
Dr. Andreas Biagosch <sup>2</sup> (since May 23, 2013)	2015	25,000	0	8,000	33,000
	2014	25,000	0	8,000	33,000
	2013	15,139	0	2,000	17,139
Prof. Dr. Petra Denk <sup>2/3</sup> (since May 19, 2011) (Chair of the Technology Committee)	2015	25,000	0	26,000	51,000
	2014	25,000	0	24,000	49,000
	2013	25,000	0	28,000	53,000
Dr. Martin Komischke (since May 23, 2013)	2015	25,000	0	0	25,000
	2014	25,000	0	0	25,000
	2013	15,139	0	0	15,139
Prof. Dr. Rüdiger von Rosen <sup>1/3</sup> (Chairman of the Nomination Committee)	2015	25,000	0	14,000	39,000
	2014	25,000	0	8,000	33,000
	2013	25,000	0	20,000	45,000
Karl-Hermann Kuklies <sup>7)</sup> (until January 30, 2013)	2015	0	0	0	0
	2014	0	0	0	0
	2013	2,083	0	0	2,083
Dr. Holger Jürgensen <sup>5/6/7</sup> (until January 30, 2013) (Deputy Chairman of the Supervisory Board until January 30, 2013)	2015	0	0	0	0
	2014	0	0	0	0
	2013	3,125	0	0	3,125
<b>Total</b>	<b>2015</b>	<b>212,500</b>	<b>0</b>	<b>90,000</b>	<b>302,500</b>
	<b>2014</b>	<b>212,500</b>	<b>0</b>	<b>80,000</b>	<b>292,500</b>
	<b>2013</b>	<b>196,042</b>	<b>0</b>	<b>94,000</b>	<b>290,042</b>

<sup>1)</sup> Member of the Audit Committee

<sup>2)</sup> Member of the Technology Committee

<sup>3)</sup> Member of the Nomination Committee

<sup>4)</sup> Member of the Capital Markets Committee

<sup>5)</sup> Former AIXTRON Executive Board Member

<sup>6)</sup> Honorary Chairman of the Supervisory Board

<sup>7)</sup> Resigned from Office as of January 30, 2013

As in previous years, there were no payments made to any Supervisory Board member for advisory services in fiscal year 2015.

## 5. Opportunities and Risk Report

### 5.1. Opportunities

The development of leading edge complex material deposition technology remains AIXTRON's core competency. It is an area where the Company has developed global leadership positions. AIXTRON Management intends to keep this focus and positioning while at the same time expanding this core know-how into both existing and emerging markets.

AIXTRON remains committed to investing in R&D to not only maintain the Company's leading technology position in MOCVD equipment for applications such as LEDs, power electronics or next generation logic applications. The Company also targets to enable greater penetration into markets for memory and organic semiconductor devices.

Important fields for AIXTRON are power management devices based on wide band gap materials such as Gallium Nitride (GaN) and Silicon Carbide (SiC). These devices are extremely energy efficient. Such device applications can be found in electric vehicles, transformers, converters, feed-in of renewable energy into the grid and they will be considered for power management on high performance logic chips. AIXTRON expects further growing equipment demand as the penetration of above mentioned devices is gaining momentum.

AIXTRON continues to pursue the market entry into the large area organic semiconductor application markets with the Company's deposition technology for organic materials, OVPD<sup>®</sup> and PVPD<sup>™</sup>. The exclusively licensed OVPD<sup>®</sup> technology allows a highly efficient deposition of organic material, especially on large area substrates, and offers a number of advantages over the incumbent technologies especially in terms of material consumption. Demonstration and qualification efforts are closely linked to the expansion plans of potential customers in this field. AIXTRON will continue to position its newly acquired PECVD technology for thin film encapsulation with manufacturers of flexible and rigid OLED displays as well as other OLED applications, expecting to secure additional orders in this field.

The Company also aims to make further inroads into the research and development community with its PECVD technology to manufacture advanced carbon nanostructures including carbon nanotubes, carbon nanowires and graphene. The potential applications these materials include, among other things, display technologies, semiconductor technologies or composite materials. The installed base of AIXTRON R&D tools and the close collaboration with customers allow the Company to align its roadmaps with the market requirements of this emerging technology. Building on a leading position captured over the last years, AIXTRON expects the market opportunity for equipment to expand.

AIXTRON's QXP-8300 ALD deposition tool aimed specifically at providing efficient and innovative solutions for memory applications. AIXTRON's QXP tool is production qualified at a major Korean chip manufacturer and is in the process of production qualification at two other memory chip manufacturers. AIXTRON therefore sees growth potential with this technology. In addition, based on R&D projects and customer feedback, AIXTRON sees tangible opportunities to further support the miniaturization of logic device structures with the use of compound semiconductor materials produced on AIXTRON's MOCVD tool technology.

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

#### Short-Term

- Further increasing adoption of LEDs for Solid State Lighting.
- Increased emergence of wide band gap GaN or SiC based devices for energy efficient power management applications.
- Development of next generation NAND and DRAM memory devices.
- Further progress in the development of GaN-on-Silicon LEDs and Wafer Level Packaging.

#### Mid- to Long-Term

- Development of new wide-band-gap applications such as RF and System-on-Chip with integrated power management.
- Progress in the development of large area OLED devices requiring efficient deposition technologies.
- Progress in the development of flexible and rigid OLED devices requiring thin-film encapsulation.
- Increased development activity for specialized compound solar cell applications.
- Increasing requirements for High-k and interconnect components, implying a new approach to production technologies.
- Progress in the development of future logic chips applying wide band gap and high electron mobility materials (III-V-on-Silicon).
- Development of applications using Carbon Nanostructures (Carbon Nanotubes, Carbon Nanowires, Graphene).
- Development of alternative LED applications such as Visual Light Communication technology.

## 5.2. Risk Management

A risk management system has been implemented for monitoring, analyzing, and documenting business risks and measures. Risk and measure reporting is the core component of AIXTRON's strategic risk and opportunity management. Risk managers, responsible for implementing risk reporting, have been appointed in different areas of the Company.

In addition to aforementioned, as an international technology company, AIXTRON is engaged in business operations worldwide and is, consequently, exposed to a variety of risks. The Company may also benefit from the opportunities related to the risks it is exposed to. In order to minimize risks, AIXTRON established an enterprise risk management system that is continuously being adapted to the evolving business environment and business processes.

To minimize risks and to capitalize on opportunities, AIXTRON pursues a forward looking product strategy, by observing current and identifying anticipated future market trends and customer requirements and continuously striving to develop and maintain unique selling propositions related to its technology. This product strategy incorporates measures for honing the Company's profile in its target market, for building new partnerships and alliances, as well as for training third parties engaged to market, sell, and deploy AIXTRON products. In fiscal year 2015, the Company continued to monitor market trends and the activities of its competitors and evaluated market analyses and forecasts produced by leading market research companies. Project management and quality assurance systems are routinely deployed in all areas of product development where risk awareness and evaluation play a crucial role. Therefore, AIXTRON uses systems for project management and quality control in this area.

These measures are accompanied by a training and development program for managers and specialist employees, and by procedures to maintain and expand the necessary infrastructure when required.

AIXTRON deploys accounting, control, and forecasting software for the global monitoring and management of core enterprise information. Regular reporting processes ensure that information on business and market trends is regularly updated. In addition to annual budget planning, real-time forecasts are used to continuously review and update the Company's plans. As part of the Company's financial control procedures, variances between actual and budget figures are continuously identified and analyzed and serve as basis for corrective measures as necessary.

Furthermore, the Executive Board analyzes the Company's net assets, financial position, and results of operations on a continuous basis. The frequent exchange of knowledge and experiences at all hierarchy levels worldwide ensures the constant and efficient flow of information as well as rapid decision-making.

The Executive Board informs and includes, where required, the Supervisory Board in all key decisions at least once every quarter, and normally at shorter intervals. The Audit Committee of the Supervisory Board meets regularly with the Executive Board to discuss, analyze, and monitor financial issues arising in the course of the Company's business activities. Internal guidelines governing risk management, insider trading, and the disclosure of share price sensitive information ensure compliance with all applicable laws and the implementation of the corporate governance recommendations specified in the German Corporate Governance Code.

The Company's Supervisory Board is informed about the status, plausibility, and further development of the risk management system by the Executive Board on an ongoing basis. In addition, it is the Company's auditor's duty, to inform the Supervisory Board about their audit of the risk management early warning system.

## 5.3. Internal Control over Financial Reporting

AIXTRON's Management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in the Securities Exchange Act of the US Code of Federal Regulations, Title 17, Chapter II, §240, 13a-15(f) or 15d-15(f)) to provide reasonable assurance regarding the reliability of its financial reporting and the preparation of financial statements for external purposes. Internal control over financial reporting includes those policies and procedures that: (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of AIXTRON; (ii) provide reasonable assurance that all transactions are recorded as necessary to permit the preparation of AIXTRON's Consolidated Financial Statements and the proper authorization of receipts and expenditures of AIXTRON are being made in accordance with authorization of AIXTRON's Management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of AIXTRON's assets that could have a material effect on AIXTRON's Consolidated Group Financial Statements.

Management assessed AIXTRON's internal control over financial reporting as of December 31, 2015, the end of its fiscal year. Management based its assessment on criteria established in the 2013 Internal Control Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Management's assessment included evaluation of such elements as the design and operating effectiveness of key financial reporting controls, process documentation, accounting policies and AIXTRON's overall control environment. This assessment is supported by testing and monitoring. If a test should reveal a problem, proper feedback will be given and appropriate action will be taken to resolve the issue. This internal control over the financial reporting system, designed to be dynamic, is being continually adapted to reflect the progressive development of the Company.

Based on the Company's assessment, Management has concluded that AIXTRON's internal control over financial reporting was effective as of December 31, 2015 to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes. AIXTRON's Management reviewed the results of Management's assessment jointly with the Audit Committee of AIXTRON's Supervisory Board.

Deloitte & Touche GmbH Wirtschaftsprüfungsgesellschaft, an independent registered public accounting firm, has audited the Consolidated Financial Statements included in this annual report and has issued an attestation report on the effectiveness of AIXTRON's internal control over financial reporting pursuant to Section 404 of the U.S. Sarbanes Oxley Act of 2002.



## 5.4. Single Risk Factors

### 5.4.1. Currency Exchange Risks and Other Financial Risks

AIXTRON conducts a large part of its business in foreign currencies, i.e., in currencies other than the Euro. The most prevalent foreign currency relevant to AIXTRON is the US Dollar. Unfavorable exchange rate movements, especially the US Dollar/Euro exchange rate, will adversely affect the Company's results of operation. In order to manage foreign exchange risks, the Company routinely monitors if and to what extent currency hedging instruments should be used. In 2015, no currency hedging instruments were used. Nevertheless, Management actively manages the currency risk of balance sheet items by pursuing an active balancing of assets and liabilities held in foreign currencies, specifically in US Dollars.

AIXTRON conducts business with a large number of customers worldwide and is therefore exposed to the risk of bad debt losses. This potential risk is significantly reduced by down payments, letters of credit or bank guarantees. Further information on this subject is contained in section 17. "Trade receivables and other current assets" of the Notes to the Consolidated Financial Statements for 2015.

Regular outside audits by the fiscal tax authorities may result in supplementary tax payments. An outside audit is currently being performed by the German tax authorities, which may result in supplementary tax payments.

AIXTRON assesses the financial strength of its banking partners regularly and will take appropriate measures should it detect any significant deterioration or risk.

The Company's need for cash is generally provided for, through operating cash flows and, to a smaller extent, through grants. The Company currently commands adequate cash and cash equivalents to meet business needs and carries no debt. However, should AIXTRON not be able to generate sufficient sales revenues, due to a prevailing weak market demand, then this may significantly harm operating results and cash flows in the future. If AIXTRON cannot quickly and appropriately realign its business structure in line with adverse conditions, the need for additional external funding may arise. If it is not possible to acquire sufficient funding, AIXTRON could be forced to delay or reduce operations.

A further share price decline may also result in the necessity of an impairment of assets. Please refer to Note 12. to the Company's Consolidated Financial Statements "Intangible assets" for more information.

### 5.4.2. Company-Specific Risks, Market and Competition Risks

The semiconductor industries can be highly volatile and unpredictable, which may adversely affect AIXTRON's operating results and result in significant volatility in the market price of its ordinary shares and ADS.

A persistence of the current market environment with subdued market demand for LED manufacturing equipment would lead to the order intake situation not improving. This could have a significantly adverse impact on the Company's net assets, financial position, and results of operations.

The semiconductor manufacturing equipment industry can be affected by the cyclical nature of the semiconductor industry. Although semiconductors are used in many different products, the markets for those products are interrelated to various degrees. The industry has historically experienced sudden changes in supply and demand for semiconductors. The timing, length and severity of these industry cycles are difficult to predict. During periods of declining demand for semiconductor manufacturing equipment, AIXTRON needs to be able to quickly and effectively align its cost structure with prevailing market conditions, to manage its inventory levels to reduce the possibility of future inventory write-downs resulting from obsolescence, and to motivate and retain key employees. Because a certain proportion of AIXTRON's costs are fixed in the near term, the Company's ability to reduce expenses quickly in response to revenue shortfalls is limited. During periods of rapid growth, AIXTRON's business must be able to acquire and/or develop sufficient manufacturing capacity and inventory to meet customer demand, and to attract, hire, assimilate and retain a sufficient number of qualified people.

AIXTRON's business operates in a highly competitive industry characterized by increasingly rapid technological changes, and if the Company does not develop new products in a timely manner, in response to changing market conditions or customer requirements, it may not be able to compete successfully in this market. AIXTRON's competitive advantage and future success depend on its ability to successfully develop new products and technologies as well as new markets for its products and services. They also depend on the introduction of new products to the marketplace in a timely manner as well as the qualification of new products with its customers and the commencement and adjustment of production to meet customer demands.

AIXTRON often faces lengthy sales and qualification cycles for its products and customer contracts regularly include demanding technical or other commercial hurdles which have to be met. Therefore in many cases the Company must invest time and funds with no assurance that these efforts or expenditures will result in revenues.

Revenues from AIXTRON's systems primarily depend upon the decision of a prospective customer to invest in or upgrade its manufacturing capabilities, which typically involves a significant capital commitment by the customer. AIXTRON often experiences delays in obtaining system orders while customers evaluate and receive internal commercial or technical approvals for the purchase of these systems.

The Company's customers may experience difficulties in acquiring manufacturing facilities or maintaining a sufficient flow of raw materials and components or accessing cash to achieve their increased manufacturing output. Should this occur, customers could request to delay AIXTRON system shipments. These delays may include the time necessary to plan, design or complete a new or expanded semiconductor fabrication facility. Due to these factors, the Company expends substantial funds as well as marketing and management efforts to sell its semiconductor production systems. These expenditures and efforts may not result in revenues.

The Company's customers often accelerate or delay expenditures, or they cancel or reschedule their orders. As a result, AIXTRON must be able to react quickly to these changes in supply and demand. Failure to quickly align the Company's cost structure and manufacturing capabilities with industry fluctuations could lead to significant losses or a failure to capitalize on increased demand opportunities. In either event, the results of operations may be adversely affected, which could result in significant volatility in the market price of the Company's ordinary shares and ADS.

To partly protect AIXTRON from negative effects of the cyclical nature of the semiconductor markets, AIXTRON outsources a large part of its production to third party suppliers. To minimize risks in this area, the company generally dual sources the supply of procured key items.

AIXTRON invests significantly into R&D and AIXTRON's future success depends highly on its ability to translate the knowledge gained from R&D into commercial success. Should this fail, then this could have a significantly adverse impact on the Company's net assets, financial position, and results of operations.

As a result of doing business internationally, AIXTRON must comply with different laws and regulations. New or changed domestic or foreign laws and regulations may be imposed on AIXTRON. Any actual or alleged failure to comply with such laws and regulations may have a material adverse effect on AIXTRON's business, financial condition, results of operations and reputation.

AIXTRON anticipates that international revenues, including revenues from Asia, will continue to account for a significant portion of its revenues. As a result, a significant portion of the Company's revenues will be subject to risks, for example, unexpected changes in foreign law or regulatory requirements, political and economic instability; difficulties in accounts receivable collection, extended payment terms, and so on.

AIXTRON is currently involved or may become involved in claims, pending or threatened litigation or other legal proceedings. Because in the past there has been substantial industry litigation regarding patents and other intellectual property rights infringements, AIXTRON cannot exclude the possibility of itself infringing upon intellectual property rights of third parties or of itself being held liable for allegedly infringing upon third party intellectual property rights. The outcome of current, pending and threatened litigation proceedings cannot be predicted with any certainty. Decisions of courts or other authorities as well as settlements can cause expenses, which may have a material adverse effect on AIXTRON's business, financial condition and results of operations. To address some of these risks, AIXTRON pursues a continuous assessment of its intellectual property.

For more details to the previously mentioned litigation risk, please refer to "3. Report on Post-Balance Sheet Date Events" included in this report.

Information on risks, can also be found in section "Risk Factors" in AIXTRON's 2015 20 F Report, which has been filed with the U.S. Securities and Exchange Commission on February 23, 2016.

## **5.5. Overall Statement to the Risk Situation**

Neither within fiscal year 2015 nor at the time of writing has the Executive Board identified any risks that could jeopardize the Company's continued existence.

## 6. Report on Expected Developments

### 6.1. Future Market Environment and Opportunities

In their World Economic Outlook January 2016 update report, the IMF forecasts global growth to slightly increase to 3.4% in 2016 (2015: 3.1%). Global growth is expected to be supported by lower prices for energy and other commodities being partially offset by other factors such as slower growth in emerging markets including China. At this point in time, AIXTRON does not expect any significant influence on its business development from the global economic environment. However, the possibility of further setbacks to the global economy cannot be ruled out.

Gartner Dataquest estimated (Forecast: Semiconductor Manufacturing Equipment, Worldwide, 4Q15 Update, December 2015) that semiconductor capital spending in 2015 declined by 3.5% to USD 62 billion. In the same report, Gartner forecasts further decline in semiconductor capital spending to USD 59 billion (-4.7%) in 2016 and then growing again to USD 64 billion in 2017 (Forecast: Semiconductor Manufacturing Equipment, Worldwide, 4Q15 Update).

In Wafer Fab equipment, the segment where AIXTRON competes, Gartner expects a 2.5% annual decline in the size of the market from USD 31.9 billion in 2015 to USD 31 billion in 2016, to 33.6 billion in 2017.

According to some financial and market analysts, the value of MOCVD equipment was expected to have reached a range of USD 250 million to USD 450 million by the end of 2015. It is expected to be within the range of USD 260 million and USD 610 million in 2016. The demand will primarily depend on the execution of strategic investments and the availability and the level of subsidies, in particular coming from China. The market will need to increase manufacturing capacity driven by higher demand for LEDs and wide band gap devices for power management.

According to Gartner, the total silicon power transistor market is expected to grow from USD 8.9 billion to 10.2 billion between 2013 and 2018 (Gartner, April 2014). According to a study from IHS, the market for SiC and GaN Power Electronics devices, which can be produced using AIXTRON equipment, is estimated to generate a volume of USD 1.6 billion by 2020. Estimates of an accessible market size for the respective production equipment are based on internal assessments and are therefore not meaningful at this point in time.

AIXTRON Management believes that the markets AIXTRON addresses with its organic large area OVPD<sup>®</sup> and PVPD<sup>™</sup> deposition technologies as well as with its PECVD thin film encapsulation technology bear substantial growth potential in the mid- to long-term. This growth potential in the market for organic deposition systems stems from the necessity of device manufacturers to invest into technologies that enable them to achieve improved features and aggressive cost reduction targets. In the highly competitive market space of TVs or large area displays, efficient manufacturing technologies such as those potentially provided by AIXTRON are required to be able to compete. The market volume for OLED devices including OLED TVs are expected by IHS in its OLED Shipment and Forecast Report to grow from approximately USD 14 billion in 2015 to approximately USD 20 billion in 2021. However, as with all emerging technologies, there is an element of risk associated with the timing of AIXTRON's technology being adopted by the market.

AIXTRON's PECVD technology for the production of carbon nanostructures continues to contribute positively to total revenues but due to its R&D focus, the revenue volumes are comparably low and are expected to remain on low levels.

Estimates of an accessible OLED or Carbon Nanostructure equipment market size are based on internal assessments and are therefore not disclosed.

The total ALD market of which AIXTRON addresses only a specific niche with its system technologies, was estimated by Gartner Dataquest in its latest forecast of December 2015 (Forecast: Semiconductor Manufacturing Equipment, Worldwide, 4Q15 Update) to be valued at USD 901 million for 2015 (2016e: USD 940 million; 2017e: USD 1005 million). AIXTRON's QXP tool is production qualified by a major Korean memory chip manufacturer and is in production qualification at two other memory chip manufacturers. AIXTRON therefore sees further growth potential with this technology.

### 6.2. Expected Results of Operations and Financial Position

For Memory and Logic applications, Management expects a significant contribution again in 2016 due to successful qualifications from additional customers. However, demand development for production equipment for memory applications is uncertain due to difficult market conditions in the DRAM end markets.

Management sees near term potential from an increasing penetration of wide band gap GaN- and SiC-based power devices.

In terms of MOCVD equipment for LED manufacturing, Management expects an improving demand. Nevertheless, the exact timing and extent remains difficult to predict also due ongoing qualification processes for the AIX R6 MOCVD tool at several customers.

Based on the assessment on AIXTRON's current order situation, including current risks and opportunities as well as on the internal budget rate of USD/EUR 1.10, Management expects for fiscal year 2016 to achieve revenues between EUR 170 and 200 million with a significantly stronger revenue generation in the second half of 2016 compared to the first half of 2016. Currency adjusted, order Intake is expected to be on the same level as in fiscal year 2015.

Depending on the successful completion of qualification processes and market entry efforts as well as the achievement of revenues at the high end of the revenue guidance range, Management expects to achieve another improvement of results in 2016. EBITDA, EBIT, net result and free cash flow are expected to improve slightly compared to 2015 but to remain negative for the full year 2016. Management expects to report a positive EBITDA for full year 2017.

R&D investments will have a significant impact on the actual amount of operating expenses. AIXTRON considers the consistent execution on its product roadmap for applications, such as OLED, Power Electronics, Logic, etc., in terms of timing, quality and cost a core objective.

During fiscal year 2016, Management will continue its activities to increase efficiency with a particular emphasis on costs, margin contributions and the allocation of funds. In light of changing market dynamics including customers' time-to-market and specification requirements, Management continuously reviews the performance and prospects of the Companies' product portfolio.

As in previous years, Management expects that the Company does not require any external bank debt financing in 2016. Furthermore, the Company will retain its strong equity base also in the foreseeable future.

### 6.3. Overall Statement on the Future Development

Due to the Companies' proven ability to develop and market best-in-class enabling deposition equipment for a variety of markets, Management continues to believe in the positive short- mid- and long-term outlook for AIXTRON and its targeted markets.

As at December 31, 2015, AIXTRON had no binding agreements for participation financing, company acquisition or transfers of parts of the Company.

### 7. Information concerning section 315 (4) of the German Commercial Code ("HGB") on takeovers

The Company's stated share capital as of December 31, 2015 amounted to EUR 112,720,355 (December 31, 2014: EUR 112,694,555; December 31, 2013: EUR 112,613,445) divided into 112,720,355 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.

The Company 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	2015	Approved	Expiry	2014	2013	2015-2014
(EUR or number of shares)	31-Dec	since	Date	31-Dec	31-Dec	
Issued shares	112,720,355	--	--	112,694,555	112,613,445	25,800
Authorized Capital 2014 - Capital increase for cash or contribution in kind with or without existing shareholders' preemptive rights	45,883,905	14.05.2014	13.05.2019	45,883,905	0	0
Authorized Capital 2012 - Capital increase for cash with existing shareholders' preemptive rights	10,422,817	16.05.2012	15.05.2017	10,422,817	10,422,817	0
Authorized Capital 2011 - Capital increase for cash or contribution in kind with or without existing shareholders' preemptive rights	cancelled	--	--	cancelled	30,248,813	--
Conditional Capital I 2012 - Authorization to potentially issue bonds with warrants and/or convertible bonds in future	40,715,810	16.05.2012	15.05.2017	40,715,810	40,715,810	0
Conditional Capital II 2012 - Stock Options Program 2012	4,208,726	16.05.2012	15.05.2017	4,208,726	4,208,726	0
Conditional Capital II 2007 - Stock Options Program 2007	2,872,638	22.05.2007	31.12.2018	2,890,613	2,927,226	-17,975
Conditional Capital 4 - Stock Options Program 2002	463,888	22.05.2002	31.12.2016	471,713	516,210	-7,825
Conditional Capital 2 - Stock Options Program 1999	1,926,005	26.05.1999	31.12.2017	1,926,005	1,926,005	0

In accordance with section 71 (1) no. 8 German Corporations Act, AktG, the Company is authorized until May 13, 2019, with the approval of the Supervisory Board, to purchase its own shares representing an amount of up to EUR 11,262,429 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. 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, 2015, about 36% of AIXTRON shares were held by private individuals, with around 64% held by institutional investors. The largest AIXTRON non-institutional shareholder was Camma B.V., Renesse (Netherlands) with 6.8% holdings in AIXTRON stock. Circa 93.2% of the shares were considered as free float according to Deutsche Börse's definition.

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.

If a change of control situation exists, the individual members of the Executive Board are entitled to terminate their service relationship with AIXTRON with a notice period of three months to the end of the month and to resign from their post on the termination date. Upon termination of the services as a result of a change of control, such member of the Executive Board will receive a severance pay in an amount equal to the fixed and variable compensation expected to be owed by the Company for the remaining term of the service contract, however, not exceeding an amount equal to twice the annual compensation. A change of control situation exists if a third party or a group of third parties who contractually combine their shares in order to act subsequently as a third party, directly or indirectly hold more than 50% of the Company's authorized capital. Apart from the above mentioned, there are no further changes of control provisions.

## 8. Responsibility Statement

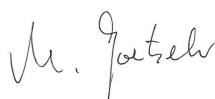
Responsibility Statement required by section 37y no. 1 of the Wertpapierhandelsgesetz (WpHG – German Securities Trading Act) in conjunction with sections 297(2) sentence 4 and 315(1) sentence 6 of the Handelsgesetzbuch (HGB – German Commercial Code) for the Consolidated Financial Statements:

"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, 2016

AIXTRON SE

Executive Board



**Martin Goetzeler**  
Chief Executive Officer



**Dr. Bernd Schulte**  
Chief Operating Officer

## Consolidated Income Statement

	Note	2015	2014	2013
<i>in EUR thousands</i>				
Revenues	3	197,756	193,797	182,863
Cost of sales		147,934	154,118	204,708
<b>Gross profit</b>		<b>49,822</b>	39,679	-21,845
Selling expenses		11,547	14,135	14,499
General administration expenses		16,279	19,341	18,223
Research and development costs	4	55,415	66,739	57,153
Other operating income	5	8,852	3,901	27,610
Other operating expenses	6	2,159	1,674	11,631
<b>Operating result</b>		<b>-26,726</b>	-58,309	-95,741
Finance Income		788	1,168	839
Finance Expense		22	0	313
<b>Net Finance Income</b>	8	<b>766</b>	1,168	526
<b>Loss before taxes</b>		<b>-25,960</b>	-57,141	-95,215
Taxes on income/loss	9	3,200	5,370	5,801
<b>Loss for the year</b>		<b>-29,160</b>	-62,511	-101,016
<b>Thereof attributable to the owners of AIXTRON SE</b>		<b>-29,160</b>	-62,511	-101,016
Basic loss per share (EUR)	21	-0.26	-0.56	-0.98
Diluted loss per share (EUR)	21	-0.26	-0.56	-0.98

See accompanying notes to consolidated financial statements.

## Consolidated Statement of other Comprehensive Income

<i>in EUR thousands</i>	Note	2015	2014	2013
<b>Loss for the year</b>		<b>-29,160</b>	<b>-62,511</b>	<b>-101,016</b>
Currency translation adjustment	20	9,117	11,815	-6,130
<b>Other comprehensive income/loss</b>		<b>9,117</b>	<b>11,815</b>	<b>-6,130</b>
<b>Total comprehensive loss for the year</b>		<b>-20,043</b>	<b>-50,696</b>	<b>-107,146</b>
Thereof attributable to the owners of AIXTRON SE		-20,043	-50,696	-107,146

See accompanying notes to consolidated financial statements.

# Consolidated Statement of Financial Position

<i>in EUR thousands</i>	Note	12/31/2015	12/31/2014
<b>Assets</b>			
Property, plant and equipment	11	81,332	77,299
Goodwill	12	75,902	64,813
Other intangible assets	12	6,392	2,458
Other non-current assets	13	630	382
Deferred tax assets	14	3,242	4,120
Tax receivables	15	59	117
<b>Total non-current assets</b>		<b>167,557</b>	<b>149,189</b>
Inventories	16	70,817	81,694
Trade receivables less allowance kEUR 2,410 (2014: kEUR 945)	17	25,956	26,324
Current tax receivables	10	2,538	543
Other current assets	17	5,691	7,723
Other financial assets	18	93,089	151,494
Cash and cash equivalents	19	116,305	116,580
<b>Total current assets</b>		<b>314,396</b>	<b>384,358</b>
<b>Total assets</b>		<b>481,953</b>	<b>533,547</b>
<b>Liabilities and shareholders' equity</b>			
Fully paid capital Number of shares: 111,581,783 (2014: 111,591,036)		111,582	111,591
Additional paid-in capital		372,636	371,781
Accumulated losses		-99,962	-70,802
Accumulated comprehensive income and expense recognised in equity		12,249	3,132
<b>Total shareholders' equity</b>	20	<b>396,505</b>	<b>415,702</b>
Other non-current payables		2,294	62
Other non-current provisions	24	1,305	1,206
Deferred tax liabilities	14	0	34
<b>Total non-current liabilities</b>		<b>3,599</b>	<b>1,302</b>
Trade payables	25	9,814	16,397
Advance payments from customers		24,011	66,928
Other current provisions	24	20,182	28,057
Other current liabilities	25	24,968	3,192
Current tax payables	10	2,874	1,969
<b>Total current liabilities</b>		<b>81,849</b>	<b>116,543</b>
<b>Total liabilities</b>		<b>85,448</b>	<b>117,845</b>
<b>Total liabilities and shareholders' equity</b>		<b>481,953</b>	<b>533,547</b>

See accompanying notes to consolidated financial statements.



# Consolidated Statement of Cash Flow

<i>in EUR thousands</i>	Note	2015	2014	2013
<b>Cashflow from operating activities</b>				
Loss for the year		-29,160	-62,511	-101.016
<b>Reconciliation between loss and cashflow from operating activities</b>				
Expense from share-based payments		991	778	981
Depreciation, amortization and impairment expense		10,348	17,000	27.812
Net result from disposal of property, plant and equipment		6	29	11
Deferred income taxes		1,110	618	643
<b>Change in</b>				
Inventories		13,031	-13,466	57.938
Trade receivables		2,030	2,738	8.500
Other assets		927	3,263	4.209
Trade payables		-7,594	1,890	4.841
Provisions and other liabilities		7,598	-3,223	2.050
Deferred revenues		0	0	-92
Non-current liabilities		61	-801	1.977
Advance payments from customers		-44,998	19,905	364
<b>Cashflow from operating activities</b>		<b>-45,650</b>	<b>-33,780</b>	<b>8.218</b>

See accompanying notes to consolidated financial statements.

<i>in EUR thousands</i>	Note	2015	2014	2013
<b>Cashflow from investing activities</b>				
Acquisition of subsidiary	38	-6,213	0	0
Capital expenditures in property, plant and equipment		-12,524	-12,622	-9.603
Capital expenditures in intangible assets		-732	-785	-465
Proceeds from disposal of fixed assets		161	146	789
Bank deposits with a maturity of more than 90 days	18	60,529	-9,933	-30.383
<b>Cashflow from investing activities</b>		<b>41,221</b>	<b>-23,194</b>	<b>-39.662</b>
<b>Cashflow from financing activities</b>				
Own shares acquired		-250	-249	0
Proceeds from issue of equity shares		105	442	101.553
<b>Cashflow from financing activities</b>		<b>-145</b>	<b>193</b>	<b>101.553</b>
Effect of changes in exchange rates on cash and cash equivalents		4,299	5,907	-2.389
Net change in cash and cash equivalents		-275	-50,874	67.720
Cash and cash equivalents at the beginning of the period		116,580	167,454	99.734
<b>Cash and cash equivalents at the end of the period</b>	19	<b>116,305</b>	<b>116,580</b>	<b>167.454</b>
Interest paid		0	-34	-3
Interest received		913	242	1.172
Income taxes paid		-2,898	-5,878	-1.860
Income taxes received		83	10,518	65

See accompanying notes to consolidated financial statements.

## Consolidated Statement of Changes in Equity

<i>in EUR thousands</i>	Sub- scribed capital under IFRS	Addi- tional paid-in- capital	Currency trans- lation	Retained Earnings/ Accumu- lated deficit	Shareholders' equity attributable to the owners of AIXTRON SE
<b>Balance at January 1, 2013</b>	100,896	278,952	-2,553	92,725	470,020
Share based payments		970			970
Issue of shares	10,639	90,920			101,559
<i>Net loss for the year</i>				-101,016	-101,016
<i>Other comprehensive income</i>			-6,130		-6,130
Total comprehensive loss for the year	0	0	-6,130	-101,016	-107,146
<b>Balance at December 31, 2013 and January 1, 2014</b>	111,535	370,842	-8,683	-8,291	465,403
Share based payments		802			802
Purchase of treasury shares	-25	-224			-249
Issue of shares	81	361			442
<i>Net loss for the year</i>				-62,511	-62,511
<i>Other comprehensive income</i>			11,815		11,815
Total comprehensive loss for the year	0	0	11,815	-62,511	-50,696
<b>Balance at December 31, 2014 and January 1, 2015</b>	111,591	371,781	3,132	-70,802	415,702
Share based payments		991			991
Purchase of treasury shares	-35	-215			-250
Issue of shares	26	79			105
<i>Net loss for the year</i>				-29,160	-29,160
<i>Other comprehensive income</i>			9,117		9,117
Total comprehensive loss for the year	0	0	9,117	-29,160	-20,043
<b>Balance at December 31, 2015</b>	111,582	372,636	12,249	-99,962	396,505

See accompanying notes to consolidated financial statements.

# Notes

## 1. GENERAL PRINCIPLES

AIXTRON SE 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 "Company") have been prepared in accordance with, and fully comply with

- International Financial Reporting Standards (IFRS), and the interpretations as published by the International Accounting Standards Board (IASB); and also
- International Financial Reporting Standards (IFRS) as adopted for use in the European Union; and also
- the requirements of Section 315a of HGB (German Commercial Law).

AIXTRON is a leading provider of deposition equipment to the Semiconductor industry. The Company'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, 2016 for approval and publication.

## 2. SIGNIFICANT ACCOUNTING POLICIES

### A COMPANIES INCLUDED IN CONSOLIDATION

Companies included in consolidation are the parent company, AIXTRON SE, and 8 companies, in which AIXTRON SE has a 100% direct shareholding or control. The balance sheet date of all consolidated companies is December 31. A list of all consolidated companies is shown in note 31.

### B BASIS OF ACCOUNTING

The consolidated financial statements are presented in Euro (EUR). The amounts are rounded to the nearest thousand Euro (kEUR). Some items in the consolidated statement of financial position and consolidated income statement have been combined under one heading to improve the clarity of presentation. Such items are disclosed and commented on individually in the notes.

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 recognized in the period in which the estimate is revised if this revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods. Judgments which have a significant effect on the Company's financial statements are described in Note 37.

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

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

## C BASES OF CONSOLIDATION

### ( I ) SUBSIDIARIES

Entities over which AIXTRON SE has control are treated as subsidiaries (see note 31). Control exists when the Company is exposed, or has the rights to, variable returns from its involvement with the subsidiary and has the ability to affect those returns through its power over the subsidiary. The financial statements 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

The Company 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 Company 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 - 33 years
Machinery and equipment	3 - 14 years
Other plant, factory and office equipment	2 - 14 years

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

## **F INTANGIBLE ASSETS**

### **( I ) GOODWILL**

Business combinations are accounted for by applying the purchase method. In respect of business combinations that have occurred since January 1, 2004, goodwill represents the difference between the fair value of the consideration for the business combination and the fair value of the net identifiable assets acquired.

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 did not capitalize such costs.

### **( III ) OTHER INTANGIBLE ASSETS**

Other intangible assets that are acquired by the Company 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	5 - 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), 'held to maturity investments', and 'loans and receivables'. The classification depends on the nature and purpose of the financial assets and is determined at the time of initial recognition.

Investments are recognized at the contract date, and are initially measured at fair value, plus transaction costs, except for those financial assets classified as at fair value through profit or loss, which are initially measured at fair value.

### **( II ) FINANCIAL ASSETS AT FVTPL**

Financial assets are classified as at FVTPL where the asset is either

- held for trading or
- it is designated as at FVTPL.

Financial assets at FVTPL are stated at fair value, with any resultant gain or loss recognized in profit or loss. The 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.

### **( III ) HELD TO MATURITY INVESTMENTS**

Investments with fixed or determinable payments and fixed maturity dates that the Company intends to and has the ability to hold to maturity are classified as held to maturity investments. Held to maturity investments are recorded at amortized cost using the effective interest rate method less any impairment, with revenue recognized on an effective yield basis.

### **( IV ) TRADE RECEIVABLES**

Trade receivables and other receivables that have fixed or determinable payments that are not quoted on an active market are classified as loans and receivables. Loans and receivables are measured at amortized cost using the effective interest rate method, less any impairment.

### **( V ) IMPAIRMENT OF FINANCIAL ASSETS**

Financial assets are assessed for indicators of impairment at each balance sheet date. Financial assets are impaired where there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows of the investment have been impacted.

The carrying amount of the financial asset is reduced by the impairment loss directly for all financial assets with the exception of trade receivables, where the carrying amount is reduced through the use of an allowance account. When a trade receivable is considered uncollectible, it is written off against the allowance account. Subsequent recoveries of amounts previously written off are credited against the allowance account. Changes in the carrying amount of the allowance account are recognized in profit or loss.

If, in a subsequent period, the amount of the impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognized, the previously recognized impairment loss is reversed through profit or loss to the extent that the carrying amount of the investment at the date the impairment is reversed does not exceed what the amortized cost would have been had the impairment not been recognized.

### **( VI ) 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.

### **( VII ) EQUITY INSTRUMENTS**

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

### **( VIII ) FINANCIAL LIABILITIES**

Financial liabilities are classified as either financial liabilities "at FVTPL" or "other financial liabilities".

### **( IX ) FINANCIAL LIABILITIES AT FVTPL**

Financial liabilities are classified as at FVTPL where the liability is either

- held for trading or
- it is designated as at FVTPL.

Financial liabilities at FVTPL are stated at fair value, with any resultant gain or loss recognized in profit or loss. The 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.

## **( X ) OTHER FINANCIAL LIABILITIES**

Other financial liabilities, including borrowings, are initially measured at fair value, net of transaction costs. Other financial liabilities are subsequently measured at amortized cost using the effective interest rate method, with interest expense recognized on an effective yield basis.

## **( XI ) DERIVATIVE FINANCIAL INSTRUMENTS AND HEDGE ACCOUNTING**

The Company's activities expose it to the financial risks of changes in foreign exchange currency rates (see note 26). The Company uses foreign exchange forward contracts to hedge these exposures. The Company 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.

Changes in the fair value of derivative financial instruments that are designated as effective hedges of future cash flows are recognized directly in equity and the ineffective portion is recognized immediately in the income statement.

Changes in fair value of derivative financial instruments that do not qualify for hedge accounting are recognized in the income statement as they arise.

Hedge accounting is discontinued when the derivative financial instrument expires or is sold, terminated, or exercised, or no longer qualifies for hedge accounting. At that time, any cumulative gain or loss on the derivative financial instrument recognized in equity is retained in equity until the forecasted transaction occurs. If a hedged transaction is no longer expected to occur, the net cumulative gain or loss recognized in equity is transferred to net profit or loss for the period.

## **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 Company's estimated forecast of product demand and production requirement or historical usage. When the estimated future demand is less than the inventory, the Company 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 cost to sell or value in use of the cash-generating unit.

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 company 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 either the fair value that would be obtainable from a sale in an arm's length transaction, or 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 (see note 21) 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 and convertible bonds were converted, unless such conversion 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**

The stock option programs allows members of the Executive Board, management and employees of the Company to acquire shares/ADS (see note 23) of the Company. These stock option programs are accounted for by AIXTRON according to IFRS 2. The fair value of options granted after November 7, 2002 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. In the calculation of the personnel expense options forfeited are taken into account.

## **M PROVISIONS**

A provision is recognized when the Company 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 Company normally offers one, occasionally 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 Company 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 Company's warranty liability include the historical and anticipated rates of warranty claims and cost per claim.

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

The Company has reclassified warranty expenses from Selling Expenses to Cost of Sales. This classification is the usual practice in the semiconductor equipment industry. Selling expenses have been reduced by kEUR 1,836 in 2014 (2013 kEUR 14,457) and Cost of Sales increased by the same amounts.

### **( II ) ONEROUS CONTRACTS**

A provision for onerous contracts is recognized when the expected economic benefits to be derived by the Company 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**

Revenue is generated from the sale and installation of equipment, spare parts and maintenance services and is recognized when the Company satisfies a performance obligation by transferring 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 a customer acceptance test at AIXTRON's production facility. After successful completion of this test, the equipment is dismantled and packaged for shipment. Upon arrival at the customer site the equipment is reassembled and installed, which is a service generally performed by AIXTRON engineers. AIXTRON gives no general rights of return, discounts, credits or other sales incentives within its terms of sale. However, occasionally some customers of AIXTRON have specifically negotiated terms and conditions of business.

Revenues from the sale of products that have been demonstrated to meet product specification requirements are recognized upon shipment to the customer, if a full customer acceptance test has been successfully completed at the AIXTRON production facility and the significant risks and rewards of ownership has passed to the customer.

Revenue relating to the installation of the equipment at the customer's site is recognized when the installation is completed and the final customer acceptance has been confirmed.

The portion of the contract revenue related to equipment deferred until completion of the installation services is determined based on either the fair value of the installation services or, if the company determines that there may be a risk that the economic benefits of installation services may not flow to the Company, 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.

Revenue related to products where meeting the product specification requirements has not yet been demonstrated, or where specific rights of return have been negotiated, is recognized only upon final customer acceptance.

Revenue on the sale of spare parts is recognized when title and risk passes to the customer, generally upon shipment. Revenue from maintenance services is recognized as the services are provided.

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 company expects to be entitled in exchange for transferring the goods or services to the customer. The company uses a combination of methods such as an estimated cost plus margin approach, and allocating discounts proportionately to each performance obligation when determining the consideration for each performance obligation.

## **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 ) OPERATING LEASE PAYMENTS**

Payments made under operating leases are recognized as expense on a straight-line basis over the term of the lease.

## **P OTHER OPERATING INCOME**

### **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.

## **Q TAX**

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

Deferred tax assets and liabilities are recorded for all 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.

A deferred tax asset is recognized only to the extent that it is probable that future taxable profits can be set off against tax credits 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.

## **R SEGMENT REPORTING**

An operating segment is a component of the Company that is engaged in business activities and whose operating results are reviewed regularly by the Chief Operating Decision Maker, which the Company 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 inflows and cash outflows from taxes and interest are included in cash flows from operating activities.

## **T RECENTLY ISSUED ACCOUNTING STANDARDS**

In the current year, the following new and revised standards have been adopted. Their adoption has not had any significant impact on the amounts reported in these financial statements.

Amendments to IAS 19 Defined Benefit Plans: Employee Contributions

The Group has no defined benefit plans.

Annual Improvements to IFRSs 2010-2012 Cycle and 2011 – 2013 Cycle

The majority of the amendments are clarifications rather than substantive changes to existing requirements. The amendments to IFRS 8 Operating Segments – Aggregation of operating segments and IAS 24 Related Party Disclosures – Key management personnel represent changes to existing requirements. Neither of these changes has had an effect on the reported results because the company does not aggregate operating segments and does not use management entities to provide key management services.

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 9	Financial Instruments
IFRS 15	Revenue from Contracts with Customers
IFRS 11 (amendments)	Accounting for Interests in Joint Operations
IAS 16 and IAS 41 (amendments)	Agriculture: Bearer Plants
IAS 1 (amendments)	Disclosure initiative
IAS 16 and IAS 38 (amendments)	Clarification of Acceptable Methods of Depreciation and Amortization
IAS 27 (amendments)	Equity method in Separate Financial Statements
IFRS 10 and IAS 28 (amendments)	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture
IFRS 10, IFRS 12 and IAS 28 (amendments)	Investment entities: Applying the Consolidation Exemption.
Annual Improvement to IFRSs: 2012 - 2014	Amendments to various IFRSs Cycle

The company 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.

The Executive Board regularly reviews 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 company'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).

The company values the revenue deferred for 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 contracts where 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

<i>in EUR thousands</i>	Note	2015	2014	2013
Equipment revenues		150,971	148,543	138.044
Spares and service revenue		46,785	45,254	44.819
<b>Revenue from external customers</b>		<b>197,756</b>	<b>193,797</b>	<b>182.863</b>
Inventories recognized as an expense	16	95,143	134,940	117.900
Reversals of inventory provisions	16	-10,372	-32,018	0
Obsolescence and valuation allowance expense for inventories	16	4,141	3,016	17.885
Personnel expense	7	63,029	66,409	67.548
Depreciation	11	9,146	15,591	16.314
Impairment	6 / 11	0	0	9.888
Amortization	12	1,430	1,409	1.609
Other expenses		71,521	65,384	74.864
Foreign exchange losses	5	-704	1,276	206
Other operating income	5	-8,852	-3,901	-27.610
<b>Segment loss</b>		<b>-26,726</b>	<b>-58,309</b>	<b>-95.741</b>
Finance income	8	788	1,168	839
<b>Finance expense</b>	<b>8</b>	<b>-22</b>	<b>0</b>	<b>-313</b>
<b>Loss before tax</b>		<b>-25,960</b>	<b>-57,141</b>	<b>-95.215</b>

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.

## Segment assets and liabilities

<i>in EUR thousands</i>	12/31/2015	12/31/2014
Semi-conductor equipment segment assets	266,720	260,693
Unallocated assets	215,233	272,854
<b>Total Group assets</b>	<b>481,953</b>	<b>533,547</b>

<i>in EUR thousands</i>	12/31/2015	12/31/2014
Semi-conductor equipment segment liabilities	82,574	115,842
Unallocated liabilities	2,874	2,003
<b>Total Group liabilities</b>	<b>85,448</b>	<b>117,845</b>

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 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 assets increased by kEUR 248 during 2015 (decreased by kEUR 525 in 2014).

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.

<i>in EUR thousands</i>	<b>2015</b>	<b>2014</b>	<b>2013</b>
Asia	118,376	160,240	141,785
Europe	35,772	25,189	24,213
Americas	43,608	8,368	16,865
<b>Total</b>	<b>197,756</b>	<b>193,797</b>	<b>182,863</b>

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

<i>in EUR thousands</i>	<b>2015</b>	<b>2014</b>	<b>2013</b>
Germany	6,705	6,621	7,210
USA	41,937	8,162	14,805
Korea	26,507	18,641	30,578
China	52,571	106,568	56,788
Taiwan	27,375	20,580	43,177

Revenues from all foreign countries outside of Germany were kEUR 191,051, kEUR 187,176 and kEUR 175,653 for the years ended December 31, 2015, 2014 and 2013 respectively.

In 2015 sales to one customer were 18.1% of Group revenue, with no other customer exceeding 10%. Sales to four customers in 2014 exceeded 10% of Group revenue, representing 12.2%, 10.9%, 10.4% and 10.1% respectively. In 2013 sales to one customer amounted to 14.4% of Group revenues.

<i>in EUR thousands</i>	<b>12/31/2015</b>	<b>12/31/2014</b>
Asia	3,837	2,591
Europe excluding Germany	13,093	12,619
Germany	124,954	127,536
USA	22,372	2,205
<b>Total Group non current assets</b>	<b>164,256</b>	<b>144,951</b>

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 55,415, kEUR 66,739 and kEUR 57,153 for the years ended December 31, 2015, 2014 and 2013 respectively.

After deducting project funding received and not repayable, net expenses for research and development were kEUR 52,409, kEUR 64,944 and kEUR 54,627 for the years ended December 31, 2015, 2014 and 2013 respectively.

## 5. OTHER OPERATING INCOME

<i>in EUR thousands</i>	2015	2014	2013
Research and development funding	3,006	1,795	2,526
Income from resolved contract obligations	1,904	0	225
Income from the reversal of provisions and the write-off of debts	0	4	33
Reversal of impairment of building	225	0	0
Gain from the disposal of fixed assets	3	0	43
Insurance recoveries	0	52	22,638
Foreign exchange gains	3,389	979	746
Other	325	1,071	1,399
	<b>8,852</b>	<b>3,901</b>	<b>27,610</b>

In June 2013 inventory belonging to AIXTRON with an original cost of kEUR 22,284 was destroyed by a fire in a third party warehouse in the United Kingdom. The inventory valuation had been written down by a provision of kEUR 17,127 to a net amount of kEUR 5,157. Insurance proceeds related to the incident amounting to kEUR 22,479 are included within Insurance recoveries in Other operating income. The destroyed inventory, net of the provision, is expensed in cost of sales.

The total amount of exchange gains and losses (see also note 6) recognized in profit or loss was a gain of kEUR 2,685, (2014 loss kEUR 297; 2013 gain kEUR 540).

<i>in EUR thousands</i>	2015	2014	2013
Foreign exchange gains	3,389	979	746
Foreign exchange losses (see note 6)	-704	-1,276	-206
<b>Net foreign exchange gains (losses)</b>	<b>2,685</b>	<b>-297</b>	<b>540</b>
Other foreign exchange gains (losses)	2,685	-297	540
<b>Net foreign exchange gains (losses)</b>	<b>2,685</b>	<b>-297</b>	<b>540</b>

## 6. OTHER OPERATING EXPENSES

<i>in EUR thousands</i>	2015	2014	2013
Foreign exchange losses	704	1,276	206
Impairment of building	0	0	9,888
Losses from the disposal of fixed assets	8	29	54
Additions to allowances for receivables or write-off of receivables	1,439	327	142
Other	8	42	1,341
	<b>2,159</b>	<b>1,674</b>	<b>11,631</b>

## 7. PERSONNEL EXPENSE

<i>in EUR thousands</i>	2015	2014	2013
Payroll	54,033	57,403	58,783
Social insurance contributions	6,731	6,560	6,444
Expense for defined contribution plans	1,274	1,667	1,340
Share based payments	991	779	981
	<b>63,029</b>	<b>66,409</b>	<b>67,548</b>

Personnel expenses include restructuring costs related to reductions in personnel in a number of the Group's activities. Costs are included in expenses as set out in the table below.

<i>in EUR thousands</i>	2015	2014	2013
Cost of sales	0	729	2,096
Selling expenses	0	424	525
General administration expenses	0	577	1,680
Research and development costs	0	4,086	930
	<b>0</b>	<b>5,816</b>	<b>5,231</b>

## 8. NET FINANCE INCOME

<i>in EUR thousands</i>	2015	2014	2013
<b>Interest income from financial assets</b>			
On financial assets measured at amortised cost	788	1,168	839
<b>Interest expense from financial liabilities</b>			
On financial liabilities not at fair value through profit or loss	-22	0	-313
<b>Net finance income</b>	<b>766</b>	<b>1,168</b>	<b>526</b>

Interest income relates to interest on cash and cash equivalents and held to maturity investments.

## 9. INCOME TAX EXPENSE/BENEFIT

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

<i>in EUR thousands</i>	2015	2014	2013
<b>Current tax expense (+)/current tax income (-)</b>			
for current year	2,164	4,093	5,697
for prior years	-175	719	-539
<b>Total current tax expense/income</b>	<b>1,989</b>	<b>4,812</b>	<b>5,158</b>
<b>Deferred tax expense (+)/deferred tax income (-)</b>			
from temporary differences	1,157	989	55
Income/expense from changes in local tax rate	54	0	4
from reversals and write-downs	0	-431	584
<b>Total deferred tax expense</b>	<b>1,211</b>	<b>558</b>	<b>643</b>
<b>Taxes on income/loss</b>	<b>3,200</b>	<b>5,370</b>	<b>5,801</b>

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

<i>in EUR thousands</i>	2015	2014	2013
<b>Income/loss before income taxes</b>			
Germany	-30,479	-61,568	-104,284
Outside Germany	4,519	4,427	9,069
<b>Total</b>	<b>-25,960</b>	<b>-57,141</b>	<b>-95,215</b>
<b>Income tax expense</b>			
Germany	2,192	1,249	353
Outside Germany	1,008	4,121	5,448
<b>Total</b>	<b>3,200</b>	<b>5,370</b>	<b>5,801</b>

The Company's effective tax rate is different from the German statutory tax rate of 32.80% (2014: 30.55%; 2013: 30.54%) 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:



<i>in EUR thousands</i>	<b>2015</b>	<b>2014</b>	<b>2013</b>
<b>Net result before taxes</b>	<b>-25,960</b>	<b>-57,141</b>	<b>-95,215</b>
Income tax expense/benefit (German tax rate)	<b>-7,928</b>	-17,451	-29,079
Effect from differences to foreign tax rates	<b>-833</b>	-2,291	-1,768
Non-deductible expenses	<b>765</b>	1,848	338
Tax losses not recognized as assets	<b>13,798</b>	27,277	36,089
Recognition/derecognition of deferred tax assets	<b>348</b>	-431	662
Effect from changes in local tax rate	<b>54</b>	0	4
Effect of the use of loss carryforwards	<b>-4,113</b>	-1,390	-1,752
Effect of permanent differences	<b>-63</b>	-24	-25
Other	<b>1,172</b>	-2,168	1,332
<b>Taxes on income/loss</b>	<b>3,200</b>	<b>5,370</b>	<b>5,801</b>
<b>Effective tax rate</b>	<b>-12.3%</b>	<b>-9.4%</b>	<b>-6.1%</b>

## 10. CURRENT TAX RECEIVABLE AND PAYABLE

As of December 31, 2015 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 2,538 (2014: kEUR 543) and kEUR 2,874 (2014: kEUR 1,969) respectively.

## 11. PROPERTY, PLANT AND EQUIPMENT

<i>in EUR thousands</i>	Land and buildings	Technical equipment and machinery	Other plant, factory and office equipment	Assets under construction	Total
<b>Cost</b>					
Balance at January 1, 2014	63,539	78,715	19,755	4,291	<b>166,300</b>
Additions	428	2,894	644	8,681	<b>12,647</b>
Disposals	29	504	2,172	47	<b>2,752</b>
Transfers	119	3,200	130	-3,474	<b>-25</b>
Effect of movements in exchange rates	311	2,452	271	153	<b>3,187</b>
Balance at December 31, 2014	<b>64,368</b>	<b>86,757</b>	<b>18,628</b>	<b>9,604</b>	<b>179,357</b>
Balance at January 1, 2015	64,368	86,757	18,628	9,604	<b>179,357</b>
Additions	344	10,935	416	829	<b>12,524</b>
Additions from business combinations	0	52	0	0	<b>52</b>
Disposals	76	8,572	2,918	0	<b>11,566</b>
Transfers	17	4,355	139	-4,521	<b>-10</b>
Effect of movements in exchange rates	304	2,346	297	293	<b>3,240</b>
Balance at December 31, 2015	<b>64,957</b>	<b>95,873</b>	<b>16,562</b>	<b>6,205</b>	<b>183,597</b>
<b>Depreciation and impairment losses</b>					
Balance at January 1, 2014	20,903	51,647	13,884	0	<b>86,434</b>
Depreciation charge for the year	1,940	11,762	1,889	0	<b>15,591</b>
Disposals	16	400	2,146	0	<b>2,562</b>
Effect of movements in exchange rates	204	2,151	240	0	<b>2,595</b>
Balance at December 31, 2014	<b>23,031</b>	<b>65,160</b>	<b>13,867</b>	<b>0</b>	<b>102,058</b>
Balance at January 1, 2015	23,031	65,160	13,867	0	<b>102,058</b>
Depreciation charge for the year	1,847	5,391	1,566	342	<b>9,146</b>
Reversal of impairment	225	0	0	0	<b>225</b>
Disposals	76	8,434	2,896	0	<b>11,406</b>
Effect of movements in exchange rates	208	2,250	244	-10	<b>2,692</b>
Balance at December 31, 2015	<b>24,785</b>	<b>64,367</b>	<b>12,781</b>	<b>332</b>	<b>102,265</b>
<b>Carrying amounts</b>					
At January 1, 2014	42,636	27,068	5,871	4,291	<b>79,866</b>
At December 31, 2014	41,337	21,597	4,761	9,604	<b>77,299</b>
At January 1, 2015	<b>41,337</b>	<b>21,597</b>	<b>4,761</b>	<b>9,604</b>	<b>77,299</b>
At December 31, 2015	<b>40,172</b>	<b>31,506</b>	<b>3,781</b>	<b>5,873</b>	<b>81,332</b>

## DEPRECIATION

Depreciation expense amounted to kEUR 9,146 for 2015 and was kEUR 15,591 and kEUR 16,314 for 2014 and 2013 respectively.

During each financial year, asset useful lives are reviewed in accordance with IAS 16. The effect of the changes in assets useful lives has been to increase the depreciation expense in 2015 by kEUR nil (2014 kEUR 561, 2013 kEUR 2,160) compared with the depreciation which would have occurred had the asset useful lives remained unchanged. The changes relate to test equipment which is no longer used.

## IMPAIRMENTS

In 2015 and 2014 there were no impairments of Fixed Assets.

In 2013 impairment charges of kEUR 9,888 were made in respect of a building and specific equipment contained in that building in Herzogenrath, Germany. The impairment losses are recorded in Other operating expenses in the Income Statement, within AIXTRON's one operating segment, and are also shown in the table above.

The company decided to relocate its main activities from its Kaiserstrasse facility in Herzogenrath to a purpose built building nearby. Consequently, the recoverable amount of the Kaiserstrasse facility was re-assessed as its fair value less costs of disposal, which was kEUR 5,500.

The valuation was carried out by a professionally qualified valuer (CIS Immobiliengutachter HypZert fuer finanzwirtschaftliche Zwecke) and is level 2 in the hierarchy of valuations in IFRS 13. The valuation was based on observable inputs from comparable property transactions. The valuation given of the building in 2013 was kEUR 5,670 and an allowance for the costs of disposal of kEUR 170 has been made against this.

The valuation was updated on the same basis as at the end of 2015. The building is now valued at kEUR 5,070 less costs of disposal of kEUR 152. Other operating income includes a reversal of impairment of kEUR 225 resulting from this updated valuation. The building is expected to be put on the market for sale in the near future.

## ASSETS UNDER CONSTRUCTION

Assets under construction relates mainly to self-built systems for development laboratories in 2015 and 2014.

## 12. INTANGIBLE ASSETS

<i>in EUR thousands</i>	<b>Goodwill</b>	<b>Other intangible assets</b>	<b>Total</b>
<b>Cost</b>			
Balance at January 1, 2014	81,504	36,833	<b>118,337</b>
Acquisitions	0	759	<b>759</b>
Disposals	0	1,990	<b>1,990</b>
Transfers	0	25	<b>25</b>
Effect of movements in exchange rates	982	2,620	<b>3,602</b>
Balance at December 31, 2014	<b>82,486</b>	<b>38,247</b>	<b>120,733</b>
Balance at January 1, 2015	82,486	38,247	<b>120,733</b>
Acquisitions	0	696	<b>696</b>
Additions from business combinations	10,515	4,655	<b>15,170</b>
Transfers	0	10	<b>10</b>
Effect of movements in exchange rates	867	2,604	<b>3,471</b>
Balance at December 31, 2015	<b>93,868</b>	<b>46,212</b>	<b>140,080</b>
<b>Amortisation and impairment losses</b>			
Balance at January 1, 2014	17,389	33,775	<b>51,164</b>
Amortisation charge for the year	0	1,409	<b>1,409</b>
Disposals	0	1,990	<b>1,990</b>
Effect of movements in exchange rates	284	2,595	<b>2,879</b>
Balance at December 31, 2014	<b>17,673</b>	<b>35,789</b>	<b>53,462</b>
Balance at January 1, 2015	17,673	35,789	<b>53,462</b>
Amortisation charge for the year	0	1,430	<b>1,430</b>
Effect of movements in exchange rates	293	2,601	<b>2,894</b>
Balance at December 31, 2015	<b>17,966</b>	<b>39,820</b>	<b>57,786</b>
<b>Carrying amounts</b>			
At January 1, 2014	64,115	3,058	<b>67,173</b>
At December 31, 2014	64,813	2,458	<b>67,271</b>
At January 1, 2015	<b>64,813</b>	<b>2,458</b>	<b>67,271</b>
At December 31, 2015	<b>75,902</b>	<b>6,392</b>	<b>82,294</b>

## AMORTIZATION AND IMPAIRMENT EXPENSES FOR OTHER INTANGIBLE ASSETS

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

<i>in EUR thousands</i>	<b>2015</b>	<b>2014</b>	<b>2013</b>
	<i>Amortization</i>	<i>Amortization</i>	<i>Amortization</i>
Cost of sales	2	0	0
Selling expenses	0	1	1
General administration expenses	861	1,261	1,461
Research and development costs	570	147	147
	<b>1,433</b>	<b>1,409</b>	<b>1,609</b>

In 2015, 2014 and 2013, 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:

<i>in EUR thousands</i>	
2016	1,274
2017	975
2018	815
2019	718
2020	580
After 2020	2,030

The actual amortization can differ from the expected amortization.

## IMPAIRMENT OF GOODWILL

At the end of 2015 the Group assessed the recoverable amount of goodwill and determined that no impairment loss had to be recognized (2014: kEUR 0; 2013 kEUR 0).

The carrying value of goodwill was kEUR 75,902 (2014 kEUR 64,813; 2013 kEUR 64,115).

As at the end of 2015 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, 2015 the market capitalization of AIXTRON was Euro 460.6 million, based on a share price of Euro 4.128 and issued shares (excluding Treasury Shares) of 111,581,783. 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.

<i>Euro millions</i>	<b>Impairment Test 2015</b>	<b>Impairment Test 2014</b>	<b>Sensitivity Analysis 2015</b>	<b>Sensitivity Analysis 2015</b>
			<b>No control premium</b>	<b>20% Control premium</b>
Market capitalisation as of December 31	460.6	1,045.6	402.5	335.5
Costs to sell in percentage	1.50%	1.50%	1.50%	1.50%
Costs to sell	-6.9	-15.7	-6.0	-5.0
Market capitalisation less cost to sell	453.7	1,029.9	396.5	330.4
Control premium in percentage	20.00%	20.00%	0.00%	20.00%
Control premium	90.7	206.0	0.0	66.1
Market capitalisation and control premium less cost to sell	544.4	1,235.9	396.5	396.5
Net debt	-209.4	-268.1	-209.4	-209.4
Tax assets	-3.0	-2.8	-3.0	-3.0
Fair value less costs to sell of CGU	332.0	965.0	184.1	184.1
Carrying amount of the CGU	184.1	144.8	184.1	184.1
Surplus of fair value less cost to sell over carrying amount	147.9	820.2	0.0	0.0
Surplus of fair value less cost to sell over carrying amount as a percentage	80%	566%	0%	0%

The fair value less costs to sell, which is the recoverable amount, exceeds the carrying amount of the CGU by 80% (2014 566%).

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 13% (2014: 60%) to EUR 402.5 million; EUR 3.61 per share (2014: EUR 422.0 million EUR 3.78 per share).

A sensitivity analysis of the impairment test in which a control premium of 20% or 40% was used would show that the carrying amount of the CGU would equate with the recoverable amount should the share price be EUR 3.01 or EUR 2.58 respectively (2014: 20%, EUR 3.15; 40%, EUR 2.70).

### 13. OTHER NON-CURRENT ASSETS

Other non-current assets totaling kEUR 630 (2014: kEUR 382) include mainly rent deposits for buildings.

### 14. DEFERRED TAX ASSETS AND LIABILITIES

#### RECOGNIZED DEFERRED TAX ASSETS AND LIABILITIES

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 1,542 (2014: kEUR 2,281).

Deferred taxes for tax losses in the amount of kEUR 161,068 (2014: kEUR 129,544) and on deductible temporary differences in the amount of kEUR 19,555 (2014: kEUR 12,164) were not recognized. Tax losses in the amount of kEUR 139,853 can be used indefinitely (2014: kEUR 110,550), kEUR nil expire by 2020 (2014: kEUR nil, by 2019) and kEUR 21,215 expire after 2020 (2014: kEUR 18,994 after 2019).

The following table shows the development of temporary differences during the financial year:

<i>in EUR thousands</i>	Assets		Liabilities		Net	
	2015	2014	2015	2014	2015	2014
Property, plant and equipment	185	624	0	0	185	624
Trade receivables	1	-29	0	0	1	-29
Inventories	473	939	0	0	473	939
Employee benefits	257	318	0	0	257	318
Currency translation	9	-37	0	0	9	-37
Provisions and other liabilities	74	80	0	0	74	80
Other	-35	-56	0	-34	-35	-90
Tax losses	2,278	2,281	0	0	2,278	2,281
<b>Deferred tax assets (+) liabilities (-)</b>	<b>3,242</b>	<b>4,120</b>	<b>0</b>	<b>-34</b>	<b>3,242</b>	<b>4,086</b>

<i>in EUR thousands</i>	Balance at January 1, 2015	Recognized in income statement	Directly recognized in Other Comprehensive Income	Balance at December 31, 2015
Property, plant and equipment	624	-439	0	185
Trade receivables	-29	30	0	1
Inventories	939	-466	0	473
Employee benefits	318	-61	0	257
Currency translation	-37	-320	366	9
Provisions and other liabilities	80	-6	0	74
Other	-90	55	0	-35
Tax losses	2,281	-3	0	2,278
	<b>4,086</b>	<b>-1,210</b>	<b>366</b>	<b>3,242</b>

<i>in EUR thousands</i>	Balance at January 1, 2014	Recognized in income statement	Directly recognized in Other Comprehensive Income	Balance at December 31, 2014
Property, plant and equipment	124	500	0	624
Trade receivables	693	-722	0	-29
Inventories	959	-20	0	939
Employee benefits	209	109	0	318
Currency translation	29	-397	331	-37
Provisions and other liabilities	53	27	0	80
Intangible assets	-711	711	0	0
Other	-371	281	0	-90
Tax losses	3,328	-1,047	0	2,281
	<b>4,313</b>	<b>-558</b>	<b>331</b>	<b>4,086</b>

## 15. LONG TERM RECEIVABLE FROM CURRENT TAX

Long term receivables from current tax consist of a receivable from corporate tax which will be refunded over a period of up to five years. The amount included in long term receivables is for the amount receivable after more than one year from the balance sheet date.

## 16. INVENTORIES

<i>in EUR thousands</i>	2015	2014
Raw materials and supplies	37,259	32,019
Work in process	20,615	42,269
Inventories at customers' locations	12,943	7,406
	<b>70,817</b>	<b>81,694</b>

<i>in EUR thousands</i>	Note	2015	2014
Inventories recognised as an expense during the period	3	95,143	134,940
Reversals of write-downs recognised during the year	3	-10,372	-32,018
		<b>84,771</b>	<b>102,922</b>
Write-down of inventories during the year	3	4,141	3,016
Inventories measured at net realisable value		10,312	5,665
Carrying amount of inventories pledged as security for liabilities		0	0

The reversal of write-downs recognized during the year in both 2014 and 2015 mainly relates to inventories which had been written down to their net realizable value and has subsequently been sold.

## 17. TRADE RECEIVABLES AND OTHER CURRENT ASSETS

### Current Assets

<i>in EUR thousands</i>	2015	2014
Trade receivables	28,366	27,269
Allowances for doubtful accounts	-2,410	-945
<b>Trade receivables - net</b>	<b>25,956</b>	<b>26,324</b>
Prepaid expenses	1,551	1,152
Reimbursement of research and development costs	1,310	1,485
Advance payments to suppliers	919	2,010
VAT recoverable	1,046	1,865
Other assets	865	1,211
<b>Total other current assets</b>	<b>5,691</b>	<b>7,723</b>
	<b>31,647</b>	<b>34,047</b>



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:

<i>in EUR thousands</i>	<b>2015</b>	<b>2014</b>
Allowance at January 1	945	1,821
Translation adjustments	16	21
Impairment losses recognised	1,509	2
Used	0	-866
Impairment losses reversed	-60	-33
<b>Allowance at December 31</b>	<b>2,410</b>	<b>945</b>

#### Ageing of past due but not impaired receivables

<i>in EUR thousands</i>	<b>2015</b>	<b>2014</b>
1-90 days past due	2,534	1,891
More than 90 days past due	3,200	2,084

Due to the worldwide spread of risks, there is a diversification of the credit risk for trade receivables. Generally, the Company demands no securities for financial assets. In accordance with usual business practice for capital equipment however, the Company 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 one customer accounted for 22% of the company's net trade receivables, no other single customer accounted for more than 10% of trade receivables. In 2014 four customers each accounted for more than 10% of the company's net trade receivables, representing respectively 30.4%, 16.2%, 11.5% and 10.5% of trade receivables. In determining concentrations of credit risk the company defines counterparties as having similar characteristics if they are connected entities.

Included in the Company's trade receivable balance are debtors with a carrying amount of kEUR 5,734 (2014: kEUR 3,975) which are past due at the reporting date for which the Company has not provided. As there has not been a significant change in credit quality, and although the company has no collateral, the amounts are still considered recoverable.

In determining the financial assets which may be individually impaired the Company 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.

## 18. OTHER FINANCIAL ASSETS

Other financial assets of kEUR 93,089 (2014: kEUR 151,494) are fixed deposits with banks with a maturity of more than three months at inception of the contracts.

An analysis of the maturities at December 31, 2015 and 2014 is as follows:

<i>In EUR thousands</i>	2015	2014
Maturity up to 180 days	93,089	111,494
Maturity 181 days to 365 days	0	40,000
	<b>93,089</b>	<b>151,494</b>

## 19. CASH AND CASH EQUIVALENTS

<i>in EUR thousands</i>	2015	2014
Cash-in-hand	5	3
Bank balances	116,300	116,577
Cash and Cash equivalents	<b>116,305</b>	<b>116,580</b>

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 (2014: kEUR 0) at December 31, 2015.

## 20. SHAREHOLDERS' EQUITY

### FULLY PAID CAPITAL

	2015	2014
<b>January 1</b>	<b>112,694,555</b>	<b>112,613,445</b>
Shares issued during the year	25,800	81,110
Issued and fully paid capital at December 31, including Treasury Shares	112,720,355	112,694,555
Treasury shares	-1,138,572	-1,103,519
<b>Issued and fully paid share capital at December 31 under IFRS</b>	<b>111,581,783</b>	<b>111,591,036</b>

The share capital of the company consists of no-par value shares and was fully paid-up during 2015 and 2014. 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 219,214,144 (2014: 219,214,144).

### 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 2015 and 2014 all shares issued were the results of stock options being exercised.

The Company 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 Company considers its capital resources to be adequate.

## INCOME AND EXPENSES RECOGNIZED IN OTHER COMPREHENSIVE INCOME

<i>in EUR thousands</i>	Currency translation	Total
<b>Balance at December 31, 2012</b>	<b>-2,553</b>	<b>-2,553</b>
Change in currency translation	-6,130	-6,130
<b>Balance at December 31, 2013</b>	<b>-8,683</b>	<b>-8,683</b>
Change in currency translation	11,815	11,815
<b>Balance at December 31, 2014</b>	<b>3,132</b>	<b>3,132</b>
Change in currency translation	9,117	9,117
<b>Balance at December 31, 2015</b>	<b>12,249</b>	<b>12,249</b>

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.

## 21. LOSS PER SHARE

### BASIC LOSS PER SHARE

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

### DILUTED LOSS PER SHARE

The calculation of the diluted loss 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.

	2015	2014	2013
<b>Loss per share</b>			
Net loss attributable to the shareholders of AIXTRON SE in kEUR	-29,160	-62,511	-101,016
Weighted average number of common shares and ADS for the purpose of Earnings/Loss Per Share	111,583,480	112,107,905	103,016,618
<b>Basic loss per share (EUR)</b>	<b>-0.26</b>	<b>-0.56</b>	<b>-0.98</b>
<b>Loss per share (diluted)</b>			
Net profit/loss attributable to the shareholders of AIXTRON SE in kEUR	-29,160	-62,511	-101,016
Weighted average number of common shares and ADS for the purpose of Earnings/Loss Per Share	111,583,480	112,107,905	103,016,618
Dilutive effects of share options	0	0	0
Weighted average number of common shares and ADS for the purpose of Earnings/Loss Per Share (diluted)	111,583,480	112,107,905	103,016,618
<b>Diluted loss per share (EUR)</b>	<b>-0.26</b>	<b>-0.56</b>	<b>-0.98</b>

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

<i>Number of shares</i>	2015	2014	2013
Share options	2,891,815	3,521,639	3,289,025

## 22. EMPLOYEE BENEFITS

### DEFINED CONTRIBUTION PLAN

The Company grants retirement benefits to qualified employees through various defined contribution pension plans. The expenses incurred for defined contribution plans mainly arise from two pension plans in subsidiaries. The contributions made by the company do not exceed 10% of qualified employees' base salaries. In 2015 the expense recognized for defined contribution plans amounted to kEUR 1,274 (2014: kEUR 1,667, 2013: kEUR 1,340).

In addition to the Company's retirement benefit plans, the company is required to make contributions to state retirement benefit schemes in most of the countries in which it operates. The company 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.

## 23. SHARE-BASED PAYMENT

The Company has different fixed option plans which reserve shares of common stock and AIXTRON American Depository Shares (ADS) for issuance to members of the Executive Board, management and employees of the Company. Each AIXTRON ADS represents the beneficial ownership in one AIXTRON common share. The following is a description of these plans:

### AIXTRON stock option plan 1999

In May 1999, options were authorized to purchase 3,000,000 shares of common stock (after giving effect to capital increases, stock splits, and the EURO conversion). The stock options can be exercised when 15 years have elapsed since their issue. Under the terms of the 1999 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. Under this plan options for the purchase of 644,000 common shares were outstanding as of December 31, 2015.

### AIXTRON STOCK OPTION PLAN 2002

In May 2002, options were authorized to purchase 3,511,495 shares of common stock. The options are exercisable in equal instalments of 25% per year after the second anniversary of the date of grant, subject to certain conditions. Options expire ten years from date of grant. Under the terms of the 2002 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 20%. No grants were issued with a strike price less than fair market value. Options to purchase 108,750 common shares were outstanding under this plan as of December 31, 2015.

### 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 1,113,665 common shares were outstanding under this plan as of December 31, 2015.

### 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 1,025,400 were outstanding under this plan as of December 31, 2015.

### GENUS STOCK OPTION PLAN 2000

With the acquisition of Genus, Inc. the company adopted the Genus Incentive Stock Option Plan 2000. Under this plan at the date of acquisition options were authorized to purchase the equivalent of 2,013,487 AIXTRON ADS. Options granted before October 3, 2003 vest over a three-year-period and expire five years from the date of grant. Options granted after October 3, 2003 vest over a four-year-period and expire ten years from the date of grant.

No options to purchase AIXTRON ADS remain outstanding under this plan as of December 31, 2015.

## SUMMARY OF STOCK OPTION TRANSACTIONS

AIXTRON share options	Number of shares	Average exercise price (EUR)	Number of shares	Average exercise price (EUR)
Balance at January 1	3,521,639	21.02	3,283,435	23.47
Granted during the year	0	0	1,150,400	13.19
Exercised during the year	25,800	4.08	81,110	5.53
Forfeited during the year	604,024	42.61	831,086	21.35
Outstanding at December 31	2,891,815	16.67	3,521,639	21.02
Exercisable at December 31	1,214,165	20.46	1,564,214	28.91

## GENUS SHARE OPTIONS

Genus share options	Number of shares	Average exercise price (USD)	Number of shares	Average exercise price (USD)
Balance at January 1	0		5,590	6.55
Expired during the year	0		5,590	6.55
Outstanding at December 31	0		0	0.00
Exercisable at December 31	0		0	0.00

## AIXTRON STOCK OPTIONS AS OF DECEMBER 31, 2015

Exercise price per share (EUR)	Underlying shares represented by outstanding options	Shares represented by exercisable options	Average option life (in years)
26.93	252,000	0	0.5
7.48	392,000	0	1.5
3.83	108,750	108,750	0.5
10.09	119,125	119,125	2.0
4.17	83,415	83,415	3.0
24.60	425,825	425,825	4.0
26.60	452,300	452,300	5.0
12.55	8,000	6,000	6.0
15.75	25,000	18,750	7.0
14.01	41,000	0	9.0
13.14	984,400	0	9.0
	<b>2,891,815</b>	<b>1,214,165</b>	

## ASSUMPTIONS USED TO CALCULATE FAIR VALUES AND SHARE-BASED PAYMENT EXPENSES

The fair value of services received in return for stock options granted is measured by reference to the fair value of the stock options granted. The fair value of the stock options is determined on the basis of a mathematical model. In accordance with IFRS 2 the

measurement includes only options which were granted after November 7, 2002.

In 2015, the personnel expenses from share-based payments, all of which were equity settled share based payments, were kEUR 991 (2014: kEUR 779; 2013: kEUR 981).

As of December 31, 2015 an amount of kEUR 2,649 relating to stock options granted prior to that date had not yet been recognized as a personnel expense. This amount will be charged over the periods to 2018. The expected allocation of the expense is as follows: 2016: kEUR 980, 2017: kEUR 975 and 2018: kEUR 694

#### AIXTRON SHARE OPTIONS GRANTED

	in 2014 (October)	in 2014 (June)
Fair value on grant date	3.79 €	4.26 €
Price per share	10.11 €	10.77 €
Exercise price	13.14 €	14.01 €
Expected volatility	50.53%	50.92%
Option life	10.0 years	10.0 years
Expected dividend payments	0.13 €	0.13 €
Risk-free interest rate	1.03%	1.46%

The expected volatility is based on historical volatility.

## 24. PROVISIONS

Development and breakdown of provisions

<i>in EUR thousands</i>	01.01.2015	Exchange rate differences	Usage	Reversal	Addition	31.12.2015	Current	Non-current
Personnel expenses	9,666	244	4,830	2,273	2,817	5,624	5,624	0
Warranties	7,683	51	6,807	0	5,539	6,466	5,381	1,085
Onerous contracts	3,352	70	3,352	5	2,571	2,636	2,636	0
Commissions	682	7	508	174	418	425	425	0
Other	7,880	163	6,134	1,228	5,655	6,336	6,116	220
<b>Total</b>	<b>29,263</b>	<b>535</b>	<b>21,631</b>	<b>3,680</b>	<b>17,000</b>	<b>21,487</b>	<b>20,182</b>	<b>1,305</b>

#### PERSONNEL EXPENSES

These include mainly provisions for holiday pay, payroll and severance costs, 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.

#### COMMISSIONS

Commissions are payable to sales agents and are recorded as financial liabilities.

#### 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, 2015 and December 31, 2014, 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.

## 25. TRADE PAYABLES AND OTHER CURRENT LIABILITIES

The liabilities consist of the following:

<i>in EUR thousands</i>	2015	2014
Trade payables	9,814	16,397
Liabilities from grants	2,665	2,015
Payroll taxes and social security contributions	655	769
VAT and similar taxes	644	52
Other liabilities	21,004	356
	24,968	3,192
	34,782	19,589

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.

Other liabilities includes kEUR 17,187 (2014 kEUR nil) previously recorded as an advance payment from a customer in China and which is repayable following the reduction in order volume.

## 26. 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 Company'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, 2015 the group had no borrowings (2014 nil). Financial liabilities, all due within one year, of kEUR 34,782 (2014 kEUR 19,589) consisting of trade payables and other liabilities and are shown in Note 25, together with an analysis of their maturity.

As at December 31, 2015 the group had kEUR 116,305 cash and cash equivalents (2014 kEUR 116,580) and a further kEUR 93,089 of fixed deposits with banks (2014 kEUR 151,494).

### CREDIT RISKS

Financial assets generally exposed to a credit risk are trade receivables (see note 17) and cash and cash equivalents.

The Group's cash and cash equivalents are kept with banks 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 cash balances as described in notes 17, 18 and 19.

For receivables measured at fair value, the maximum amount of the exposure to credit risk is the amount of receivables measured at fair value as disclosed in note 26. 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 Company'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 company only receives a minor amount of interest income. The Company does not use derivative financial instruments to manage its exposure to interest rate risk. Cash deposits are made with the company's bankers at the market rates prevailing at inception of the deposit for the period and currency concerned. There has been no change to the Company's exposure to market risk or the manner in which it manages and measures the risk.

## FOREIGN CURRENCY RISK

The Company 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 Company did not use derivative financial instruments during either 2015 or 2014. The main exchange rates giving rise to the risk are those between the US Dollar, Pound Sterling and Euro.

The carrying amounts of the Group's foreign currency denominated monetary assets and monetary liabilities at the reporting date are as follows:

<i>in EUR thousands</i>	Liabilities		Assets	
	2015	2014	2015	2014
US Dollars	-24,416	-62,064	112,313	123,852
GB Pounds	-1,903	-3,158	10,489	13,218

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

## FOREIGN CURRENCY SENSITIVITY ANALYSIS

The Company is mainly exposed to US Dollar exchange rate risks through its worldwide activities.

The following table details the company's sensitivity to a 10% change in the value of the Euro against the Dollar. A positive number indicates an increase in profit and other equity, a negative number indicates a reduction in profit and other equity.

<b>Increase in value of Euro by 10%</b>	<b>USD Currency Effect</b>	
<i>In EUR thousands</i>	2015	2014
Profit or loss	-6,482	-3,529
Other comprehensive income	-1,404	-2,429
<b>Decrease in value of Euro by 10%</b>		
<i>In EUR thousands</i>	2015	2014
Profit or loss	6,482	3,529
Other comprehensive income	1,404	2,429

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 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

Cash and cash equivalents, Loans and receivables and Held to maturity investments are stated at amortized cost. At FVTPL are classed as at fair value through profit or loss and are designated as such upon initial recognition. At FVTPL includes accrued receivables arising as the difference between the fair value of revenue (note 3) and the invoiced amounts. The fair value is level 2 in the fair value hierarchy.

The fair values and the carrying amounts of the financial instruments shown in the balance sheet are shown in the following table. Financial assets are classified into categories.

### FINANCIAL ASSETS 2015

in EUR thousands	Cash and cash equivalents	Loans and receivables	Held to-maturity investments	At FVTPL	Total Carrying amount and fair value
	at amortised cost	at amortised cost	at amortised cost	at fair value	
Cash and cash equivalents	116,305	0	0	0	116,305
Other financial assets	0	0	93,089	0	93,089
Other non-current assets	0	630	0	0	630
Trade receivables	0	25,542	0	414	25,956
<b>Total</b>	<b>116,305</b>	<b>26,172</b>	<b>93,089</b>	<b>414</b>	<b>235,980</b>
<b>At amortized cost</b>	<b>116,305</b>	<b>26,172</b>	<b>93,089</b>	<b>0</b>	<b>235,566</b>
<b>At fair value</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>414</b>	<b>414</b>

### FINANCIAL LIABILITIES 2015

in EUR thousands	Cash and cash equivalents	Loans and receivables	Other payables	At FVTPL	Total Carrying amount and fair value
	at amortised cost	at amortised cost	at amortised cost	at fair value	
Trade payables	0	0	9,814	0	9,814
Advance payments from customers (not in scope of IFRS 7)	0	0	24,011	0	24,011
<b>Total</b>	<b>0</b>	<b>0</b>	<b>33,825</b>	<b>0</b>	<b>33,825</b>
<b>At amortized cost</b>	<b>0</b>	<b>0</b>	<b>33,825</b>	<b>0</b>	<b>33,825</b>
<b>At fair value</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## FINANCIAL ASSETS 2014

<i>in EUR thousands</i>	Cash and cash equivalents	Loans and receivables	Held to-maturity investments	At FVTPL	Total Carrying amount and fair value
	at amortised cost	at amortised cost	at amortised cost	at fair value	
Cash and cash equivalents	116,580	0	0	0	116,580
Other financial assets	0	0	151,494	0	151,494
Other non-current assets	0	382	0	0	382
Trade receivables	0	23,374	0	2,950	26,324
<b>Total</b>	<b>116,580</b>	<b>23,756</b>	<b>151,494</b>	<b>2,950</b>	<b>294,780</b>
<b>At amortized cost</b>	<b>116,580</b>	<b>23,756</b>	<b>151,494</b>	<b>0</b>	<b>291,830</b>
<b>At fair value</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2,950</b>	<b>2,950</b>

## FINANCIAL LIABILITIES 2014

<i>in EUR thousands</i>	Cash and cash equivalents	Loans and receivables	Other payables	At FVTPL	Total Carrying amount and fair value
	at amortised cost	at amortised cost	at amortised cost	at fair value	
Trade payables	0	0	16,397	0	16,397
Advance payments from customers (not in scope of IFRS 7)	0	0	66,928	0	66,928
<b>Total</b>	<b>0</b>	<b>0</b>	<b>83,325</b>	<b>0</b>	<b>83,325</b>
<b>At amortized cost</b>	<b>0</b>	<b>0</b>	<b>83,325</b>	<b>0</b>	<b>83,325</b>
<b>At fair value</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## 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.

## 27. OPERATING LEASES

### LEASES AS LESSEE

Non-cancellable operating lease rentals are payable as follows:

<i>in EUR thousands</i>	
2016	3,919
2017	1,916
2018	487
2019	375
2020	100
after 2020	41
	<b>6,838</b>

The Company leases certain office and plant facilities, office furniture and motor vehicles under various operating leases. Under most of the lease commitments for office and plant facilities the Company has options to renew the leasing contracts. The leases typically run for a period between one and fifteen years. None of the leases include contingent rentals.

The expenses for leasing contracts were kEUR 4,520, kEUR 4,150 and kEUR 3,957 for 2015, 2014 and 2013 respectively.

## 28. CAPITAL COMMITMENTS

As of December 31, 2015, the Company had entered into purchase commitments with suppliers in the amount of kEUR 19,104 (2014: kEUR 38,998) for purchases within the next 12 months. Commitments for capital expenditures for fixed assets are kEUR 1,059 (2014: kEUR 1,977) as of December 31, 2015.

## 29. CONTINGENCIES

The Company 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 Company's net assets, results of operations and financial position.

## 30. IDENTITY OF RELATED PARTIES

Related parties of the Company are members of the Executive Board and members of the Supervisory Board.

### EXECUTIVE BOARD AND SUPERVISORY BOARD REMUNERATION

The disclosures for key management personnel compensation required according to IAS 24 contain the remuneration of the Executive Board and the Supervisory Board.

Remuneration of the members of the Executive Board:

<i>in EUR thousands</i>	<b>2015</b>	<b>2014</b>	<b>2013</b>
Short-term employee benefits	<b>1,041</b>	1,387	1,555
Termination benefits	<b>0</b>	0	780
Share based payments	<b>0</b>	628	250
	<b>1,041</b>	<b>2,015</b>	<b>2,585</b>

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.

Remuneration of the members of the Supervisory Board:

<i>in EUR thousands</i>	<b>2015</b>	<b>2014</b>	<b>2013</b>
Fixed remuneration (incl. attendance fee)	<b>303</b>	293	290
	<b>303</b>	<b>293</b>	<b>290</b>

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.

## 31. CONSOLIDATED ENTITIES

AIXTRON S.E. controls the following subsidiaries:

	Country	Share of capital in %	
		<b>2015</b>	2014
AIXTRON Inc	USA	<b>100</b>	100
AIXTRON Ltd.	England & Wales	<b>100</b>	100
AIXTRON Korea Co. Ltd.	South Korea	<b>100</b>	100
AIXTRON Taiwan Co. Ltd.	Taiwan	<b>100</b>	100
AIXTRON AB	Sweden	<b>100</b>	100
AIXTRON KK	Japan	<b>100</b>	100
AIXTRON China Ltd	P. R. China	<b>100</b>	100
Genus trust *	USA	<b>n.a.</b>	n.a.

\* The shares held in the Genus trust are attributed, as beneficial owner, to AIXTRON, as control exists through the trust relationship with AIXTRON SE

All companies in the Group are engaged in the supply of equipment to the semiconductor industry. Design and manufacture of equipment takes place at the entities in Germany, UK and USA. Service and distribution takes place at all locations.

## 32. 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 Company's net assets, results of operation and financial position.

## 33. AUDITORS' FEES

Fees expensed in the income statement for the services of the group auditor Deloitte & Touche are as follows:

<i>in EUR thousands</i>	<b>2015</b>	<b>2014</b>
for audit	<b>731</b>	699
for other confirmation services	<b>33</b>	34
for tax advisory services	<b>124</b>	173
for other services	<b>18</b>	53
	<b>906</b>	<b>959</b>

Included in the total amount of fees are fees for the group auditor Deloitte & Touche GmbH, Wirtschaftsprüfungsgesellschaft, Duesseldorf, in the amount of kEUR 583 for audit (2014: kEUR 416), kEUR 33 for other confirmation services (2014: kEUR 34), kEUR 41 for tax services (2014: kEUR 76) and kEUR 18 for other services (2014: kEUR 53).

### 34. EMPLOYEES

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

#### EMPLOYEES BY FUNCTIONS

	2015	2014
Sales	61	65
Research and Development	265	285
Manufacturing and Service	326	331
Administration	88	86
<b>Employees (§ 314 HGB)</b>	<b>740</b>	<b>767</b>
Executive board members	2	2
	<b>742</b>	<b>769</b>
Apprentices	15	16
	<b>757</b>	<b>785</b>

### 35. STATEMENT OF COMPLIANCE WITH THE GERMAN CORPORATE GOVERNANCE CODE

In 2015, Executive and Supervisory Boards have made the declaration of compliance in accordance with Section 161 of AktG and this is permanently available on the Company's web site at <http://www.aixtron.com/en/investors/corporate-governance/principles>.

## 36. SUPERVISORY BOARD AND EXECUTIVE BOARD

### Composition of the Supervisory Board as of December 31, 2015

- Dipl.-Kfm. Kim Schindelhauer
  - Aachen / businessman /Chairman of the Supervisory Board since 2002
- Prof. Dr. Wolfgang Blättchen
  - Leonberg / Managing Director of Blättchen Advisory GmbH / member of the Supervisory Board since 1998 / Deputy Chairman of the Supervisory Board since February 27, 2013
  - Membership of Supervisory Boards and controlling bodies:
    - Pfisterer Holding AG, Winterbach - Chairman of the Supervisory Board
    - H. STOLL AG & Co. KG, Reutlingen – member of the Supervisory Board (June 2015 until January 2016)
    - FAS AG, Stuttgart - member of the Supervisory Board
- Prof. Dr. Rüdiger von Rosen
  - Frankfurt/Main / businessman / member of the Supervisory Board since 2002
  - Membership of Supervisory Boards and controlling bodies:
    - ICF Bank AG, Frankfurt/Main – Deputy Chairman of the Supervisory Board
    - Paladin Asset Management Investment AG, Hannover – Chairman of the Supervisory Board
    - AKO Capital AG, Thalwil/Switzerland – member of the Board
- Prof. Dr. Petra Denk
  - Unterschleißheim / Professor of Energy Economics / member of the Supervisory Board since 2011
  - Membership of Supervisory Boards and controlling bodies:
    - Pfisterer Holding AG, Winterbach - member of the Supervisory Board(since September 22, 2015)
- Dr. Andreas Biagosch
  - Munich / Managing Partner Impacting I GmbH & Co KG / member of the Supervisory Board since May 2013
  - Membership of Supervisory Boards and controlling bodies
    - Lürssen Maritime Beteiligungen, Bremen, member of the Advisory Board
    - Ashok Leyland Limited, Chennai/Indien - non-executive director
    - Wacker Chemie AG, Munich – member of the Supervisory Board (since February 4, 2015)
- Dr. Ing. Martin Komischke
  - Morgarten/Switzerland / Group Chief Executive Officer, Hoerbiger Holding AG, Zug/Switzerland / member of the Supervisory Board since May 2013
  - Membership of Supervisory Boards and controlling bodies
    - ADCURAM Group AG, Munich - member of the Supervisory Board (since July 2014)

The composition of the Company's Executive Board is:

- Martin Goetzeler, Aachen, businessman, Chairman, President and Chief Executive Officer since March 1, 2013
- Dr. Bernd Schulte, Aachen, physicist, Executive Vice President and Chief Operating Officer since 2002

## 37. CRITICAL ACCOUNTING JUDGMENTS AND KEY SOURCES OF ESTIMATION AND UNCERTAINTY

The preparation of AIXTRON's Consolidated Financial Statements requires the Company to make certain estimates, judgments and assumptions that the Company 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 Company'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 is generally recognized in two stages for the supply of equipment to customers, partly on delivery and partly on final installation and acceptance (see note 2 (n)). The Company believes, based on past experience, that this method of recognizing revenue fairly states the revenues of the Company. The judgements made by management include an assessment of the point at which substantially all of the risks and rewards of ownership have passed to the customer.

### VALUATION OF INVENTORIES

Inventories are stated at the lower of cost and net realizable value. This requires the Company 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 16.

As disclosed in notes 3 and 16, during the years 2015, 2014 and 2013 the Company incurred expenses of kEUR 4,141, kEUR 3,016 and kEUR 17,885 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 Company 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 Company's products. These factors could result in adjustment to the valuation of inventory in future periods, and significantly impact the Company's future operating results.

Commitments for the manufacture of 25 AIX R6 systems existed as of December 31, 2015. The carrying value of inventories and outstanding supplier commitments totals kEUR 20,608. The expected realizable value of these systems has been based on past experience and estimates supplied by regional and head office sales management. A further 3 systems were in the process of customer qualification as of December 31, 2015

### INCOME TAXES

At each balance sheet date, the Company 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 Company'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 Company 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 Company with respect to their valuation. Actual liabilities may differ from the estimated amounts. Details of provisions are shown in Note 24.

### LEGAL PROCEEDINGS

In the normal course of business, the Company is subject to various legal proceedings and claims. On January 4, 2016, the Company was named as a defendant in a putative class action commenced in the United States District Court for the Southern District of New York brought on behalf of a putative class of purchasers of the Company's securities between September 25, 2014 and December 9, 2015. The complaint claims in part that the Company made false and/or misleading statements, as well as failed to disclose material adverse facts about the Company's business, operations and prospects. AIXTRON disputes the allegations and intends to contest the allegations vigorously.

The Company, based upon advice from legal counsel, believes that the matters the Company is aware of are not likely to have a material adverse effect on its financial condition or results of operations. The Company is not aware of any unasserted claims that may have a material adverse effect on its financial condition or results of operation.

### 38. Acquisition of PlasmaSi Inc

On April 1st, 2015 the group acquired 100% of the voting equity interests of PlasmaSi Inc.(USA), obtaining control of the company. PlasmaSi enables the encapsulation of organic thin-films by depositing ultra-thin, light weight and flexible barrier films through its proprietary technology which is particularly well suited to OLED displays. In combining AIXTRON's OVPD technology with PlasmaSi's innovative approach the Company expects to be able to add significant value in the production of flexible OLED applications.

The amounts recognized in respect of the identifiable assets acquired and liabilities assumed are as set out in the table below.

*in EUR thousands*

Cash & cash equivalents	1,471
Property, plant & equipment	52
Other current assets	24
Identifiable intangible assets	4,655
Other current liabilities	-2,541
Other non-current liabilities	-2,256
Contingent consideration	-4,236
<b>Total identifiable liabilities</b>	<b>-2,831</b>
Goodwill	10,515
<b>Net assets acquired &amp; consideration</b>	<b>7,684</b>
Satisfied by :	
<b>Cash paid</b>	<b>7,684</b>
Cash consideration	7,684
Less: cash acquired	-1,471
<b>Net cash outflow on acquisition</b>	<b>6,213</b>

In March 2015, AIXTRON made a short term loan to PlasmaSi Inc. of USD 1.65m which is included in the other current liabilities assumed. The cash acquired of kEUR 1,471 is effectively the cash needed to repay this loan to AIXTRON.

The goodwill arising on the acquisition of kEUR10,515 is underpinned by a number of elements which individually cannot be quantified. The most significant of these is the competitive advantage gained from AIXTRON's complimentary products. None of the goodwill is expected to be deductible for tax purposes. Individually identifiable and quantifiable intangible assets amount to kEUR 4,655 and represent the fair value of the developed technology acquired.

Contingent consideration of kEUR4,236 is payable if specified sales milestones are met. The contingent consideration has been valued at its gross contractual amount because the milestones were met during the final quarter of 2015 and payment is expected to be made within one year of the acquisition date. The contingent consideration outstanding as at December 31, 2015 was kEUR 4,177, the difference arising from exchange rate movements.

During 2015 the business of PlasmaSi was absorbed within other AIXTRON companies and PlasmaSi Inc. was dissolved.

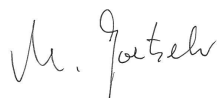
The acquired business did not record revenue in 2015. A loss of kEUR 2,719 in respect of the business is included in the Group Income Statement.

Had the acquisition taken place on January1, 2015, the combined Group revenue would have been EUR 197.8m and the loss for the year would have been EUR 30.0m.

Herzogenrath, February 2016

AIXTRON SE

Executive Board



**Martin Goetzeler**  
Chief Executive Officer



**Dr. Bernd Schulte**  
Chief Operating Officer



# Independent Auditors' Report

We have audited the consolidated financial statements prepared by AIXTRON SE, Herzogenrath – comprising the consolidated statement of financial position, the consolidated income statement and consolidated statement of other comprehensive income, the consolidated statement of cash flow, the consolidated statement of changes in equity and the notes to the consolidated financial statements – and the group management report for the financial year from January 1 to December 31, 2015. The preparation of the consolidated financial statements and the group management report in accordance with IFRS, as adopted by the European Union (EU), and the additional requirements of German commercial law pursuant to § 315a, paragraph 1, HGB ("German Commercial Code") are the responsibility of the parent Company's management. Our responsibility is to express an opinion on the consolidated financial statements and on the group management report based on our audit.

We conducted our audit of the consolidated financial statements in accordance with § 317 HGB and German generally accepted standards for the audit of financial statements promulgated by the Institut der Wirtschaftsprüfer. Those standards require that we plan and perform the audit such that misstatements materially affecting the presentation of the net assets, financial position and results of operations in the consolidated financial statements in accordance with the applicable financial reporting framework and in the group management report are detected with reasonable assurance. Knowledge of the business activities and the economic and legal environment of the group and expectations as to possible misstatements are taken into account in the determination of audit procedures. The effectiveness of the accounting-related internal control system and the evidence supporting the disclosures in the consolidated financial statements and the group management report are examined primarily on a test basis within the framework of the audit. The audit includes assessing the annual financial statements of those entities included in consolidation principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements and the group management report. We believe that our audit provides a reasonable basis for our opinion.

Our audit has not led to any reservations.

In our opinion, based on the findings of our audit, the consolidated financial statements of AIXTRON SE, Herzogenrath, comply with IFRS, as adopted by the EU and the additional requirements of German commercial law pursuant to § 315a, paragraph 1, HGB and give a true and fair view of the net assets, financial position and results of operations of the group in accordance with these requirements. The group management report is consistent with the consolidated financial statements and as a whole provides a suitable view of the group's position and suitably presents the opportunities and risks of future development.

Düsseldorf, February 22, 2016

Deloitte & Touche GmbH  
Wirtschaftsprüfungsgesellschaft

signed Dr. Reichmann  
Wirtschaftsprüfer

signed Mißmahl  
Wirtschaftsprüfer

# Glossary

A B C D E F G H I L M N O P R S T V W

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## A

### **ALD**

Atomic Layer Deposition (ALD) is a method for producing ultra-thin films for semiconductor devices and new, emerging non-semiconductor applications. ALD is a technology that is capable of meeting the production requirements of next-generation geometries (45 nanometer and below). The ALD process is used to pulse and purge two reactants to deposit films. In the purge process carrier gases like argon or nitrogen are employed.

### **AVD®**

Atomic Vapor Deposition (AVD®); a liquid delivery and evaporation technology. Liquid precursors or precursor solutions are sprayed directly into the flash vaporizer via injectors. Up to four injectors – one for each precursor source – can be used.

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## B

### **Backlighting**

The assemblies used to illuminate the liquid-crystal displays (LCDs) of electronic equipment are known as "backlighting" assemblies. LEDs are used for backlighting because their advantages – long operating lifetime, robustness and small dimensions – are all of particular benefit. Displays for small mobile equipment such as mobile phones or navigation DEVICES are typical examples of applications.

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## C

### **Capacitor**

A capacitor is a circuit element formed by placing an insulating layer between two conducting layers; its function is to store an electrical charge. It is a very important component of memory chips.

### **Capital market**

The capital market is part of the financial market and is the entirety of all institutions and transactions whose purpose is to combine supply and demand for long-term (financial) capital.

### **Carbon nanotubes**

Carbon nanotubes (CNT) are microscopically small tube-shaped structures of carbon (molecular nanotubes). Depending on the structural detail, the electrical conductivity within the tubes is either metallic or semiconducting. There are also carbon nanotubes with superconducting properties at low temperatures. Transistors and simple circuits have already been produced using semiconducting carbon nanotubes.

### **Carrier gas**

In the process for the production of compound semiconductor layers or silicon devices, the raw materials are converted into gases and transported into the reactor with the help of a carrier gas. Carrier gases most commonly used are hydrogen, argon and nitrogen.

### **Chip**

The finished device structure which constitutes a very small element of the semiconductor wafer.

### **Clean room**

In a clean room area of a semiconductor fab, all wafer processing is completed. Dust and particles which might fall on the wafers during processing and result in the circuits not functioning correctly are kept out of the clean room by filtering the air and managing the air flow. Personnel are required to wear specially designed clean room overalls and "booties" over their street clothes and shoes, and must wear gloves and face masks (humans tend to shed skin and hair). Not even normal paper is allowed in clean rooms – only clean room low particulate paper may be taken in.

### **Close coupled showerhead®**

With this technology, the reagent gases are introduced vertically into the reactor through a water-cooled showerhead surface covering the entire area of deposition. During deposition, the showerhead is extremely close to the substrates and is constructed to enable precursors to be kept separate right up to the point where they are injected into the reactor chamber. The gases are injected through a multiplicity of small tube orifices into the chamber in order to create a very uniform distribution of reagent gases.

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## **CMOS**

Complementary Metal Oxide Semiconductor (CMOS) is a major class of integrated circuits. CMOS technology is used in CHIPS such as microprocessors, microcontrollers, static RAM, and other digital logic circuits. CMOS technology is also used for a wide variety of analog circuits such as image sensors, data converters, and highly integrated transceivers for many types of communication devices.

## **Compliance**

Compliance (including regulatory compliance) stands for the observance of laws and company policies, but also of voluntary codes. The totality of the principles, processes and measures of a company to comply with certain rules and thus to avoid breaking the rules in a company is called Compliance Management System and is a part of the Corporate Governance system.

## **Compound semiconductors**

These multi-element semiconductors are complex crystal growth structures containing a variety of material elements. The structures are defined by the periodic table groups from which they come. For example: IV/IV (germanium/silicon), III/V (gallium/nitrogen), II/VI (magnesium/ oxygen). Compound semiconductors have several advantages compared to single element semiconductors. Many have properties that allow them to emit or absorb light very efficiently (for illumination or production of electrical energy). Many can be processed into devices that have better power capabilities, operation frequency or efficiency than similar devices made from silicon only.

## **Corporate Governance**

Corporate Governance refers to the system by which companies are directed and controlled. Effective Corporate Governance guarantees that an enterprise is managed in a responsible, professional and transparent manner with the purpose of safeguarding its long-term success. It is intended to reflect and serve the purposes of the organization itself, its owners and all other stakeholders. Corporate Governance is very complex and includes both mandatory and voluntary measures: observance of legal provisions and policies (compliance), conformance with recognized standards and recommendations as well as the development of the company's own guidelines and adherence to them.

## **CVD**

Chemical Vapor Deposition (CVD) is the deposition of thin films (usually dielectrics/insulators) on silicon wafers placed in a reactor chamber or furnace. The target deposition material is delivered to the surface of the wafer in the form of a mixture of gases which then react at the surface of the wafers. CVD can be done at medium to high temperature in a furnace, or in a CVD reactor in which the wafers are heated but the walls of the reactor are not. Plasma enhanced CVD avoids the need for high temperature by exciting the reactant gases into a plasma.

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# **D**

## **Deposit/Growth**

Semiconductor devices comprise of several crystalline layers. Deposition is the correct term for the creation of these layers on a wafer.

## **Deposition**

Deposition describes the process by which material carrying gases are introduced into the reactor chamber where the required crystal growth or deposition process occurs on the wafers. Depending on the kind of coating process, different electronic and optoelectronic devices can be manufactured, e.g. LEDs, lasers, solar cells or transistors.

## **Devices**

These are the completed products which are manufactured with the compound or silicon semiconductor chips at their core. For example, LEDs and lasers, transistors, memory and logic chips, as well as solar cells.

## **Diode**

A two-terminal electronic device which permits significant current flow in only one direction. Diodes typically function as a rectifier, i.e. converting alternating current into direct current.

## **Display**

A display is an electronic device for displaying images and text. Displays can be found in many industrial and consumer electronic products, e.g. in digital cameras, cell phones or navigational equipment, as well as in flat screen televisions.

## **DRAM**

Dynamic Random Access Memory (DRAM) is a volatile type of semiconductor memory chip, on which data is lost after an interruption of the electric power supply.

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# **E**

## **Electronic paper**

Electronic paper (also e-paper, E-Paper or ePaper) aims to imitate printed paper. Displays of so-called E-Book Readers (EBR) reflect light in the same way as common paper devices do. Static digital information such as texts or pictures can be displayed semi-permanently and does not require any additional energy whilst being viewed. The image can be changed at any time and requires only a small energy input to be changed. Some methods allow the production of electronic paper displays which are nearly as flexible and thin as common paper devices.

**Epitaxy**

The deposition of thin single crystalline layers on a suited substrate in the form of crystal growth.

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**F****FeRAM**

FeRAM (Ferroelectric Random Access Memory) is a nonvolatile computer memory chip. It is similar in construction to DRAM, which is currently the most commonly used main memory in computers. FeRAM is based on a ferroelectric layer whose memory state is still retained even after switching off the power supply. At the same time it allows operating speeds that come close to those of DRAMS.

**Flash Memory**

See NAND flash memory.

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**G****Gas Foil Rotation®**

Gas Foil Rotation® (GFR) means that the wafer carriers in AIXTRON MOCVD equipment turn friction-free on gas cushions. This movement is powered by a directed gas flow.

**General lighting**

General lighting is the uniform, even illumination of a space. The term "solid state lighting" is also used in this context: Today this is what all semiconductor-based lighting components are called. They include LEDs and OLEDs, among others.

**German Commercial Code**

The German Commercial Code (HGB) contains the core of the commercial law of Germany.

**German Securities Trading Act**

The German Securities Trading Act (WpHG) regulates securities trading in Germany and serves in particular the control of the service industry, that deals with securities and financial futures, but also the protection of the investor.

**German Stock Operation Act**

The German Stock Corporation Act (AktG) regulates the setting up, incorporation, accounting, liquidation, and stockholders' meetings of stock corporations and partnerships limited by shares.

**Glovebox**

The hermetically sealed reactor cabinet with arm-length gloves in which the operator can slide his hands in order to carry out internal work from outside the cabinet. These cabinets protect the reactor from contamination with oxygen or humidity and ensure the purity of the epitaxial process.

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**H****HBT**

The Heterojunction Bipolar Transistor (HBT) is an improvement of the bipolar junction transistor, using differing SEMICONDUCTOR materials for the emitter and base regions and creating a heterojunction, that can handle signals of very high frequencies up to 600 GHz and more. This type of device is common in modern ultrafast circuits as well as applications requiring a high power efficiency, such as power amplifiers in cellular phones.

**HEMT**

High Electron Mobility Transistor (HEMT) is a field-effect transistor incorporating a junction between two materials with different band gaps. A commonly used material combination is GaAs with AlGaAs. HEMTs have attracted attention due to their high-power performance capabilities, especially for high frequency applications.

**HVPE**

Hydride Vapor Phase Epitaxy (HVPE) is a technique employed to produce semiconductors e.g. III-V compound semiconductor materials from metallic sources of group III elements and hydrogen compounds of group V elements of the semiconductor crystal. Also see VPE.

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## I

### **ISO 9001**

ISO 9001 is part of a series of standards that document the principles for quality management measures within a company. This standard describes the entire quality management system as a model and is the basis for a comprehensive quality management system.

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## L

### **LCD**

A Liquid Crystal Display (LCD) fulfills the same function as a monochrome or color television tube, namely as a display. LCD displays are very thin and energy-saving.

### **LED**

A light-emitting diode (LED) is an electronic semiconductor device. LEDs can emit very bright light and are highly energy-efficient. The most commonly used LEDs generally have an area of 0.1 mm<sup>2</sup> (ca. 20 mA) whereas the most powerful LEDs can have an area of 1 mm<sup>2</sup> (ca. 350 mA) or more. This places LEDs among the world's smallest light sources and their low power consumption and heat emission qualities make LEDs potentially far more economical and safer than traditional lighting.

### **Logic chip**

The critical chip which does the necessary computational calculations in an electronic component. For example, the main chip in a computer is a microprocessor, for mathematical computations, amongst other things.

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## M

### **Memory chip**

A chip which retains the information that logic chips will then process. For example, in a computer, the memory chips will store the word processing program while it is being used, and the letters of the word processing documents which are being worked on. DRAM is the type of memory used most in computers, and is by far the most important type of memory from a total worldwide revenue standpoint.

### **MOCVD**

Metal-Organic Chemical Vapor Deposition (MOCVD) is a compound semiconductor production method where the raw material "metal-organic compounds" are transformed into gases and then, bound to a carrier gas, are subsequently fed into the reactor. This transformation also occurs under reduced pressure, down to approximately one-tenth of normal atmospheric pressure. The advantage is that the gases being introduced are of high purity and can be finely dosed. MOCVD allows the processing of quite large surface areas and therefore is the first choice for the production of compound semiconductors. AIXTRON is one of the global market leaders in this technology.

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## N

### **NAND flash memory**

A non-volatile computer memory manufactured in NAND (Not/AND) technology. Flash memories are characterized by the fact that they can be electrically erased and reprogrammed. This technology is mainly used for memory cards. The data of a flash memory device is retained even after interruptions in the power supply.

### **Nanometer**

One nanometer (nm) is equal to one billionth of a meter and is approximately 70,000 times thinner than a human hair.

### **Nanotechnology**

The term "nanotechnology" refers to the research being conducted in cluster- and surface physics, semiconductor physics, specific areas of chemistry such as surface chemistry, and to a more limited extent, in areas of mechanical engineering and food technology ("nano food"). The collective term is derived from the magnitude common to all of the research areas, namely, structures with sizes ranging from a single atom to 100 nanometers (nm). Nanomaterials play an increasingly important role in the miniaturization of circuit elements. Typical nanotech material structures are the so-called "quantum dots". Modern processors also have structures smaller than 100nm, which could therefore also be called "nanotech" as well.

### **NASDAQ**

NASDAQ ("National Association of Securities Dealers Automated Quotations") is a stock exchange founded in 1971 as a fully electronic platform. Securities trading on NASDAQ is regulated by the United States Securities and Exchange Commission (SEC).

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### **Non-volatile memory**

A non-volatile memory device is a semiconductor memory device which will not lose its data even after its power source is switched off. This is in contrast to volatile memory (e.g. DRAMs), which loses its data when the power supply to the chip is interrupted.

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## **O**

### **OLED**

Organic Light Emitting Diode: An OLED is a solid state device that typically consists of a series of organic thin films sandwiched between two thin film conductive electrodes. The choice of organic materials and the layer structure determine the device's performance features: emitted color, operating lifetime and power efficiency.

### **OVPD®**

Organic Vapor Phase Deposition (OVPD®) is a technology for the thin film deposition of small molecular organic materials. It utilizes the advantages of gas phase deposition, where the materials are transported to the SUBSTRATE by an inert carrier gas.

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## **P**

### **PCRAM**

This abbreviation stands for Phase Change RAM and refers to a type of non-volatile memory in electronics. The active principle of this memory is based on the differences in electrical resistivity exhibited by the material depending on whether it is in the amorphous phase (high resistivity/reset state) or the crystalline phase (low resistivity/set state). The material used is a chalcogenide alloy (chalcogenide compound) similar to the material used for data storage in a CD-RW or DVD-RAM – also on the basis of phase change.

### **PECVD**

Plasma-Enhanced Chemical Vapor Deposition or also Plasma Assisted Chemical Vapor Deposition (PECVD) is the term for a special type of Chemical Vapor Deposition (CVD) process used to deposit thin films by chemical reaction, as with the CVD technique. In addition, the process is supported by a plasma. The plasma can burn directly in contact to the substrate to be layered (direct plasma method) or in a separate chamber (remote plasma method).

### **Periodic system**

All elements are ordered within the periodic table according to their atomic number and chemical properties into main- and subgroups. MOCVD technology uses elements like gallium arsenide (GaAs), indium phosphide (InP), gallium nitride (GaN) and related alloys. They are also called "III-V semiconductors" because they are elements of group III and V of the Periodic Table and can interact to form crystalline compounds.

### **Planetary Reactor®**

The Planetary Reactor® is based on the principle of a horizontal laminar flow reactor. The laminar flow principle guarantees extremely precise heterojunctions and unequalled control of deposition rates at the atomic monolayer level. The combination of this principle with AIXTRON's unique multiple substrate carrier rotation methodology, known as Gas Foil Rotation® (GFR), ensures excellent deposition uniformity, regarding layer thickness, composition and doping. In addition, the special reactor inlet, which allows the separation of reactive gases, ensures a uniform outward radial flow and optimum distribution adjustment.

### **Planetary rotation**

A specific arrangement of the wafers within an MOCVD reactor for the production process, whereby a number of small discs holding the wafers orbit like planets in space around the central gas injector (Gas Foil Rotation®). The large plate, where those small discs lie on, also turns. This method facilitates a uniform, even deposition of compound semiconductor layers on the wafer. AIXTRON employs this process as part of its MOCVD technology (Planetary Reactor®).

### **Prime standard**

As a sub-segment of the Regulated Market with additional requirements for admission, organized under private law and regulated by legislation, the Prime Standard is the segment of the Frankfurt Stock Exchange with the highest transparency standards, surpassing those of the General Standard. Admission to Prime Standard is a prerequisite for shares to be included in the DAX®, MDAX®, TecDAX® and SDAX® indices.

### **PVPD®**

Polymer Vapor Phase Deposition (PVPD®) is a technological process that is used e.g. in the production of electronic paper.

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## R

### **RFID chips**

Radio-frequency identification (RFID) is the use of an object (typically referred to as an RFID tag) applied to or incorporated into a product, animal, or person for the purpose of identification and tracking using radio waves. This contact-free technology makes the capture and storage of data considerably easier.

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## S

### **Sarbanes-Oxley Act**

The Sarbanes-Oxley Act of 2002 (also SOX) is a United States federal law designed to improve the reporting reliability of companies that make use of the public capital market of the United States.

### **Semiconductor**

A material such as silicon whose conductivity lies between that of a conductor and an insulator. Its conductivity can be modulated by adding impurities (such as boron or phosphorus in silicon).

### **Silicon**

An element of the periodic table with the symbol Si. Silicon is a semiconductor used to fabricate most transistors and integrated circuits.

### **Substrate**

A substrate is the base material on which semiconductor layers are deposited, see also wafer.

### **Susceptor**

This circular plate serves as the pocket holder for the substrate or the substrate carrier. Normally it consists of graphite so that excellent temperature uniformity can be achieved.

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## T

### **TecDAX®**

The TecDAX® is a German stock market technology index. Along with those in the DAX®, the MDAX® and the SDAX®, the companies in the TecDAX® are listed in the prime standard.

### **TFT**

A thin-film transistor (TFT) is a special field-effect transistor that allows the production of electronic circuits with large areas, e.g. on glass screens, backlit by LEDs. It is increasingly used in laptops, computer monitors and televisions.

### **Transistors**

These devices are divided into two types: the field-effect transistor is based on the effect that, by means of a voltage applied through an insulated terminal (gate), a current can be controlled between two terminals (source and drain). In the case of a bipolar transistor, the current is controlled between the two terminals by means of a small current at the base. This current controls the current flow between the two other terminals, referred to as emitter and collector.

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## V

### **VPE**

This is an older, established process for the production of compound semiconductors. In contrast to MOCVD, this gas phase process exclusively uses inorganic substances as starting materials. The method allows for clean deposits of very thick and pure layers. However, not all materials can be produced by this method. This method (also referred to as HVPE – Hydride VPE) has gained much attention as a way to produce high quality gallium nitride substrates or templates.

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## W

### **Wafer**

The technical term for the substrate material (e.g. silicon), typically a thin disc of semiconductor material, on which the layers are deposited in the reactor. The diameter of wafers is typically 2 inch, 100, 150, 200 or 300 mm.

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## Financial Calendar

04/26/2016	>	Q1/16 Result
05/25/2016	>	Annual General Meeting 2016
07/26/2016	>	H1/16 Result
10/25/2016	>	Q3/16 Result



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