

Sustainability Report

2017/18

ZEISS Group



# Performance Indicators 2017/18

(1 October 2017 to 30 September 2018)

Around  
**30,000** employees in almost 50 countries

**42,900**

online courses completed on the ZEISS Learning Platform

**19,400**

training days were completed via the eCademy

More than **1,000** employees participated in sustainability events at ZEISS

**158**

new vocational trainees and students enrolled in a cooperative education program in Germany

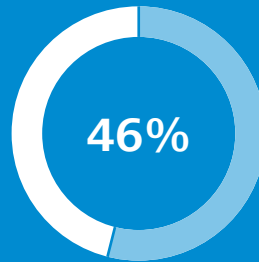
Around **140**

projects in Germany were supported by the Carl Zeiss Promotion Fund and the Education and Science Fund

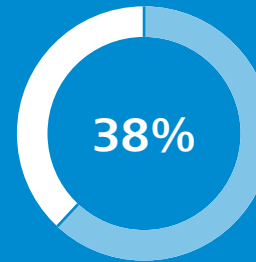
Revenue in fiscal year (FY)

2017/18 **5.8** billion euros

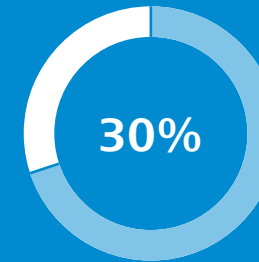
2016/17 **5.3** billion euros



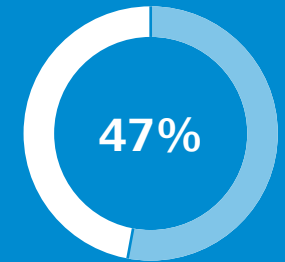
reduction in (relative) **energy consumption** as compared to FY 2009/10



reduction in (relative) **water consumption** as compared to FY 2009/10



reduction in (relative) **waste volume** as compared to FY 2009/10



reduction in (relative) **CO<sub>2</sub> emissions** as compared to FY 2009/10 (Scope 1 and 2)

Around **270**

quality audits conducted on suppliers' premises, including occupational health and safety and environmental aspects

Approx. **200**

occupational safety inspections

## Highlights from Fiscal Year 2017/18

# 2017

- 10 **Week of Sight** featured initiatives and provided information on the subject of vision and preventable blindness throughout the company
- 11 **Basic compliance training** available worldwide as an eLearning in 14 languages
- 12 **German Management Team** event on “Sustainability as a Success Factor” highlighted the relevance of this topic to the company’s business

# 2018

- 1 Publication of the **first Sustainability Report for the ZEISS Group** and the Group directive on occupational health and safety
- 2 **Kick-off event for 2018** in Germany with a focus on “**Rethinking Education**” and the first ZEISS MINT Awards (MINT = STEM: science, technology, engineering and mathematics)
- 3 Company-wide **environmental and occupational health and safety targets** defined
- 4 **First sustainability conference** hosted by the **Vision Care** strategic business unit in Guangzhou, China, with employees from the Asia/Pacific region
- 5 Internal “**ZEISS Diversity Days**” campaign featuring 35 events in 14 countries
- 6 **Opening of a Green, Safe & Responsible Experience Center** for employees and visitors in China
- 7 **First participation in CDP climate reporting** (previously: Carbon Disclosure Project)
- 8 Pilot project with a new **carpooling app for employees** in Germany
- 9 **eLearning on sustainability** available on the global ZEISS Learning Platform

More information available at:  
[www.zeiss.com/responsibility](http://www.zeiss.com/responsibility)

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## Foreword from the President & Chief Executive Officer

Dear Readers,

For ZEISS, business success is closely intertwined with corporate responsibility. Since 1889, the Carl Zeiss Foundation Statute has set a clear course: In addition to business growth while also accepting responsibility for the company's employees, it stipulates the continued promotion of science and education as a corporate responsibility. Through its modern approach to sustainability, ZEISS is building on these historic values and assuming responsibility for sustainable development with its business activities.

ZEISS product solutions for ophthalmology, neurosurgery and ENT surgery drive medical progress and improve patients' quality of life. Eyeglass lenses from ZEISS help people around the world enjoy better vision. And intelligent measuring systems from ZEISS enable precise inspections in quality assurance within the aerospace and energy industries, thereby contributing to the production of safe and energy-efficient components. ZEISS semiconductor manufacturing equipment is defining the microelectronics age and makes microchips increasingly powerful as well as more energy- and cost-effective.

For ZEISS, impactful environmental protection begins at its own facilities, which is why we have set specific reduction targets for energy and CO<sub>2</sub> emissions along with waste and water. Last year, we were able to reduce our relative CO<sub>2</sub> emissions by 47 percent as compared to our reference year 2009/10. By the end of the upcoming fiscal year, we intend to achieve a reduction of 50 percent. We have also established quantifiable targets for occupational health and safety.

Further strengthening the impact of our activities in the broad field of sustainability requires carefully documented and exact reporting. To meet the European CSR reporting requirements, we have published a separate Non-Financial Report for the first time that has been reviewed by an auditing company. This Sustainability Report supplements the Non-Financial Report. It was prepared in accordance with the Global Reporting Initiative (GRI) standards, covers relevant concepts and performance indicators for fiscal year 2017/18 and thereby ensures transparent sustainability management.

Sincerely,



**Prof. Dr. Michael Kaschke**  
President and Chief Executive Officer

## About the Report (GRI 102-40, 102-45)

This Sustainability Report is intended for the ZEISS Group's customers, business partners, employees and investors as well as interested stakeholders from industry, research, politics and society and especially those people who live in the vicinity of our company's facilities. The report illustrates how the company contributes to sustainable development, which goals it has set for itself, which structures have been put in place and which actions it has taken. The report also addresses the company's legal obligations in different areas.

This Sustainability Report – the second published by the ZEISS Group – references fiscal year 2017/18 (1 October 2017 to 30 September 2018). All relevant departments were involved in its preparation, and the report has been approved by the Executive Board. Unless stated otherwise, the statements and performance indicators in the report refer to all ZEISS Group segments and all sites worldwide.

The report was prepared as per the standards set forth by the Global Reporting Initiative (GRI), the internationally recognized framework for sustainability reporting. This report has been prepared in accordance with the GRI Standards: Core option. It was made available to GRI for review by the GRI Materiality Disclosures Service, which has confirmed the correct placement of the materiality disclosures (102-40 to 102-49) in the report. The ZEISS Group publishes its Sustainability Report annually.

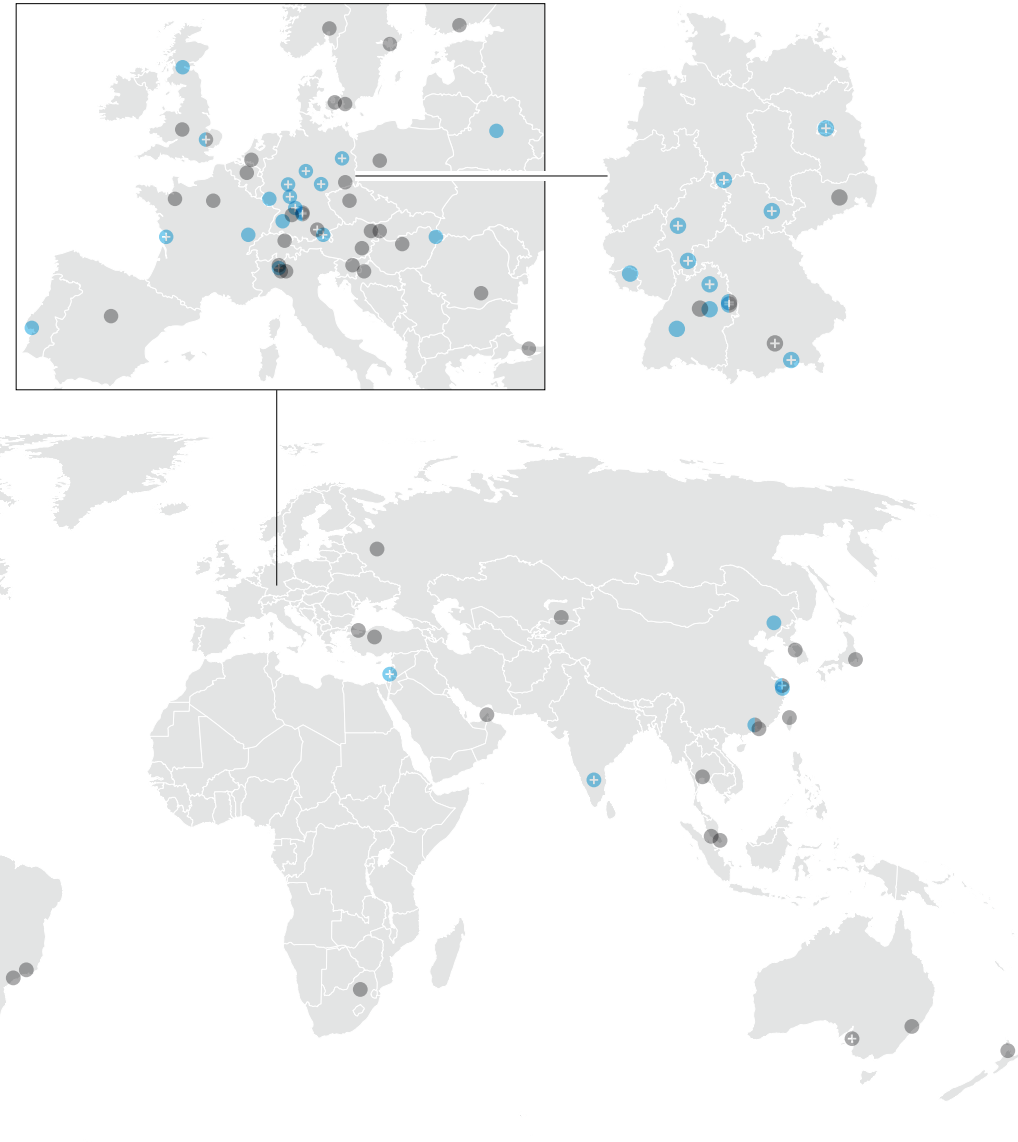
# Company Profile and Business Model

ZEISS is an internationally leading technology enterprise operating in the optics and optoelectronics industries. In the previous fiscal year, the ZEISS Group generated annual revenue totaling more than 5.8 billion euros in its four segments Industrial Quality & Research, Medical Technology, Consumer Markets and Semiconductor Manufacturing Technology.



Today the ZEISS Group is represented in almost 50 countries. About 30,000 employees worldwide work at more than 30 production sites, around 60 sales and service locations and about 25 research and development facilities. Founded in 1846 in Jena, the company is headquartered in Oberkochen, Germany. The Carl Zeiss Foundation, one of the largest foundations in Germany committed to the promotion of science, is the sole owner of the holding company, Carl Zeiss AG.

The Annual Report 2017/18 provides information on the general economic framework for the company's development and lists the Group's revenue by region in the Report on Economic Position.

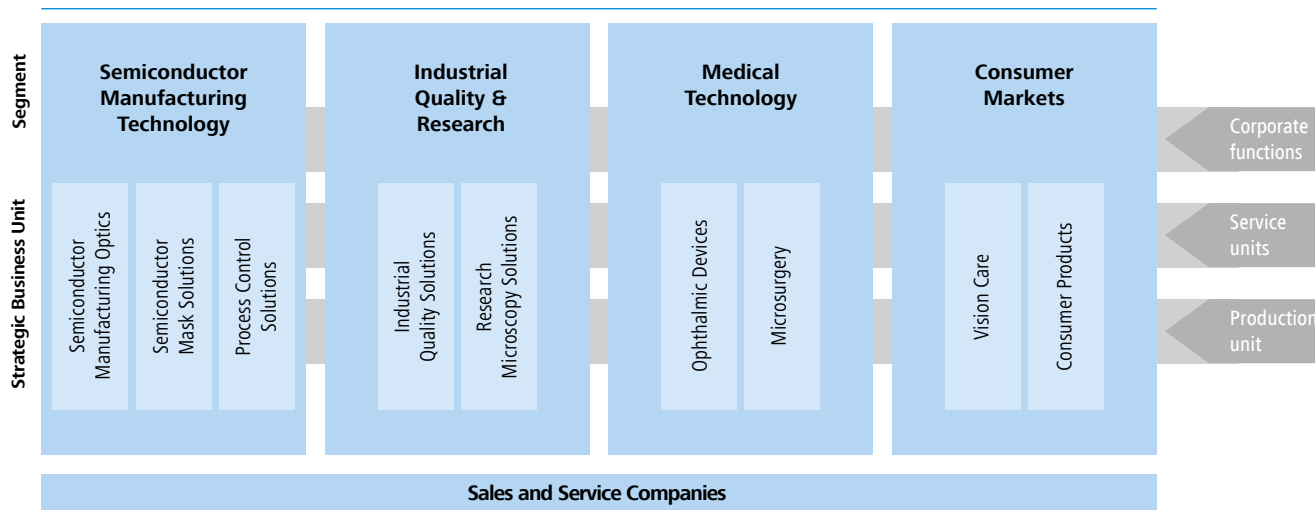


- Manufacturing site
- Sales and service site
- ⊕ Research and development site



## The Four Segments and Their Products

### ZEISS Group



#### Semiconductor Manufacturing Technology

With a wide product portfolio and globally leading know-how, the Semiconductor Manufacturing Technology segment covers a variety of key processes in the production of microchips. ZEISS develops and manufactures products using semiconductor manufacturing technology, including lithography optics, photomask systems and process control solutions, key technologies for the manufacture of extremely fine circuit path structures on silicon wafers – the material from which the microchips are made. The technologies from ZEISS

enable further miniaturization of semiconductor structures, making microchips smaller, more powerful, energy-efficient and cost-effective. The electronic equipment with which they are equipped fosters global progress in a variety of disciplines, including technology, electronics, communications, entertainment, mobility, energy and artificial intelligence. With this segment, ZEISS is making a decisive contribution to shaping the age of microelectronics and our digital future. In the reporting year, the segment celebrated 50 years of semiconductor manufacturing technology at ZEISS.

#### Industrial Quality & Research

The products and solutions developed in the Industrial Quality & Research segment are focused on increasing productivity, quality assurance in production and visualizing the tiniest of structures in the area of science and research. The range of coordinate measuring machines, optical and multisensory systems, and software solutions is complemented by comprehensive service offerings and innovative technologies, such as 3D X-ray measurement in quality assurance. They ensure perfect results, for example, in the automotive industry, mechanical engineering and aircraft construction, and in the plastics industry and medical technology. In the area of science and research, the segment also covers the entire spectrum of microscopy with light, ion, electron and X-ray microscopes. The solutions and services are used in the life sciences and materials research, as well as for education and in clinical practice.

#### Medical Technology

The Medical Technology segment develops, manufactures, markets and sells diagnostic and treatment systems, as well as implants and consumables in the field of ophthalmology. In addition, ZEISS offers visualization systems for microsurgery – for example, neuro/ENT surgery and dentistry. ZEISS aspires to improve the diagnosis and treatment of diseases by constantly enhancing its innovative products and applications. As a solutions provider, the company plays an active part in the increasing digitalization and systems integration in the health sector and creates the conditions needed for efficient processes and effective patient data management at its customers' sites. The segment's activities are pooled primarily in the listed entity Carl Zeiss Meditec AG, in which Carl Zeiss AG holds a 59.1% stake.

### Consumer Markets

The Consumer Markets segment stands for excellence in vision care, photography, cinematography and sports optics. ZEISS develops, produces and sells solutions for the entire eyeglass value chain. Alongside ZEISS precision eyeglass lenses, this includes devices for eye examinations and vision testing, digital consultation and measurement applications, as well as comprehensive services for eye care professionals. ZEISS is one of the world's largest manufacturers of eyeglass lenses and offers a combined competence in eye and vision care that is unique the world over. With its camera and cine lenses, binoculars, spotting scopes and hunting optics, ZEISS offers discerning customers high-end products and applications for their hobbies and professional needs.

### Consolidated revenue by segment

Revenue by segment	2017/18	2016/17	Change over prior year in %	
	€ million	€ million		Adjusted for currency influences
Semiconductor Manufacturing Technology	1,531	1,212	26	27
Industrial Quality & Research	1,549	1,538	1	4
Medical Technology	1,546	1,427	8	14
Consumer Markets	1,106	1,108	0	4
Other	85	63	35	35
<b>ZEISS Group</b>	<b>5,817</b>	<b>5,348</b>	<b>9</b>	<b>12</b>

### Consolidated revenue by region

Revenue by region and cooperation partners	2017/18	2016/17	Change over prior year in %	
	€ million	€ million		Adjusted for currency influences
Europe, Middle East, Africa (EMEA)	1,718	1,637	5	6
» Germany	596	608	-2	-2
Americas	1,263	1,316	-4	4
Asia/Pacific (APAC)	1,407	1,270	11	16
Cooperation partners	1,429	1,125	27	27
<b>ZEISS Group</b>	<b>5,817</b>	<b>5,348</b>	<b>9</b>	<b>12</b>

## Corporate Governance

Carl Zeiss AG is the strategic management holding company that manages the ZEISS Group. It develops the corporate business activities and portfolio and provides central management and service functions. The company is wholly owned by the Carl Zeiss Foundation (*Carl-Zeiss-Stiftung*).

The Supervisory Board oversees the activities of the non-listed company's six-member Executive Board. The Supervisory Board of Carl Zeiss AG has 16 members. In accordance with the provisions of the German Co-Determination Act (*Mitbestimmungsgesetz*), half the members are representatives of the sole shareholder – the Carl Zeiss Foundation – and the other half are representatives of the company's employees.

The Carl Zeiss Foundation Statute governs the activities and accounting of its subsidiaries, the duties of the Executive Board and the collaboration between the Executive and Supervisory Boards. For example, when determining total compensation paid to the individual members of the Executive Board, including any severance payments or pension payments, the Supervisory Board must ensure that the compensation paid is commensurate with the duties and performance of the board member and the company's financial position.

Further rules defining responsible and compliant corporate governance within the company can be found in the ZEISS Identity, Code of Conduct, governance and compliance guidelines, leadership principles and corporate directives.

### The Carl Zeiss Foundation

The Carl Zeiss Foundation is the sole shareholder of Carl Zeiss AG. This special ownership structure ensures stability: The Foundation Statute prohibits the sale of shares, e.g. through an initial public offering. In 1889 the physicist and entrepreneur Ernst Abbe created the Carl Zeiss Foundation, to which Carl Zeiss AG and SCHOTT AG belong. The objectives of the foundation stipulated by Abbe remain valid to this very day:

- » Safeguarding the future and responsible management of the two Foundation companies
- » Fulfilling its special responsibility toward employees
- » Meeting its responsibility toward society through the commitment of its member companies to non-profit activities in their surrounding regions
- » Promoting science

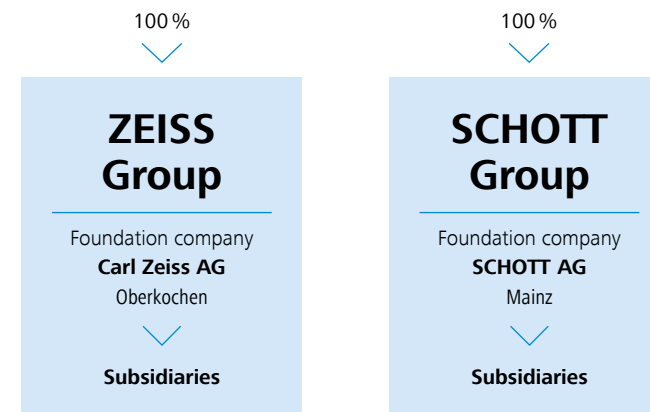
With this unique corporate model, the Carl Zeiss Foundation and its two member companies made industrial and social history in Germany. The Foundation uses the dividends generated by Carl Zeiss AG and SCHOTT AG to promote science – in particular the natural and engineering sciences, and mathematics and information technology at universities in the German federal states of Baden-Württemberg, Rhineland-Palatinate and Thuringia. Today, the Carl Zeiss Foundation is one of Germany's largest foundations committed to the promotion of science.

For more information, visit:

[www.carl-zeiss-stiftung.de/english](http://www.carl-zeiss-stiftung.de/english)

## Carl Zeiss Foundation

Heidenheim an der Brenz and Jena, Foundation acting as a shareholder



### ZEISS as a Partner to Researchers

For more than 100 years, over 30 Nobel laureates have advanced scientific progress with devices from ZEISS. For example, Robert Koch discovered the causes of tuberculosis and cholera and hence became the founder of modern bacteriology. Christiane Nüsslein-Volhard was honored for her studies on the genetic control of embryonic development. The team consisting of Eric Betzig, Stefan W. Hell and William E. Moerner performed groundbreaking work in the development of high-resolution microscopy techniques as the basis for further progress in science and research.

## Business Model

ZEISS has a broad and balanced business portfolio focused on attractive future-oriented markets for optics, precision mechanics and optoelectronics. As a global technology enterprise, ZEISS plays an active part in advancing cutting-edge technology and drives the world of optics and related fields with its solutions. A strategy consistently focused on continuous value enhancement is necessary both to ensure the sustainable business success of the ZEISS Group and to generate the necessary equity through internal financing. The ZEISS mission statement is: "As the pioneer of science in optics, we continue to challenge the limits of our imagination. With our passion for excellence, we create value for our customers and inspire the world in new ways."

This statement encapsulates the company's fundamental aspirations: ZEISS aims to leverage its strong customer focus to consolidate and expand its position as a global technology leader. With the commitment and expertise of its employees, its innovative strength and culture of innovation, ZEISS shapes the markets in which it is active. Moreover, the company continues to work on internationalizing its business.

Its strategic program, the ZEISS Agenda 2020, is intended to also make the company resilient and successful in the future. In this context, the ongoing improvements to the company's customer offerings, competitiveness in all areas, digital solutions and processes and collaboration as a global team all play a key role.

### Products and value chain

Optical and optoelectronic technologies will prove some of the key technologies in the future. The technological and scientific applications will increasingly penetrate all areas of life and

improve people's lives. When developing new technologies and solutions, ZEISS cooperates with renowned universities, research institutes, customers and experts as part of global networks. Suppliers and business partners around the world play a pivotal role in ZEISS' products and services and thus strongly impact the company's sustainability performance.

ZEISS develops the products and solutions itself. When it comes to manufacturing, the company collaborates with partners that supply either complete products or key components. Local purchasing organizations active around the globe source both production and non-production materials from local and international suppliers. The supplier base now includes 6,000 suppliers located in different countries around the world. The most important suppliers include those for glass, electronic elements and components, metals, mechanical components, plastics, software and IT solutions. ZEISS business units generate more than 50 percent of total purchasing volume with approximately 650 major suppliers that are located throughout EMEA, APAC and the Americas.

Depending on the business, market and customer segment, ZEISS relies on different distribution channels such as sales and service companies (SSCs), direct sales and distributors to give all regions access to ZEISS solutions.

### Business development

Continuous business development makes it possible to invest in infrastructure and innovations, distribute a reliable dividend to the Carl Zeiss Foundation and fairly compensate our employees around the world. By paying taxes where value is created, ZEISS has a direct impact on the future-oriented development of these different regions and the people who live there.

ZEISS invests in innovations and solutions, and it secures its innovative edge by means of patents. At the end of the reporting period, ZEISS held around 8,600 patents worldwide (prior year: Approximately 8,400). In the reporting period, the company applied for new patents for approximately 450 inventions (prior year: Approximately 500).

# Strategy and Sustainability

As a company owned by a foundation, sustainability and business success are inextricably linked at ZEISS. Sustainable value creation is a fixed component of the company's strategy, which focuses on innovative solutions that contribute to positive development in society and enables long-term, profitable growth.



Thus ZEISS' commitment to sustainability is also intended to generate interest in the company and its solutions among relevant stakeholders. Responsible behavior contributes greatly to the enormous trust customers place in the ZEISS brand. This is also the reason why ZEISS actively funds research and training and helps solve social and health care problems. This is an integral part of our corporate culture.

### Goals and values

As a foundation-owned company, social responsibility is one of the most important goals shaping the ZEISS Group's business operations. Codified by the founder of the Carl Zeiss Foundation, our obligations include profitable growth, responsibility toward our employees, a commitment to society and social issues as well as the advancement of science and education.

Now more than ever, these ambitions govern the company that, together with its products, makes a significant contribution to research and development worldwide and improves the lives of many people. This is another aspect that sets ZEISS apart as a pioneer in the field of scientific optics – namely, the profound conviction that the company's fundamental mission goes far beyond simply generating profits.

The ZEISS Agenda 2020 establishes the strategic framework for future business development. Here, the focus of all activities is placed squarely on the customer because ZEISS always aspires to be their "preferred partner." To live up to this goal, ZEISS not only needs to meet the highest quality and service standards, but also demonstrate that it operates responsibly above and beyond the value chain.

### Guidelines for daily activities

The ZEISS Group's Code of Conduct, which went into effect for all of the company's locations worldwide in 2007, lays out binding principles that guide employees and management in carrying out their daily activities in a responsible manner. It covers topics such as the fair treatment of coworkers and business partners, product safety, environmental protection and fighting corruption. More detailed company directives are available for all the topics addressed in the Code of Conduct.

### Our approach to sustainability

ZEISS understands that growth is only possible in an intact environment that is open to innovation. Only companies that respect the needs and motivations of others – particularly customers, business partners, employees and local communities – and cooperate with them on an ongoing basis can achieve long-term business success. At ZEISS, ensuring acceptance for our own activities and assuming responsibility for the environment, employees and society is an integral part of our business philosophy. Behaving with integrity and in a lawful manner is the foundation upon which the ZEISS business philosophy is built. Yet in many areas, ZEISS goes even further and achieves even more.

The approach taken by ZEISS to address, implement and integrate the requirements for responsible and sustainable business practices in its day-to-day operations is divided into five key areas of activity: Integrity and Compliance, Products and the Value Chain, Employees, Environment and Social Engagement.



### Drivers of innovation

With its innovations, ZEISS drives progress, efficiency and the success of its customers – another basic requirement for its own economic success. Thus ZEISS constantly strives to achieve a leading position worldwide in the evolution of existing products and the development of new ones. As part of this process, innovation at ZEISS is always situated within the context of society as a whole. The primary objective of all innovations is to meet customers' current and future needs. The optical and optoelectronic technologies from ZEISS pave the way for new scientific findings and many innovations in other industries. In the future, life sciences like bionics and medical technology will become increasingly vital for a modern society. The developments in semiconductor technology enable digitalization in industry and society. From intelligent sensor systems and different types of robotics to the artificial intelligence enabled by these technologies – all these innovations will increasingly shape how people live and work. Since all advances and enhancements in research, production and quality processes require more precise findings, through its expertise ZEISS makes valuable contributions to the development of new solutions.

### Contribution to global Sustainable Development Goals

ZEISS pledges its commitment to the global Sustainable Development Goals that were adopted by the United Nations in the fall of 2015. A total of 17 goals show us the path to the future we want to achieve by 2030 and call on companies, politicians and society to make their respective contributions. ZEISS wants to do its part and has given thorough consideration to the global Sustainable Development Goals and the role it can play (see page 23).

### Growing External Requirements

As a global player, ZEISS meets a variety of requirements for conducting business with integrity and in a legally compliant, sustainable manner. These include national and international requirements pertaining to the observance of human rights and implementation of climate protection goals and guidelines like those listed in the European WEEE Directive, which governs the collection, recycling and recovery of electrical and electronic waste. In 2017, the European Medical Device Directive created a legal framework intended to improve patient safety in Europe. This directive replaced the previous Medical Device Directive and sets high standards for the quality and safety of medical products. The CSR reporting obligations, which also went into effect in 2017, require transparency on environmental, social and employee matters, human rights, corruption and bribery. These only affect listed companies and hence only pertain to the listed company Carl Zeiss Meditec AG. Carl Zeiss AG complies with this reporting obligation by publishing a separate Non-Financial Group Report on important non-financial aspects related to the ZEISS Group.

## Organizational Structure for Sustainability

At ZEISS, ultimate responsibility for sustainability lies with the Executive Board of Carl Zeiss AG. The Head of Corporate Auditing, Risk and Quality Management oversees the implementation in day-to-day operations and reports to the Chief Financial Officer. The Responsibility at ZEISS work group was established in 2014 and is headed by a Central Sustainability Coordinator, who also manages sustainability within the company.

The work group comprises representatives from Environmental Protection, Communications, Human Resources, Supply Chain Management, Corporate Strategy, Occupational Health and Safety, Compliance and Sustainability Management. It meets twice per month and ensures that the company takes a systematic approach to addressing the specific sustainability topics. The work group cooperates with the Internal Process Owners to firmly entrench sustainability topics within the organization and to establish and cultivate a sustainability network at the company. In addition, it defines the content for the ZEISS Group's Corporate Sustainability Program. In the reporting period, the members of this work group from Environmental Protection and Occupational Health and Safety discussed suggestions for specific goals with the Executive Board, which then approved these.

To complement the work group's efforts, an interdisciplinary panel for sustainability management was started in 2018. This comprises representatives from the individual segments and is organized by the Central Sustainability Coordinator. The representatives were appointed by the respective Management Boards. As an agile platform, the panel ensures, together with the central team, that the segments' specific requirements are considered in this centralized approach and simplifies communication between the segments.

### Goals of the "Responsibility at ZEISS" Work Group

The Responsibility at ZEISS work group set itself the following objectives for fiscal year 2017/18 based on ZEISS' established brand values and many years of preparation.

It continues to work on achieving these goals:

- » Further develop the sustainability program and its measurability
- » Improve sustainability performance
- » Increase transparency and traceability for internal and external stakeholders

### Dialogue with stakeholders

To ensure the company's continued business success, it is absolutely essential to incorporate the interests of stakeholders in strategic considerations and to win over stakeholders interested in collaborating with ZEISS. The ZEISS Group implemented a systematic process to identify its key stakeholders. The company concentrates on issues relevant to these stakeholders when communicating with them. These were determined within the scope of a materiality analysis.

ZEISS receives questions about sustainability through many different channels. Stakeholders, including customers, suppliers, interested members of the public and employees, have the opportunity to ask questions and express their concerns via the

ZEISS website. ZEISS has set up an email address specifically for this purpose: [responsibility@zeiss.com](mailto:responsibility@zeiss.com). Questions are either answered by the central Responsibility at ZEISS project team, which is responsible for this topic, or forwarded to a specialist. This way, ZEISS ensures that the requests are processed as quickly as possible and with maximum accuracy.

Overall, ZEISS stakeholders expect greater transparency as concerns sustainability issues. The publication of the ZEISS Group's first Sustainability Report in fiscal year 2017/18 was an important step toward increasing communication with them. It quickly provided many people with information on issues relevant to them.

In fiscal year 2017/18, various stakeholders submitted inquiries on a wide range of sustainability issues. The central team collected, processed and assessed these. There was considerable interest in supply chain, environmental management, quality as well as sustainable corporate leadership and acting with integrity. Customers especially wanted to know about corporate environmental management at the ZEISS Group, in particular whether a certified environmental management system was in place. They also wanted to learn what was being done to reduce potentially hazardous materials. Responsibility along the supply chain also played an important role, with questions about how conflict minerals are handled and processes for ensuring human rights are observed. The central team received questions about fundraising opportunities, vocational training programs and the use of internal company information for degree theses and other projects. There were also inquiries from a variety of research institutes and universities as to whether ZEISS representatives would be available to give keynote talks on sustainability.



## Memberships and Initiatives

As a global player, the ZEISS Group is active in many national industry associations, participates in regional initiatives and is involved in many associations that provide financial support for colleges, universities as well as scientific and cultural institutions. The President and Chief Executive Officer of the ZEISS Group, Prof. Dr. Michael Kaschke, is a member of the German Council of Science and Humanities. In Germany, the company is involved in the Knowledge Factory (*Wissensfabrik*) intercompany cooperation project and is a long-term member of the Max Planck Society. In addition, the company is a member of the association East Württemberg Regional Alliance for Family (*Regionales Bündnis für Familie Ostwürttemberg e.V.*) and is one of the signatories of the Diversity Charter, an initiative to promote diversity in German companies. At the international level, ZEISS is a member of the "Vision Council", a non-profit trade association, and helps fight tuberculosis through the initiative "Stop TB".

## ZEISS Group stakeholders and communication formats (GRI 102-40, 102-43)

Stakeholder groups (listed alphabetically)	Key communication formats
Banks	Ongoing communication between ZEISS and banks
Carl Zeiss Foundation	Members of the Executive Board of Carl Zeiss AG sit on the Management Advisory Board of the Foundation, the Chairman of the Supervisory Board sits on the Foundation Council
Company committees/unions	Staff meetings, Works Council committees
Customers (business customers and private consumers)	Consultations, training, global customer satisfaction survey via Net Promoter Score, external communication channels like newsletters and social media
Employees and management	International communication channels, annual performance reviews, employee satisfaction surveys, staff meetings, Dialogue Tours
Governments, including municipal and state governments (Baden-Württemberg, Thuringia)	Financial reporting, compliance reports, dialogue with Foundation representatives (i.e. with the ministers responsible for the scientific universities in the German federal states)
Investors	Personalized communication with the Investor Relations department, Annual Report, ZEISS website, Sustainability Report, Non-Financial Report
Media	Press releases and conferences, trade shows and exhibitions, Annual Report
Research institutes and universities	Partnerships with universities; funding for professorships, Ph.D. dissertations, bachelor theses and master theses; lectures given by managers at universities
Suppliers	Supplier meetings and audits, subject-specific dialogue, demand-driven supplier development, seminars and training as part of development partnerships

### Definition and prioritization of material sustainability issues (GRI 102-42, 102-43, 102-44, 102-46)

Those topics with high stakeholder expectations and which also have a relevant impact on the employees, environment and society are extremely relevant and part of this Sustainability Report. In calendar year 2016, potential issues were identified from different sources. These issues were then evaluated from the standpoint of different stakeholders, and an assessment was performed to determine the significance of these issues for ZEISS' ongoing business success. The 15 topics defined as part of this process are now considered material issues for the ZEISS Group.

In fiscal year 2017/18, the materiality analysis process was further expanded by analyzing the effects of the company's own operations and the systematic documentation of stakeholders' different expectations. ZEISS intends to further enhance both processes in fiscal year 2018/19.

### Defining the impact

In order to better understand the effects of the company's own business activities, initially those topics were addressed that had been identified in the previous materiality process. To assess these effects, a questionnaire was prepared. The inputs acquired were used to locate the impact along the value chain and to ascertain the magnitude and probability of the effects. The respective experts from the Responsibility at ZEISS work group performed the analysis, which they then discussed with the panel for sustainability management. It was also possible to address those issues which had not been considered and include them in the assessment. This resulted in a better understanding of where relevant effects emerge and where particular attention should be paid to the sustainability activities. This process confirmed the material issues for reporting, and these remain unchanged in this Sustainability Report.

### Documenting stakeholder expectations

A systematic method for better documenting and incorporating stakeholder expectations in the materiality process was developed as part of an academic thesis and tested. Questionnaires were prepared and sent to numerous stakeholders who, for each sustainability issue, estimated how important its management is for their readiness to cooperate with ZEISS and how pressing it is for ZEISS to take up each issue. In addition, the stakeholders could list topics which, in their opinion, ZEISS had not yet addressed. The questionnaire was geared toward employees, suppliers and investors. The assessment showed that those topics ZEISS considered material issues were also extremely relevant for stakeholders, even though the ratings from the different stakeholder groups varied.

## Integrity and Compliance (GRI 102-47)

Material issues	GRI topics	Goals	Selected measures in FY 2017/18	Location of impact
<ul style="list-style-type: none"> <li>» Business ethics</li> <li>» Legal compliance</li> </ul>	<ul style="list-style-type: none"> <li>» Anti-corruption, anti-competitive behavior, public policy, customer privacy, socioeconomic compliance</li> </ul>	<ul style="list-style-type: none"> <li>» Increased value orientation and behaving with integrity in accordance with the ZEISS Group's Code of Conduct</li> <li>» Compliance with applicable law in order to secure the trust of customers and partners</li> <li>» Protection of the ZEISS brand</li> </ul>	<ul style="list-style-type: none"> <li>» Redesign of the Group-wide online courses on the Learning Management System for basic compliance training and special training programs on anti-corruption and fair competition</li> <li>» The centralized assignment and tracking of participants in the Learning Management System</li> <li>» Overhaul of the Compliance Management Systems and the directive on giving and receiving benefits</li> <li>» Creation and publication of instructions on how to act in the event of a conflict of interest</li> <li>» Efficient organization of data privacy at ZEISS in a uniform global structure</li> </ul>	<ul style="list-style-type: none"> <li>» Upstream value chain</li> <li>» Downstream value chain</li> </ul>

## Products and Value Chain (GRI 102-47)

Material issues	GRI topics	Goals	Selected measures in FY 2017/18	Location of impact
<ul style="list-style-type: none"> <li>» Procurement standards</li> <li>» Product safety</li> <li>» Material restrictions</li> </ul>	<ul style="list-style-type: none"> <li>» Supplier environmental assessment, freedom of association and collective bargaining, child labor, forced or compulsory labor, supplier social assessment, customer health and safety</li> </ul>	<ul style="list-style-type: none"> <li>» Improved sustainability performance of ZEISS products and services as well as in the supply chain</li> </ul>	<ul style="list-style-type: none"> <li>» Continuation of the sustainability audits piloted in 2017 and the development of action plans in the event suppliers do not meet ZEISS sustainability requirements</li> <li>» Sustainability requirements in accordance with the Code of Conduct published by the Responsible Business Alliance (RBA) became part of contractual agreements with suppliers in FY 2017/18</li> <li>» Design of an eLearning course for supply chain functions and suppliers on the most important content from the RBA Supplier Code of Conduct</li> <li>» Creation of an annual report to evaluate the supply chain as concerns the origin of conflict minerals based on the recognized report template from the Responsible Minerals Initiative and OECD (Organisation for Economic Cooperation and Development) Guidelines</li> </ul>	<ul style="list-style-type: none"> <li>» Upstream value chain</li> <li>» Downstream value chain</li> </ul>

**Social Engagement** (GRI 102-47)

Material issues	GRI topics	Goals	Selected measures in FY 2017/18	Location of impact
<ul style="list-style-type: none"> <li>» Promotion of scientific research and education</li> <li>» Regional society</li> <li>» Health promotion</li> </ul>	<ul style="list-style-type: none"> <li>» Economic performance, indirect economic impact, local communities</li> </ul>	<ul style="list-style-type: none"> <li>» Promotion of scientific knowledge from preschool children to doctoral candidates</li> <li>» Improved patient quality of life through solutions and new standards in optometry and medical technology</li> </ul>	<ul style="list-style-type: none"> <li>» Sociopolitical commitment at multiple schools throughout Germany to support the initiative 16+ MINT (MINT = STEM: science, technology, engineering and mathematics)</li> <li>» Kick-off event for 2018 – “Rethinking Education,” first ZEISS MINT Awards for high school students and occupational trainees in honor of their outstanding dedication to the STEM subjects</li> <li>» Primary sponsor of the MINT Festival in Jena, Germany, an event celebrating the sciences for grade school and high school classes</li> <li>» Primary sponsor of the national physics competition, also providing support for the national mathematics competition</li> <li>» Support totaling over 500,000 euros from the Education and Science Fund for around 25 projects in the natural sciences and engineering</li> <li>» Continuation of existing programs to refurbish ZEISS products and donate them to disadvantaged regions without sufficient access to medical care and the five ophthalmology training centers in Indonesia, Nigeria, Paraguay, Sudan and Tanzania (ongoing)</li> </ul>	<ul style="list-style-type: none"> <li>» Upstream value chain</li> <li>» Downstream value chain</li> </ul>

**Employees** (GRI 102-47)

Material issues	GRI topics	Goals	Selected measures in FY 2017/18	Location of impact
<ul style="list-style-type: none"> <li>» Occupational health and safety</li> <li>» Work-life balance</li> <li>» Diversity (including demographic changes)</li> <li>» Employer relationships and talent management</li> </ul>	<ul style="list-style-type: none"> <li>» Employment, labor/management relations, occupational health and safety, training and education, diversity and equal opportunity, non-discrimination, freedom of association and collective bargaining</li> </ul>	<ul style="list-style-type: none"> <li>» Global Team ZEISS: Promote enhanced collaboration and the development of all employees</li> <li>» Reduce the performance indicator for the number of workplace accidents (LTIFR) to under 2.25 by fiscal year 2022/23</li> </ul>	<ul style="list-style-type: none"> <li>» Defining specific performance indicator targets to reduce the frequency of workplace accidents</li> <li>» Appointment of a Global Coordinator for Occupational Health and Safety (OHS)</li> <li>» 158 young people began a vocational training program or a combined degree-and-vocational-training program at ZEISS Germany</li> <li>» First parent-child workspace, a pilot project, opened in Oberkochen</li> <li>» Opportunity to work in other countries for a limited period of time (101 placements abroad in 37 different countries)</li> <li>» Establishment of a Diversity work group with representatives from each area and region</li> <li>» Diversity Days featuring 35 activities held in 14 countries</li> <li>» Global roll-out of the ZEISS Learning Platform</li> <li>» Internationalization of the eBooks available in German, English, Spanish and Chinese</li> <li>» Investments in the expansion of the eLearning offering</li> </ul>	<ul style="list-style-type: none"> <li>» In the company</li> </ul>

**Environment** (GRI 102-47)

Material issues	GRI topics	Goals	Selected measures in FY 2017/18	Location of impact
<ul style="list-style-type: none"> <li>» Environmental compliance</li> <li>» Climate change</li> <li>» Efficient use of natural resources</li> </ul>	<ul style="list-style-type: none"> <li>» Energy, water and effluents, emissions, effluents and waste, environmental compliance</li> </ul>	<ul style="list-style-type: none"> <li>» Economical use of all natural resources to protect the environment</li> <li>» 50%* reduction in CO<sub>2</sub> emissions (Scope 1 and 2)</li> <li>» 50%* reduction in energy use</li> <li>» 40%* reduction in water consumption</li> <li>» 30%* reduction in waste accumulation</li> </ul>	<ul style="list-style-type: none"> <li>» Independent EH&amp;S audits at major production facilities to review legal compliance status</li> <li>» Participation in CDP (previously: Carbon Disclosure Project) as the ZEISS Group</li> <li>» Establishment of mandatory environmental targets for the ZEISS Group</li> <li>» Continuation of several projects to conserve energy and resources at ZEISS sites</li> </ul>	<ul style="list-style-type: none"> <li>» Upstream value chain</li> <li>» In the company</li> <li>» Downstream value chain</li> </ul>

\*Reduction targets by fiscal year 2019/20 relative to the company's own value added

## How ZEISS Supports the Achievement of the Global Sustainable Development Goals



In the fall of 2015, the United Nations adopted the globally applicable Sustainable Development Goals (SDGs) to be achieved by 2030. Private industry is also called upon to do its part to ensure fair development worldwide that creates prosperity within the limits of what the planet can sustain.

ZEISS has pledged its support for this agenda and wants to assist with its implementation. The company is aware that all 17 goals are important and require support. In order to concentrate on those areas in which the company possesses particular influence due to its business processes, product portfolio and services, ZEISS has selected the following four goals.



**3 Good Health and Well-being:** Ensure healthy lives and promote well-being for all at all ages.

**Focus: Globally, 37 million people are blind, and 124 million suffer from a visual impairment**

ZEISS is raising the bar in health care by offering solutions for ophthalmology and medical technology and helps drive medical progress by supplying microscopy products. The aim is to help improve the lives of patients everywhere. Over the course of the “VISION 2020: The Right to Sight” initiative, ZEISS has supported five diagnostic, treatment and training centers for ophthalmology since 2005. In line with the idea of “helping people help themselves,” the objective is not only to provide access to state-of-the-art medical technology in developing and emerging countries through training centers, but also to establish locations where health care providers are taught how to use state-of-the-art medical technology and apply it. These centers are located in Indonesia, Nigeria, Paraguay, Sudan and Tanzania.

**Focus: Over 50 percent of the world’s population does not have sufficient access to basic health care services**

The company also makes financial donations and in-kind donations in the form of ZEISS products and solutions through a variety of different projects in order to give people around the globe access to high-quality medical care.



**4 Quality Education:** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

**Focus: Globally, 264 million children and adolescents are not in school**

ZEISS fosters aspiring young scientists – from small children right up to doctoral candidates – through numerous educational programs. ZEISS acts on the responsibilities set forth in its Foundation Statute, shares educational content in a comprehensible manner and makes science easier to understand. Examples of this include the company’s involvement in schools and its microscope donations to various educational initiatives.

**Focus: In Germany, just 20 percent of the German population surveyed as part of a study believe that schools adequately prepare students for life after graduation**

With the goal of bringing young people closer to science and research, ZEISS has sponsored *Jugend forscht*, Germany’s oldest and best-known competition for young researchers, for 20 years. During the kick-off event for the “2018 Initiative – Rethinking Education” (*Initiative 2018 – Bildung Neu Denken*), the company also presented the MINT Awards to honor five projects by high school students, vocational trainees and university students.





### 8 Decent Work and Economic Growth:

Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.

#### **Focus: 197 million people worldwide are unemployed**

As a global technology company, ZEISS provides jobs to approximately 30,000 employees. They are offered a safe and motivating work environment, where hard work and dedication are acknowledged and individual advancement is possible. A global survey of employees conducted on a regular basis determines the state of the corporate culture at ZEISS.

#### **Focus: In more than 50 countries worldwide, human rights are under siege or egregiously violated**

When working with suppliers, the company has pursued a centralized approach for integrating sustainability aspects into the supply chain since 2016. This approach focuses on compliance with environmental and social standards at suppliers' sites. To monitor this, demand-driven assessments and audits are conducted based on risk.



### 12 Responsible Consumption and Production:

Ensure sustainable consumption and production patterns.

#### **Focus: Humanity would require 1.7 Earths to sustain current global consumption of resources**

ZEISS continues to work on finding ways to use natural resources as efficiently as possible and prevent pollution. This is achieved in part through investments in measures to boost energy efficiency, consistent waste reduction and the integration of environmental aspects in product development.

One example of product-integrated environmental protection is the ZEISS AirSaver, a performance package comprising software and a control module for lowering the compressed air consumption of measuring machines. The energy saved reduces CO<sub>2</sub> emissions, cuts costs and, as a result, the package pays for itself after only a few months.

In addition, refurbishment programs are in place for several product groups, including electron microscopes. Older, pre-owned products are completely rebuilt in accordance with ZEISS standards and made available for resale to customers (see page 32).

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## Integrity and Compliance

Business activities compatible with statutory regulations and internal rules are an integral part of the ZEISS corporate culture. The company's mandate to act with integrity stems from the values that have been shaped by the history of this foundation company.

The company stands for integrity which customers, suppliers and business partners trust. For this reason, legality, fair competition and the proper treatment of business partners and employees are indispensable elements of successful business operations. This requires an open and respectful corporate culture which, along with an effective Compliance Management System, ensures that any deficiencies at ZEISS are detected, identified and corrected.

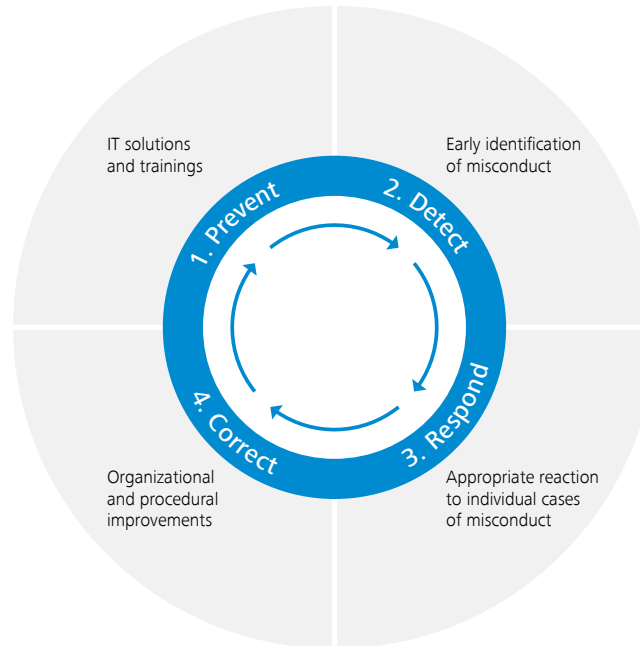
# Compliance

Legality means compliance with all laws and regulations and is the foundation of sustainable corporate governance. Yet integrity cannot simply be decreed. Instead, it must be actively put into practice by management, who act as role models, and be enshrined in the corporate culture.

## Guidelines and structures

At ZEISS, the foundation for compliance management is the Code of Conduct, which was first published in 2007 and most recently updated in 2016. This describes the risks of conducting business activities and provides specific recommendations on how to act. As the basis for entrepreneurial activity, the Code of Conduct is mandatory for all employees and managers at the ZEISS Group worldwide. It contains rules on various issues, including data protection, product safety, environmental protection and combating corruption. More detailed company directives are available for all the topics addressed in the Code of Conduct.

At ZEISS, compliance is organized on three different levels: On the Group level the Chief Compliance Officer, who reports to the Executive Board, and the Director Corporate Compliance are responsible for the Compliance Management System. This area of responsibility encompasses the design of the Compliance Management System and assisting with the identification and rectification of all compliance violations that might jeopardize the reputation of the entire ZEISS Group. Each strategic business unit has appointed its own Group Compliance Officer, who coordinates compliance activities for the particular area and its companies. In addition, each individual company has its own local Compliance Officer, who is responsible for implementing training measures on site and resolving any local compliance violations, and who serves as the point of contact for both employees and management.



Ensuring that all ZEISS business activities conform with the prevailing rules is the collective responsibility of the Executive Board and the heads of the ZEISS companies. This includes observing data protection, customs and export provisions, laws pertaining to the environment as well as regulations on occupational and product safety. Moreover, the periodic inquiry into compliance risks at all ZEISS companies is an important part of risk management throughout the Group. Regular internal and external audits and assessments are conducted to determine if all legal requirements are being met.

## Processes to ensure integrity

The Compliance Management System has been established at all companies within the ZEISS Group and features modules on leadership, risk assessment, standards, organization, training and communication as well as oversight and controls. The core processes are:

### » Prevent

A clearly structured catalogue of directives and mandatory training seminars is used to continually raise awareness and prevent incidents from occurring.

### » Detect

In spite of all the preventive measures, legal violations and cases of non-compliance can still occur within the company. To identify such cases, employees are called on to actively cooperate and should report suspected violations. Different departments and experts, such as Corporate Security or Internal Auditing, also assist with the investigation of suspected compliance violations. Depending on the case, the company can also avail itself of external assistance.

### » Respond

The company then takes appropriate measures to immediately eliminate unlawful behavior.

### » Correct

Depending on the type of misconduct, systematic or procedural measures may be necessary to prevent recurrence.

## Anti-Corruption

### Measures

All employees must complete and regularly repeat a basic compliance training program, which includes passing a final exam. This course covers the topics found in the ZEISS Code of Conduct. Employees exposed to particular compliance risks, such as in purchasing, sales and marketing, as well as members of management, must complete additional training modules on the topics of anti-corruption and fair competition. The eTrainings were completely revised in fiscal year 2016/17 and are available in 14 languages. The new Learning Management System enables the assignment of the course content to specific employees and the centralized tracking of how many people have completed the eLearnings.

ZEISS is successful in competitive markets because its products and services offer customers the right combination of price and quality. Since it is aware that corruption impedes progress and innovation, the company has issued clear rules to prevent and battle corruption. These rules are a vital part of compliance management as described above.

Internal company guidelines on granting and receiving benefits such as gifts or invitations constitute an important component of anti-corruption training. Using specific examples, a checklist for employees helps them assess whether or not particular benefits are permitted. Moreover, there are also obligatory directives for auditing sales partners. These are supported by the auditing tool from an external provider. The goal is to determine whether sales partners were ever previously suspected of corruption or involvement in a cartel, export control, money laundering or similar crimes, or exhibit any other risk factors that could damage ZEISS' reputation.

## Political Influence

The government creates the framework for business operations. Associations and interest groups help negotiate standards and common development goals. This is why ZEISS is a member of academic, industry and employer associations.

ZEISS explicitly affirms the independence and integrity of parliaments, parties and governments as the cornerstones of basic democratic order and, in the company's communications work, repeatedly emphasizes that a free, democratic regulatory framework is necessary for successful business activities in a globalized world.

The companies in the ZEISS Group do not make any financial donations or other contributions to parties or political institutions, because the Carl Zeiss Foundation Statute stipulates that all support must be politically and religiously neutral.

## Data Privacy

ZEISS is aware of the importance of protecting personal data for an ethical, future-oriented business model. The company aims to operate in compliance with international guidelines and national law so that ZEISS remains a trustworthy partner for its customers, suppliers, business partners and consumers.

Since an increasing number of companies and individual strategic business units handle highly sensitive personal data like health data, evidence of dependable and appropriate data privacy practices are a requirement for business relationships built on trust. Violations not only damage a company's reputation, but can also result in heavy fines.

### Guidelines, structures and processes

International and national data privacy regulations provide the general framework. These are supplemented by a compulsory internal directive on handling personal data, which is applicable worldwide. All employees and partners are bound to secrecy and must sign a declaration to this effect. From an organizational standpoint, data privacy is integrated into Corporate Legal & Patents. Potential crisis scenarios are simulated as part of preventative crisis management. The Corporate Data Protection Officer, who together with a two-person team defines principles and rules governing the protection of personal data and monitors compliance, reports directly to the Chief Financial Officer.

Members of the Executive Board or the Management Board for the strategic business units are responsible for implementation and compliance. To support these efforts, Corporate Data Protection employs a data privacy management system. Each company has a Data Protection Coordinator who is responsible for training measures, acts as the local point of contact for all questions from employees and management and remains in contact with the Corporate Data Protection Officer.

### Measures and results

In light of new legal frameworks, especially the European Union's General Data Protection Regulation and China's Cyber Security Law, ZEISS needed to organize data protection within a globally standardized structure. This process was completed in May 2018. An eLearning module on the subject of data privacy has been available in 14 languages since fiscal year 2016/17. Following an update to the Learning Management System in November 2017, it is now possible to track participation from one central location.

### Consistent Data Privacy Worldwide

To ensure a consistent level of data privacy in its business operations, ZEISS observes the data protection standards for the European Union in all markets where the company is active as well as local requirements. The common data protection level is a hallmark of excellence for the entire Group and a promise of quality for external partners, customers, employees, suppliers and other stakeholders.

## Products and Value Chain

With its solutions, ZEISS constantly advances the world of optics and helps shape technological progress. With its passion for excellence, the company creates value for its customers and inspires the world to see in new ways.

ZEISS offers a wide variety of highly specialized products that are as diverse as its different customer groups and their particular requirements – from hospitals and medical practices to research laboratories and technology companies and extending to automotive manufacturers and consumers. For all of them, the name ZEISS is a promise of quality, innovation, safety, reliability and responsibility. And for many of our customers, ZEISS also stands for better health and improved quality of life.

## Product Safety and Product Development

ZEISS products and services contribute to medical advancements in neuro/ENT surgery and support physicians on every continent in improving their patients' quality of life. Eyeglass lenses from ZEISS help people around the world enjoy better vision, while intelligent measuring systems from ZEISS increase efficiency in different sectors, including the automotive and aerospace industries. For example, state-of-the-art coordinate measuring technology is used to inspect the fit accuracy of drive train components in vehicles to ensure low fuel consumption. For ZEISS, product responsibility means more than just innovative, effective and safe products. It also includes responsible value chain creation from raw materials to product sales.

### Guidelines and structures

At ZEISS, creating safe products is a matter of course. ZEISS requires that all applicable laws governing product safety, both when the products are in use and being disposed of, be implemented consistently. As part of a comprehensive risk assessment during product development and production, ZEISS ensures that, prior to a product launch, all necessary measures have been taken to guarantee that customers and third parties can use and dispose of the product safely. Instructions for use and training help users operate ZEISS devices safely and successfully. In addition, potential vulnerabilities are reviewed within the scope of continuous market surveillance. As a result, ZEISS is able to respond by implementing potential improvements and, if necessary, rapidly executing corrective measures. The issue of product safety and its importance for the company's success are enshrined in the ZEISS Group's Code of Conduct. All applicable country-specific laws and guidelines for ZEISS' primary markets lay the foundation for product development,

design and sales – in accordance with the applicable standards. Individual specialists from ZEISS play an active role in their ongoing development by European and international committees and standardization bodies and thereby bring fresh ideas to product development at ZEISS.

Within the ZEISS Group, guidelines and monitoring ensure compliance with standards and rules. The responsibility for product safety lies with the Executive Board or the Managing Directors of the individual companies, respectively, as well as with Safety Officers responsible for the particular product. They must make the structures, resources and necessary skills available to properly implement all mandatory legal requirements. The following principles apply worldwide:

- » Product safety requirements must be observed during every stage of the product life cycle.
- » Customer feedback must be used as the basis for product improvements.
- » Ongoing market surveillance is utilized to ensure that products continue to meet the highest safety requirements.
- » The safety of certain products must be verified by independent organizations.

### Processes

The Product and Solution Generation process is of fundamental importance. The purpose of this guideline is to both define the minimum requirements for a modern development process at the ZEISS Group and specify mandatory minimum content.

A checklist outlines the mandatory minimum content. The goal of this systematic focus on the development process is to give customers the right products and solutions with respect to customer expectations, customer benefit, quality, time and costs, thereby achieving a significant competitive edge.

ZEISS only releases products after successfully addressing the aforementioned areas and the corresponding requirements. In addition, ZEISS continuously strives to reduce the environmental impact within the product life cycle. The mandatory checklists feature two related categories that must be observed during development: The products' environmental performance and sustainability over the products' entire lifetime. Based on the company's environmental principles, this approach to product-integrated environmental protection constitutes an obligation to adhere to strict process management. This is how the company ensures that all ZEISS products meet the applicable environmental regulations and guidelines. In particular, ZEISS ensures that:

- » Raw materials are used that are harmless to human health and the environment.
- » The manufacture and use of products generate as few effluents and emissions and as little waste as possible.

### Objectives and results

ZEISS products must not endanger users' safety or health. To guarantee this, the applicable requirements are implemented and, where needed, the necessary approvals are obtained to launch the products. The certification of relevant products by independent testing centers ensures a higher safety standard.

Updated minimum requirements governing the further integration of sustainability aspects in the product development process became binding for the development of all ZEISS products on 1 October 2018.

Many of the ZEISS strategic business units have switched from disposable to recyclable packaging for their products in recent years. Recyclable packaging is most frequently used for products from the Industrial Quality & Research and Semiconductor Manufacturing Technology segments delivered to customers within Europe.

## Product Refurbishment

Starting in fiscal year 2015/16, the Research Microscopy Solutions strategic business unit began a program to refurbish electron microscopes: Pre-owned systems are brought up to date and then sold at a discounted price. Customers receive a one-year warranty, and replacement parts are guaranteed for a period of five years. Since the start of the program, around 70 electron microscopes have been refurbished. In fiscal year 2018/19, the program will be expanded to include light microscopes. In addition to economic advantages, this program benefits the environment: Refurbishment reduces a system's ecological footprint because the raw materials used to produce it and the necessary energy are spread out over a longer service life. The unit has been able to draw on the experience of the Retrofit and Used Machines departments at the Industrial Quality Solution strategic business unit for its refurbishment program. This business unit has been retrofitting existing systems at its customers' sites with the latest technologies since 2002. In fiscal year 2017/18, over 400 refurbished systems were sold thanks to on-site retrofitting and modernized previously-owned machines. Revenue generated from these services totaled over 10 million euros.



## Procurement and Supplier Management

Due to the significant value creation along the supply chain, the procurement process is critical to the long-term success of the ZEISS Group. Local purchasing organizations active around the globe source both production and non-production materials from local and international suppliers. The company's constantly evolving supplier base now includes over 6,000 suppliers located in different countries around the world. ZEISS business units generated more than 50 percent of total purchasing volume with approximately 650 major suppliers that are located in the following regions: 73 percent in EMEA, 14 percent in APAC and 12 percent in the Americas.

### Guidelines and structures

The company works very closely with its global supplier network to reduce the negative impact of its business operations. For this, ZEISS takes a risk-based approach for the systematic management of suppliers as concerns sustainability aspects. As such, environmental and social aspects play an important role in the selection of and collaboration with suppliers. In complex supply chains, environmental pollution, inadequate occupational health and safety standards, and child or forced labor all represent potential risks that ZEISS wants to proactively address. To ensure its own requirements are fulfilled and the expectations of customers, employees and society at large are met, ZEISS plays an active role in ensuring that suppliers adhere to environmental and social standards.

ZEISS suppliers must adhere to the provisions listed in the internationally recognized Code of Conduct from the Responsible Business Alliance (RBA). These serve as minimum standards for human rights, health and safety, environmental protection and business ethics. The RBA Code of Conduct is based on the

UN Guiding Principles on Business and Human Rights and international human rights standards like those issued by the International Labour Organization (ILO). ZEISS expects all suppliers who have a direct business relationship with the company to meet the minimum standards in the Code of Conduct. The strategic suppliers outside of the ZEISS Group, who make up around 50 percent of the company's external purchasing volume, must recognize the RBA or a similar code of conduct, adhere to it and inform their sub-suppliers and contractors of the standards. Demand-driven assessments and audits are conducted to monitor compliance with the Code of Conduct. On principle, ZEISS does not enter into any business relationship if there is evidence of human rights deficiencies.

In order to anchor the topic of human rights more strongly within the company, ZEISS has assembled a work group with representatives from the Supplier Sustainability Team, Corporate Human Resources and Sustainability Coordinators. This group develops strategies for implementing the German Federal Government's National Action Plan for Business and Human Rights (NAP) and ensures that these comply with statutory requirements like the British Modern Slavery Act. The integration of sustainability aspects in the supply chain is monitored by the Supply Chain Expert Panel, which comprises employee representatives from supplier management at the different strategic business units. The Supplier Sustainability Team, which also operates on a Group level, bundles different activities for integrating sustainability aspects in supply chain management, drives their development and supports their implementation in all strategic business units.

### Processes

Within the scope of a risk-based approach, issues relevant to sustainability are a part of the supplier management process.

- » New suppliers are selected on the basis of a self-assessment questionnaire that includes questions related to occupational safety, environmental protection, energy efficiency and the acceptance of the RBA Code of Conduct. In addition, observing the RBA requirements also constitutes a key part of contractual agreements.
- » If a supplier is responsible for a significant share of value created, ZEISS conducts an on-site supplier audit at the supplier's place of business to perform a supplementary risk assessment. The goal is to get to know existing and future partners better as well as identify and eliminate weak points in the supply chain.
- » Major suppliers undergo an annual evaluation that includes occupational safety, environmental protection and energy management criteria. The results are then discussed with the suppliers in order to define enhancement measures. Aspects such as occupational safety, fire prevention and environmental management have been a part of cross-divisional supplier quality audits since 2012.
- » In accordance with established risk indices and the annual purchasing volume, the assessments of major suppliers determine if there are any potential sustainability risks. For those suppliers with an increased risk, a comprehensive media screening and a supplementary risk assessment are performed before conducting any further business activities. This makes

it possible to define additional steps, such as the completion of a sustainability self-assessment or an on-site audit. In the event of insufficient compliance with ZEISS' sustainability requirements, an action plan is agreed upon, with the company monitoring and overseeing its implementation.

Within the scope of its due diligence obligations, ZEISS has also established a suitable process for identifying and assessing risks in the supply chain for handling conflict minerals and draws on the globally recognized templates from the Responsible Minerals Initiative (formerly: the Conflict-Free Sourcing Initiative) when communicating with relevant suppliers.

### Results

A standardized assessment was conducted in fiscal year 2017/18 to identify the sustainability risk of the major suppliers. In preparation for potential on-site audits, those suppliers considered particularly high risk as a result of the initial evaluation will be asked to fill out a sustainability survey in the future: The Sustainability Supplier Self-Assessment Questionnaire. In order to systematically identify risks in the supply chain pertaining to modern slavery, the standardized STRT (Slavery & Trafficking Risk Template) questionnaire was also piloted for the first time.

Based on the risk assessment and classification, ZEISS identified six suppliers in the reporting year and had an interdisciplinary and international team conduct on-site sustainability audits. This involved a follow-up audit in Germany and five initial audits in Asia. Deviations, particularly in the areas of occupational safety and transparency concerning working conditions, were identified. A plan for corrective measures was instituted to rectify them.

In order to sensitize suppliers and key functions in supply chain management to sustainability issues and to train them on how to meet requirements, ZEISS developed an eLearning course on the RBA Code of Conduct. In October 2018, this was made available on the ZEISS Learning Platform, which suppliers can also access.

ZEISS did not become aware of any violations or complaints pertaining to human rights in the supply chain during the 2017/18 fiscal year. All stakeholders were asked to report any suspected cases.

### Performance indicators

A total of 97 percent of suppliers that responded with respect to their compliance with the RBA Code of Conduct (answers were received from 77 percent of major suppliers contacted in fiscal year 2017/18) confirmed their compliance with this or a comparable code of conduct.

Since 2012, approximately 270 supplier quality audits have been performed, which also covered aspects related to occupational safety and environmental management.

## Alternative Logistics

Strategic business units like Research Microscopy Solutions or Vision Care are increasingly testing alternative means of transportation, especially for air freight. Since summer 2018, products from China are transported to Europe via the Trans-Siberian Railway. This pilot project is intended to show under what conditions these more environmentally friendly alternatives are also suitable for other product groups. At the same time, the options are being reviewed to increasingly opt for certain transportation routes and more frequently ship products as sea freight. In addition to a reduced environmental impact and cost savings, this also makes it possible to spread out transportation risks more broadly. Key criteria for selecting the mode of transportation are protecting the freight, flexibility in terms of time and potential impact on the environment.

## Employees

In the competition for talents, ZEISS positions itself as an attractive employer and benefits from its reputation as a global and innovative foundation-owned company with a strong focus on values that have been enshrined in the corporate culture since the company's founding.

Achieving precision, innovation and unparalleled quality requires motivated and qualified employees. In light of the demographic change and the increasing shortage of skilled workers, a diverse workforce and equal opportunities that are truly put into practice will prove decisive competitive advantages. ZEISS is proactively facing these challenges with a global recruiting strategy – fully in line with the ZEISS Agenda 2020. The goal is to make the company more customer-oriented, more competitive and more digital while also strengthening global collaboration as a team.



## Employee Involvement

The more involved employees feel at the company, the more motivated they are when working. In Germany, co-determination is another tool for involving employees. Yet as a company active around the globe, it is important to ZEISS that its central values and concepts be put into practice at all sites worldwide.

### Guidelines, structures and processes (GRI 102-41, 102-43)

Corporate Human Resources works with HR managers and division representatives to define standards and procedures for strategic and overarching areas of activity and implements them within the scope of the department's functional management worldwide. This department is the Group Works Council's main dialogue and negotiating partner and is the point of contact for all of the companies' human resource departments.

Operational co-determination is well established at ZEISS, and the principles of the Foundation Statute are enshrined at the sites in Germany. Statutory matters and those issues regulated by collective wage agreements are negotiated with the respective employee representatives. In addition, ZEISS regularly discusses planned changes and initiatives with the employee representatives' committees.

In accordance with the provisions of the German Co-Determination Act (*Mitbestimmungsgesetz*), half the members of the Supervisory Board of Carl Zeiss AG represent the sole shareholder – the Carl Zeiss Foundation – while the other half represent the employees. The Executive Board regularly reports to the Supervisory Board on current issues and planned operational changes. A European Works Council (EWC) is in place at Carl Zeiss Vision International GmbH.

The Pulse Check, a survey of employees conducted on a regular basis, gives employees worldwide the chance to provide feedback on issues affecting corporate culture anonymously. The company uses this tool to measure the current state of the corporate culture and determine where progress has already been made and which priorities should be set in the future. In addition, the results of the survey are used to define specific recommended actions for developing the corporate culture. The most recent Pulse Check was held from the end of January through February 2018. The results were presented to the Executive Board and discussed with ZEISS employees. The Pulse Check showed that more than 80 percent of all employees enjoy working at ZEISS, and that 75 percent of employees would recommend ZEISS as an employer. Both values had improved since the previous survey. Nevertheless, ZEISS has set itself the goal of further driving this positive trend through suitable measures on the corporate and departmental levels.

### Measures and results

By launching the ZEISS Agenda 2020 initiative, the company has established a clear strategy for the years ahead. In order to successfully implement it, the strategy must go hand in hand with the development of the corporate culture. A reliable tool is the Cultural Journey. Launched in 2008, it involves employees in shaping change processes.

During fiscal year 2017/18, the Members of the Executive Board presented the updated strategy set forth in the ZEISS Agenda 2020 and discussed it with employees in numerous Dialogue Tours. Employees also addressed the necessary actions in numerous Team Summits, which are also part of the Cultural Journey. For example, they discussed how to improve global collaboration and prepare the company for the digital future.

ZEISS employees shared in the success for fiscal year 2017/18. Employees in Germany received a gross bonus payment of 2,400 euros, which was paid out in October 2018 after the end of the reporting period. Employees at the majority of companies outside Germany also shared in the success for fiscal year 2017/18 on the basis of the country-specific regulations.

### Global employee structure

	2017/18	2016/17
Total	29,309	26,944
» Vocational trainees and students enrolled in a cooperative education program	464	419
» Contract workers	967	1,052
» Part-time employees	1,483	1,398
» Employees with fixed-term contracts	1,354	997
Percentage of female employees	34%	34%

### Employees by region

	2017/18	2016/17
Germany	12,067	11,339
EMEA (without Germany)	4,522	4,025
Americas	6,683	6,266
APAC	6,037	5,314

## Education and Training

A total of 158 young people began a vocational training program or a combined degree-and-vocational-training program in 2018 at the German locations Göttingen, Jena, Oberkochen and Wetzlar. They are being trained in the fields of industrial mechanics, precision optics, mechatronics and industrial business management or are completing a combined degree-and-vocational-training program – which marries theoretical knowledge with real-world application. For the latter program, ZEISS cooperates with various universities. With its sophisticated dual education system, ZEISS is contributing to the development of society, above all at its German sites.

Advanced training includes focusing on the development of managers. In addition to a mandatory program to prepare them for their first leadership experience, ZEISS also promotes job rotation for its employees. Postings abroad within the company are enabled through a variety of different programs. Various offerings to identify and develop talents support employees in their professional careers, with special attention paid to their particular skills. This way, ZEISS not only enables promising careers for managers, but also offers attractive career paths for specialists.

Both young talents and seasoned professionals can participate in special development programs to enhance their leadership skills and establish professional contacts at international networking events. This prepares them for new challenges and ultimately increases ZEISS' appeal as an employer, which plays an extremely important role in combating a lack of skilled workers. With a wide range of training and education programs – for example, in the form of web-based seminars – ZEISS also offers employees in other countries professional development opportunities.

### Guidelines, structures and processes

Corporate Human Resources (CHR) is responsible for training and education, talent management and management development. The department works closely with the local human resource departments within functional teams, service areas and projects. To support the ongoing education of all employees, the eCademy learning platform was established, providing access to a wide variety of different educational formats – from face-to-face events to courses that are entirely online. Known as the Group Learning Program, it has been available since fiscal year 2016/17 – initially only to German-speaking locations – and offers more than 150 different training modules. Globally, the program has been enhanced with numerous eBooks that are available for download on the learning platform.

### Measures and results

At the end of the reporting period, ZEISS employed a total of 464 vocational trainees and students in a combined vocational-training-and-degree program in Germany (previous year: 419). To ensure that young talents remain interested in ZEISS over the years ahead, the company stays in touch with approximately 10 percent of its best interns through a retention program. Ultimately, approximately 560 young people completed a technical or business-related internship at the company's German locations or wrote their thesis at ZEISS. In addition, approximately 150 high school students had the opportunity to explore their future career options as part of a high school internship.

### New Smart Production Expertise

The digital future will require new expertise and skills. With a pilot project at the company's site in Oberkochen, ZEISS is preparing to meet the needs of Smart Production through vocational training, instructing students in cutting-edge methods and taking an innovative approach to teaching. The new course is called "Networked Production," and in the future all ZEISS vocational trainees in Germany will have to complete it to ensure they are ready to tackle the manufacturing challenges of tomorrow. Course participants learn how a modern, networked production facility functions and what skills employees will need in the years to come. As part of a project, they must organize themselves as a cross-functional team and manage the processes themselves. Before this, the vocational trainees learn project management and Lean Production basics in a blended-learning course. A professionally structured, pedagogically sound process that teaches participants skills and social competencies encourages teamwork between technical and business fields underpins these efforts.

## Diversity and Equal Opportunity

### Performance indicators

#### Figures on the use of the ZEISS Learning Platform in fiscal year 2017/18

- » Number of active users in Germany who have completed at least one online course: **27,394**
- » **83,307** online courses completed globally
- » Number of eBook downloads: **18,100**

#### Learning figures for Germany\*

Fiscal year (FY)	2017/18	2016/17	2015/16
Total no. of courses completed	27,394	21,134	11,868
Total no. of participant-days**	27,233	18,767	18,328

\* These statistics include face-to-face training sessions for FY 2015/16 and eLearnings booked via the learning platform in Germany for FY 2016/17. In FY 2017/18, the ZEISS Learning Platform was rolled out worldwide and the statistics adjusted accordingly. The figures do not contain any training sessions related to professional training or partnerships with universities.  
\*\* Based on the estimated length of the training course (one participant-day corresponds to 7.5 training hours) and not including travel or preparation time.

With around 30,000 employees in almost 50 countries, diversity is part and parcel of everyday life at ZEISS. The company is shaped by a diverse array of skills, mentalities, experiences, leadership and work styles, cultural backgrounds, nationalities and lifestyles. This is a tremendous advantage, because diverse teams are more creative and solution-oriented. Thus diversity strengthens the company's ability to innovate and plays a key role in the implementation of the ZEISS Agenda 2020.

At the same time, diversity in all its forms is crucial to the global success of an international company like ZEISS – because employees are familiar with the markets, understand customers' different needs and know how to respond to business partners' cultural practices and customs. This greatly contributes to local acceptance and trust in the company.

#### Guidelines, structures and processes

Both the Foundation Statute as well as the ZEISS Code of Conduct prohibit all forms of discrimination, whether due to "ethnic or social origin, skin color, gender, age, familial status, disability, religion, nationality, sexual identity or any other features" (ZEISS Code of Conduct). ZEISS further emphasized its commitment to diversity by signing the Diversity Charter in July 2017. The goal of this business initiative under the patronage of German Chancellor Angela Merkel is to promote the acceptance, appreciation and inclusion of diversity in the German work environment.

When it comes to its strategy for promoting diversity, ZEISS focuses on five aspects in particular:

1. Professional background: Being open to different professional careers and educational backgrounds.
2. Internationality: Employees from different cultures and with different nationalities should work in an atmosphere of mutual respect and esteem.
3. Generations: The work environment needs to be organized so that different generations can work together successfully.
4. Gender: Everyone should receive the same opportunities, regardless of gender.
5. Workplace culture: An open and flexible workplace culture should allow all employees to achieve the right work-life balance.

CHR, which reports directly to the Executive Board, is responsible for implementing the diversity strategy. It receives support from the Diversity work group, which is composed of representatives from different business areas, employee representatives and international colleagues. Executives and management are obliged to model integrity through their own behavior, inform employees about the rules, monitor compliance with these rules and rectify violations. Local human resource departments assist CHR with clarifying and resolving any violations. Since fiscal year 2017/18, a new reporting system has been in place for documenting cases of discrimination.

### Objectives and results

The main objectives are to better integrate international employees at German locations and support the professional development of women. In fiscal year 2017/18, the focus was on onboarding and the improved integration of international employees. The work group for monitoring and implementing these objectives is made up of representatives from various strategic business units and regions and meets every six weeks. In order to openly address problems and make suggestions for improvement, a discussion was held between the President & CEO and 25 international employees.

In order to create a corporate culture that promotes, recognizes and appreciates diversity, the following initiatives were launched, continued or expanded in Germany during the reporting year:

- » Expansion of the cooperation network for international employees and their family members
- » Women's Business Lunch as an initial networking opportunity for women in leadership positions in Oberkochen, Jena and Berlin
- » A mentoring program for women in Oberkochen and Jena to promote equal opportunity
- » A cooperation network for childcare and care for relatives to enable a better work-life balance

In fiscal year 2017/18, ZEISS was named a 'family-friendly company' by the Success Factor: Family (*Erfolgsfaktor Familie*) business network.

### Global age structure of the ZEISS Group in fiscal year 2017/18

Age distribution	Male	Female	Total
Under 30	3,666	2,295	5,961
30 to 49	10,875	5,545	16,420
50 and older	4,696	2,232	6,928
			<b>29,309</b>

### Diversity Equals Success

At ZEISS, diversity means being open to and supporting difference. In honor of the Diversity Days event held from 21 May through 5 June 2018, the internal diversity website was launched and 35 activities were organized in 14 countries. Workshops on diversity as a factor behind the ability to innovate were held along with networking events for women in management positions and for new employees, language lunches to give employees the chance to speak their native language and much more. Employees from around the globe submitted short videos in which they shared their ideas and views on diversity. Within the scope of the dimensions 'work culture' and 'working conditions,' a parent-child workspace was created at the site in Oberkochen as a pilot project. This workspace is intended to help employees maintain a healthy work-life balance by providing parents with the opportunity to bring their children to work so that they can better meet their professional and familial obligations.

## Occupational Health and Safety

For ZEISS, guaranteeing a healthy work environment and a safe workplace is a fundamental obligation toward its employees. This also applies to employees from non-ZEISS companies acting on behalf of ZEISS. ZEISS promotes its employees' health and performance through comprehensive safety measures and occupational health examinations. In doing so, the company avoids compliance risks and ensures productivity.

### Guidelines, structures and processes

Safety in the workplace and protecting the health of all employees are principles enshrined in both the Foundation Statute and the ZEISS Code of Conduct. The Chief Financial Officer, as a member of the Executive Board, is responsible for occupational health and safety. The respective heads of all ZEISS business units are responsible for occupational safety and, consequently, for the development, implementation, auditing and continuous improvement of health and safety performance. The responsibilities of all ZEISS employees and managers are described in a corporate directive or Corporate Standard Operating Procedure.

All companies in the ZEISS Group are obligated to appoint an OHS (Occupational Health and Safety) Officer in writing. The duties of the OHS Officer can differ as a result of local legislation, but always include advising management and assessing occupational health and safety risks. Furthermore, all ZEISS employees are called on to actively promote occupational safety and report risks to their supervisors or the respective OHS Officer. The company units organize their own training programs on occupational health and safety, which are the responsibility of the respective managers.

In Germany, the Head of Occupational Health and Safety takes on an advisory role for all locations pursuant to Germany's

Act on Occupational Physicians, Safety Engineers and Other Occupational Safety Specialists (*Arbeits-sicherheitsgesetz*). To do so, an occupational safety and health protection handbook – which must be implemented throughout Germany – is available. It regulates fundamental processes and procedures. Occupational health and safety management at ZEISS sites in Germany encompasses all sites, including the non-ZEISS employees commissioned by these facilities. Their contractors must consent to ZEISS' directive on external companies prior to accepting the commission. Eleven sites, including two in Hungary and two in China, have been certified as per OHSAS 18001, the international management standard for occupational safety. An occupational health and safety management system based on the requirements stipulated in OHSAS 18001 has been implemented at all other ZEISS sites in Germany. ZEISS promotes occupational health management primarily in Germany, but there are also individual initiatives at international sites. Insofar as health management contributes to a modern workplace and good working conditions, it is also an important factor when recruiting young talents.

Moreover, Occupational Safety Committees (OSC) subject to statutory control have been formed at German sites. They convene each quarter to discuss occupational safety issues and accident prevention. Company management is responsible for organizing the OSC. This task falls to the Member of the Executive or Management Board responsible for occupational safety or the appointed site manager for occupational health and safety. The committees also include members of the Works Council, a company physician, an occupational health and safety expert, safety officers and, if applicable, a representative for handicapped employees. Since this includes at least one

representative from company management, the committees can also make decisions.

### Objectives and results

The main objective is to reduce the frequency and severity of occupational accidents. In order to compile these data worldwide and be able to better manage preventive measures in the future, new performance indicators were introduced in fiscal year 2016/17. These data were first compiled for June 2017.

The Executive Board has set the following goal for all production units within the ZEISS Group: A Lost Time Injury Frequency Rate (LTIFR) of less than 2.25 for all the ZEISS Group's production units by the end of fiscal year 2022/23. In fiscal year 2017/18, the LTIFR was 3.96, and there were no fatal workplace accidents. In addition, a global coordinator for Occupational Health and Safety (OHS) was appointed in October 2017. The Head of the Occupational Health and Safety department took on this role in addition to his functional management responsibility for Germany.

### Performance indicators

To determine the performance indicators, 45 business units with over 23,000 employees supply statistics on the frequency and severity of workplace accidents on a monthly basis. Additional employees who primarily work in administration and sales outside of Germany are currently not included in the data because of their lower estimated risk potential. The following performance indicators are available for all regions:

» **Lost Time Injury (LTI):** A severe workplace injury that must be treated by a physician who is neither employed nor under contract with ZEISS, and which causes the person affected to



be unable to work on the following day (absence due to injury  $\geq$  1 calendar day).

» **Lost Time Injury Frequency Rate (LTIFR):** Workplace accidents per one million hours worked (this corresponds to 500 full-time employees) within a defined period of time (frequency).

» **Severity Rate (SVR):** Describes the average severity of all accidents that occurred in a certain time period.

» **Lost Calendar Day Rate (LCDR):** Describes the number of lost calendar days (LCD) per one million hours worked (this corresponds to 500 full-time employees) within a defined period of time.

» **Target hours:** (In the contracts of employment) agreed working hours.

#### Performance indicators for fiscal year 2017/18

	LTI	LTIFR	SVR	LCDR	Target hours
Germany	96	4.04	20	80	23,777,556
EMEA (without Germany)	22	4.93	14	70	4,463,492
Americas	53	4.32	15	66	12,273,269
APAC	9	1.82	7	12	4,956,545
<b>Total</b>	<b>180</b>	<b>3.96</b>	<b>17</b>	<b>68</b>	<b>45,470,862</b>

# Environment

Effective environmental protection and the responsible use of resources are core objectives of the ZEISS Group. ZEISS sees potential to increase its competitiveness by adhering to the highest standards, as well as for innovation, new business ideas and cost optimization.

As an optics and optoelectronics company, the ZEISS Group seldom uses environmentally critical materials and production methods. As a responsible company, this makes the Precautionary Principle all the more important for ZEISS: This means preventing environmental impact whenever possible. A key aspect is the efficient use of materials and energy – from product development, manufacturing and sales and extending all the way to a product's use by the customer. This way, ZEISS also helps protect the climate, since every reduction in energy consumption also decreases CO<sub>2</sub> emissions.

## Efficient Use of Natural Resources

Raw materials, semi-finished goods, preliminary products, energy and water are all used to manufacture the company's various products. This generates emissions, effluents and waste that cannot subsequently be reused in the manufacturing process. ZEISS continues to reduce its consumption and emissions and has set specific targets. The use of natural resources is accompanied by certain risks, including a scarcity of the necessary natural resources or a negative impact on the environment resulting from mining, processing and disposing of materials. In addition, rising energy, material, or waste disposal prices can adversely affect the company's competitiveness. Thus ZEISS continuously optimizes its business processes in line with environmental and economic aspects and organizes them so that increasingly fewer resources and less energy are required relative to value added. The integration of environmental aspects in product development (see page 31) should, for the most part, make end-of-pipe activities unnecessary. Wherever possible, ZEISS endeavors to close material cycles and take into account the idea of resource efficiency with the resources it uses. In order to advance new approaches to resource efficiency, ZEISS offered four years of support to the Industrial Resource Efficiency think tank at the Karlsruhe Institute of Technology (KIT) beginning in July 2017.

ZEISS selects and uses raw materials, technologies and production processes based on their environmental compatibility and the associated environmental risks. Wherever possible, potentially hazardous materials are replaced with less problematic substances. Recyclability is a key factor when selecting a material. Waste that can neither be prevented nor recycled is disposed of properly. In doing so, ZEISS selects the most environmentally friendly disposal method that is also economically viable.

### Guidelines, structures and processes

ZEISS considers compliance with stringent environmental standards to be one of the company's fundamental duties. To ensure that the company continues to improve its environmental performance, ZEISS first drew up global environmental principles back in 1998. To implement them, the company utilizes an Environmental Management System in accordance with the international ISO 14001:2015 standard. The environmental performance requirements are laid out in an internal directive on environmental protection that all ZEISS units worldwide must adhere to. The directive was updated in fiscal year 2016/17.

The Chief Financial Officer of Carl Zeiss AG bears overall responsibility for the implementation of the ZEISS Group's Environmental Management System. An Environmental Officer appointed at the Group level assists the business units with the implementation and helps them identify suitable measures. Additional appointees are designated at each site. At the end of the reporting period on 30 September 2018, 32 business units at 16 of the ZEISS Group's production facilities (FY 2016/17: 16) had been certified by external auditors in accordance with ISO 14001.

An employee suggestion program has been established at eight ZEISS sites in countries like China, the US and Germany. The employees' submissions are assessed based on their feasibility, impact and efficiency. For ZEISS, relevant ideas include suggestions for conserving energy, reducing materials usage, finding substitutes for hazardous chemicals and improving efficiency. Ideas from employees which meet ZEISS' stipulated criteria are honored with a small financial award and frequently receive recognition on a local level.

### "Environmental Protection" Work Group

To foster the exchange of information and best practices among sites in Germany, the Environmental Protection work group for the ZEISS Group was established in 2002. Officers for the integrated management system, environmental officers, environmental coordinators, representatives from the waste management, wastewater technology and utilities management divisions, hazardous materials officers and specialists for environment, health and safety (EHS) all take part in the meetings. The work group meets at least once per year. Since its founding, 26 meetings have been held.

## “Green, Safe & Responsible” Initiative

In fiscal year 2017/18, the Vision Care strategic business unit started the Green, Safe & Responsible Initiative with the goal of further improving its own performance in the following areas: The environment, occupational health and safety and social engagement. The initiative has established work groups for the Environmental, Occupational Health and Safety and Energy Managers from the respective production sites worldwide, who utilize these weekly meetings to discuss their experiences and exchange ideas. During fiscal year 2017/18, more than 120 individual activities were started as part of the initiative, with about half of these targeting environmental improvements. In order to make these measures more tangible, an Experience Center was opened for employees at the company's location in Guangzhou, China. Here they can learn about a variety of topics, including the latest developments in occupational health and safety.

### Energy

ZEISS energy management is tasked with keeping energy-related KPIs stable or improving them, even if the production quantities increase. Here the focus is on all of the company's operational processes, machines, systems and equipment along with its buildings and infrastructure. This is how, despite an increasing number of employees and growing revenues, ZEISS has been able to keep energy consumption more or less constant and even significantly reduce consumption at certain facilities. At several locations, ZEISS produces solar energy for its own use. A potential switch to renewable energy is currently under review.

All of the ZEISS Group's sites within the European Union have been certified as per ISO 50001, the internationally valid standard for energy management. Each of these units has appointed an Energy Manager who is responsible for maintaining the system with the goal of continuously improving energy-related performance. Systematically exploring and implementing measures to save energy is how ZEISS is also meeting the goals of the Paris Agreement (see page 45).

### Water and effluents

Water comes primarily from the public drinking water supply and is used for manufacturing and cleaning processes, for cooling or as sanitary water. Consistently reusing water in rinsing processes and the internal circulation of water in production, cleaning and cooling systems has significantly reduced water consumption in the past years.

Effluents resulting from production processes are treated in the company's own internal treatment plants and then subsequently drained into the municipal sewer system. The quality standards are defined by the local laws on water and effluents. Regular internal inspections ensure these standards are observed, and appropriate measures are implemented in the event of discrepancies.

### Waste

As systematic waste prevention is a top priority at ZEISS – not least for financial reasons – it has been possible to reduce the volume of waste as per value added since the reference year 2009/10. In fiscal year 2017/18, the relative and absolute volume of waste increased, which was due in part to ongoing construction projects. A distinction is generally made between waste for recycling and waste for disposal, as well as between hazardous and non-hazardous waste.

### Objectives and results

In March 2018, specific reduction targets to be achieved by fiscal year 2019/20 were set together with the Executive Board of the ZEISS Group: A 50 percent reduction in CO<sub>2</sub> emissions and energy consumption, a 40 percent reduction in water consumption and a 30 percent reduction in waste accumulation relative to the company's own value added. The reference year is fiscal year 2009/10 for all three targets.

Target	Target by FY 2019/20*	Reduction achieved in FY 2017/18*
Reduction in (relative) <b>CO<sub>2</sub> emissions (Scope 1 and 2)</b>	50%	47%
Reduction in (relative) <b>energy consumption</b>	50%	46%
Reduction in (relative) <b>water consumption</b>	40%	38%
Reduction in (relative) <b>waste volume</b>	30%	30%

\* Relative change over reference year 2009/10

All of the business units certified in accordance with ISO 14001 have set their own goals for improving their environmental performance as part of their area-specific environmental programs. These goals are developed based on the respective business unit's specific circumstances (such as products and processes). A regular, usually annual, review within the units is conducted to monitor the achievement of these goals.

### Standardized Packaging for Eyeglass Lenses

In order to save material, ZEISS has standardized the packaging for eyeglass lenses and also reduced the number of different types of packaging from 163 to six. Environmentally friendly material is used for the boxes. This standardization has also simplified the packaging and delivery processes. This measure enabled ZEISS to save the equivalent of two million plastic bags or 70 tons of packaging material in fiscal year 2017/18.

### Smart Technology for Monitoring Energy Consumption

China Mass Manufacturing in Guangzhou, China, has implemented a Smart Energy Metering System to better analyze and optimize energy consumption. This includes the entire site as well as individual processes and machines. The energy meters enable precise energy consumption monitoring and also indicate whether a machine is functioning reliably or is becoming inefficient. The installation of the system required an investment of 20,000 euros.

### Climate protection at ZEISS

The ZEISS Group aims to help limit global warming and supports the goals set forth in the Paris Agreement as well as the resulting national targets. As part of risk management, the company regularly assesses the risks and opportunities associated with climate change. More specifically, this includes the possible impact of emissions trading, plans to introduce a CO<sub>2</sub> tax and other regulatory developments. The company also monitors potential physical phenomena, such as extreme weather resulting from climate change, that could affect both its own sites and those of its suppliers. Currently, however, these risks are categorized as highly unlikely.

The company can also leverage opportunities afforded by its own products in particular, e.g. with the ZEISS AirSaver, which reduces the compressed air consumption of measuring machines (see page 25). At the same time, the company's business processes are being examined to determine where and how CO<sub>2</sub> emissions can be reduced the most effectively. Energy management and increased efficiency in production open up new potential, such as by effectively preventing the unnecessary use of materials and implementing just-in-time logistics.

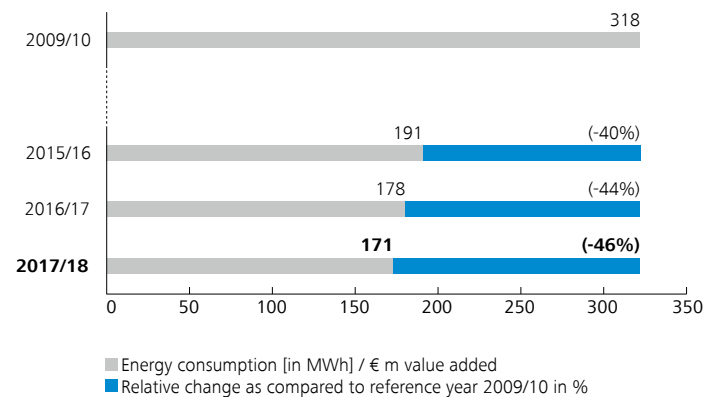
In fiscal year 2017/18, ZEISS also participated in CDP (previously: Carbon Disclosure Project) climate reporting for the first time. As a consequence, the process for capturing energy and emissions data was improved. For its disclosures, which include a financial assessment of the risks and opportunities, ZEISS was, on a scale of A to D, given a score of "B" by CDP. The results are publicly available at [www.cdp.net](http://www.cdp.net).

### Performance indicators

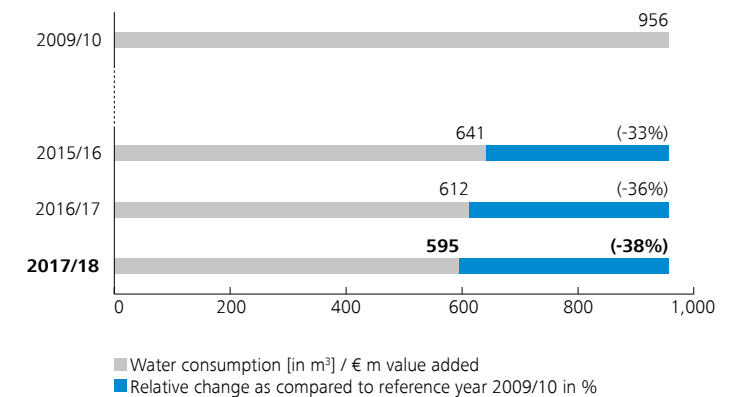
The performance indicators for energy, water, waste and CO<sub>2</sub> emissions are recorded and consolidated globally at ZEISS. They include all of the ZEISS Group's major production sites (61 sites varying in size and activities). The CO<sub>2</sub> emissions are recorded as per ISO 14064-1, which takes the Greenhouse Gas Protocol into account.

The following charts show the respective values from the past fiscal years in relation to value added\* and the percentage change since fiscal year 2009/10.

### Energy consumption



### Water consumption



Fiscal year (FY)	2017/18	2016/17	2015/16	2009/10
Energy consumption [in GWh]	514	504	483	500
» Electricity	332			
» Gas	150			
» Heating oil	1			
» District heating	32			
Value added for ZEISS overall [€ m]	2,998	2,822	2,532	1,572
Energy consumption [in MWh] / € m value added	171	178	191	318
Relative change over base year 2009/10 in %	-46	-44	-40	0

Fiscal year (FY)	2017/18	2016/17	2015/16	2009/10
Water consumption [in 1,000 m³]	1,783	1,727	1,622	1,503
Value added for ZEISS overall [€ m]	2,998	2,822	2,532	1,572
Water consumption [in m³] / € m value added	595	612	641	956
Relative change over base year 2009/10 in %	-38	-36	-33	0

\* At ZEISS value added is defined as the sum of Earnings before Interest, Taxes, Depreciation and Amortization (EBITDA) and personnel expenses.

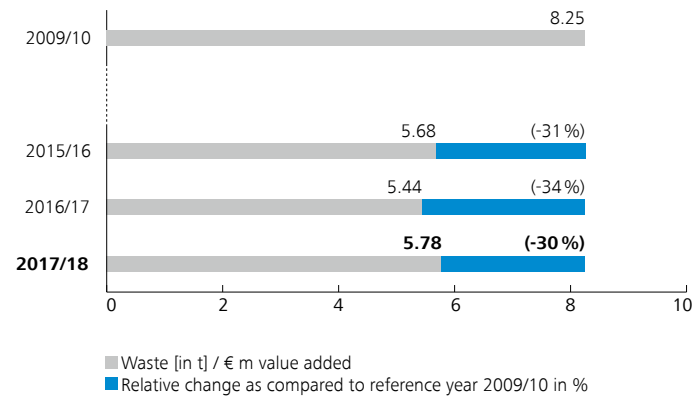
**46** percent reduction in (relative) energy consumption in fiscal year 2017/18 as compared to 2009/10

**38** percent reduction in (relative) water consumption in fiscal year 2017/18 as compared to 2009/10

Starting in fiscal year 2017/18, separate statements are published for Scope 1 and Scope 2 emissions. The emissions were calculated with current emissions factors as per the VDA list (updated January 2018).

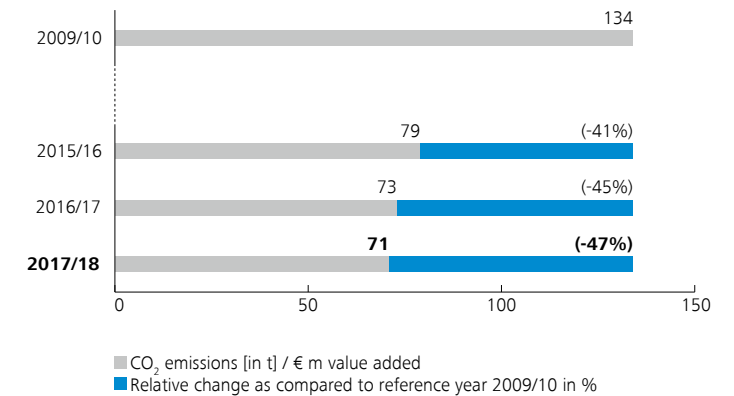
\* The figures shown here differ from those published in the Sustainability Report 2016/17 because, starting in fiscal year 2017/18, the current emissions factors from the German Association of the Automotive Industry (*Verband der Automobilindustrie*, abbr. VDA), updated in January 2018, are used to calculate the CO<sub>2</sub> emissions (GRI 102-48).

### Waste volume



Fiscal year (FY)	2017/18	2016/17	2015/16	2009/10
Waste volume [in t]	17,327	15,340	14,393	12,975
» Hazardous	3,092			
» Non-hazardous	14,234			
Value added for ZEISS overall [€ m]	2,998	2,822	2,532	1,572
Waste volume [in t] / € m value added	5.78	5.44	5.68	8.25
Relative change over base year 2009/10 in %	-30	-34	-31	0

### CO<sub>2</sub> emissions (Scope 1 and 2)\*



Fiscal year (FY)	2017/18	2016/17	2015/16	2009/10
CO <sub>2</sub> emissions [in t]	213,308	206,466	199,870	210,223
» Scope 1	30,524			
» Scope 2	182,784			
Value added for ZEISS overall [€ m]	2,998	2,822	2,532	1,572
CO <sub>2</sub> emissions [in t] / € m value added	71	73	79	134
Relative change over base year 2009/10 in %	-47	-45	-41	0

**30** percent reduction in (relative) waste volume in fiscal year 2017/18 as compared to 2009/10

**47** percent reduction in (relative) CO<sub>2</sub> emissions in fiscal year 2017/18 as compared to 2009/10

## Environmental Compliance

At ZEISS, strict compliance with all relevant laws worldwide as well as international and national standards and guidelines is considered essential to fulfilling our promise of quality – and is one of our main obligations to customers, stakeholders and owners.

### Guidelines, structures and processes

Environmental Officers for the various sites are responsible for compliance with laws, stipulations for government approval and other rules related to the environment. The Environmental Officers at ZEISS' individual facilities store the particular specifications in the management system, e.g. by creating site-specific procedural and work instructions.

Regular external and internal audits and, at ISO 14001-certified units, compliance checks are performed to ensure all statutory requirements are met. The results are then included in the annual management reviews. ZEISS also expects business partners that, as suppliers or service providers, have a direct business relationship with the company and its production facilities to fully comply with environmental laws and regulations as well internal guidelines.

The company monitors whether such contractual agreements are being put into practice by conducting on-site audits, both planned and as a result of specific incidents.

### Chemical management

Through effective chemical management, ZEISS ensures that hazardous substances and materials are handled safely throughout the entire process chain and, in doing so, protects employees and the environment. The respective system operators are

responsible for handling chemicals safely. These employees are supported by the sites' occupational safety specialists and Environmental Protection Officers. A substance database and list of hazardous materials form the basis of the Group-wide information system for hazardous substances used at the company. This is also how ZEISS ensures that only those chemicals are used that are registered for the EU in accordance with REACH (Registration, Evaluation, Authorization, and Restriction of Chemicals) and are authorized for use. In addition, care is taken to only use substances that have not been identified as Substances of Very High Concern whenever possible.

Material safety data sheets provide users with information on how to safely handle chemical products, thereby helping to ensure that chemicals are employed in a manner that is both safe and environmentally sound. ZEISS requires its suppliers to make the most up-to-date material safety data sheets available. Before introducing new hazardous substances, ZEISS takes care to ensure that suppliers observe the list of prohibited and declarable substances included in a factory standard and requests the corresponding certificates of conformity.

### Substance restrictions

To implement the EU directive on the Restriction of Hazardous Substances (RoHS), ZEISS introduced the legal regulations in 2005 with the help of a software application to monitor the relevant chemicals. This is now in use at all areas of the company. Suppliers must confirm that the supplied materials, substances and mixtures are compliant with the applicable directives, laws and regulations. The suppliers are asked to submit certificates of conformity for verification. These are a requirement for product approvals as part of the CE conformity assessment

process. With the CE marking, the manufacturer or distributor declares that the product meets the applicable requirements. Conformity requires that certificates of conformity be available for all items in the parts list for a product. If there is any doubt, ZEISS conducts its own chemical analysis of the supplied components.

### Disposal

Modern technologies consist of a complex combination of materials and components. When not disposed of properly, these can cause major environmental and health issues. In accordance with the European Union's Waste Electrical and Electronic Equipment (WEEE) Directive, which governs the collection, recycling, and recovery of electric and electronic devices, ZEISS has entered into EU-wide agreements to ensure legally compliant disposal. The company is registered as a commercial distributor of electrical and electronic devices in all EU countries.

### Goals

For the company, the legally compliant operation of its facilities is a primary goal. This is associated with the objectives of preventive emergency management as well as preventive maintenance, which saves retrofitting costs.



## Social Engagement

As per its responsibility as a foundation company, ZEISS promotes scientific and technological progress in its four segments and advocates for better living conditions worldwide through its business activities.

For more than 125 years, the Carl Zeiss Foundation Statute has set a clear course, defining social engagement as an important corporate responsibility. The company focuses on health, education, science, its commitment to social and cultural issues and the environment.

Tasked with this duty, ZEISS assumes an active role in society and makes an important contribution to sustainable development at its sites. ZEISS works together with cooperation partners and also makes financial and in-kind donations to scientific, cultural, social and environmental causes. As a global technology leader, ZEISS stands for innovation and the spirit of research at its sites and, as such, creates a climate that enables its customers and partners to perform at their peak to improve the lives of countless people. Thanks to the company's dynamic growth, the number of jobs around the world continues to grow. When organizational changes are required, they are carried out in a manner that is as socially responsible as possible in accordance with regional standards and spread out over a longer period of time.

## Guidelines, structures and processes

When it comes to the structures and processes of social engagement, there are three clearly distinct organizational levels as well as different areas of support.

As the sole stockholder of Carl Zeiss AG and SCHOTT AG, the **Carl Zeiss Foundation** carries out non-profit activities. Particular attention is paid to providing sustainable, balanced support. These are defined by the Foundation Statute and financed by the dividend payments from the companies ZEISS and SCHOTT.

The **ZEISS Group** makes donations as per a defined process. The guidelines are laid out in an internal policy that applies to the entire company. The Carl Zeiss Promotion Fund and the Education and Science Fund are additional means of supporting societal advancement. They supported around 140 projects in fiscal year 2017/18. In addition, the strategic business units and the subsidiaries in Germany and abroad conduct their own activities. This allows them to best pursue their own interests in projects eligible to receive funding and take regional aspects into account.

There are also initiatives that have been launched at individual sites or in other areas, or as a result of **employee civic engagement**. These activities usually receive indirect support from ZEISS, and the company and managers show their sincere appreciation to the employees involved in the form of credited working hours and the opportunity to organize using the company's internal structures. In September 2018, ZEISS was honored by the German state of Baden-Württemberg's Ministry for the Interior as a "volunteer-friendly employer in the field of civil protection" (*Ehrenamtsfreundlicher Arbeitgeber im Bevölkerungsschutz*).

## Areas promoted

The areas promoted are research and education, health, society and nature conservation.

### Scientific research and education

With the Education and Science Fund established by the company in 2013, ZEISS aspires to foster future generations of natural scientists, from preschoolers to doctoral candidates. Support is aimed at initiatives that promote education among young people – primarily high school students who have not yet selected a degree program and university students who have not yet entered the workforce – and their scientific skills, as well as projects and initiatives at universities and research institutes. The focus is on natural sciences and engineering, particularly optics and photonics. In fiscal year 2017/18, more than 500,000 euros was used to fund nearly 25 projects.

Two fund managers from Corporate Human Resources and Corporate Research and Technology manage the budget for donations and the applications for support. They decide which requests receive funding based on fixed criteria, in accordance with the budget and in consultation with the Executive Board. The areas of focus for donations are critically examined about every two years and changed if necessary.

## 12,000 Square Meters for Innovative Ideas

For over 10 years, ZEISS has partnered with the Karlsruhe Institute of Technology (KIT) and continues to strengthen this cooperation so that, by working together, they can spur on the transfer of technology and foster an entrepreneurial mentality. In April 2018, the cornerstone was laid for a new innovation center: The ZEISS Innovation Hub @ KIT. The building will cover a total of 12,000 m<sup>2</sup> that can be used in many ways – as office space, meeting areas, labs and production facilities. It will offer space for quickly transforming innovative ideas and the latest research findings into market-ready products that will benefit businesses and society. Moreover, the hub will open up career opportunities for graduates – ideally at the Hub itself: Along with ZEISS and KIT, start-ups and carve-outs are expected to use this location. A large part of the new building will house the company Nanoscribe, which specializes in high-precision 3D printing. This was KIT's first carve-out back in 2007, and ZEISS has been one of its stakeholders since 2008. ZEISS is investing approximately 30 million euros in the Innovation Hub and assumes the construction and operating costs.

## Fighting Tuberculosis with Microscopes

ZEISS is committed to fighting deadly infectious diseases by utilizing its know-how. Since tuberculosis microscopy improves diagnosis and thereby assists in the fight against this disease, the Research Microscopy Solutions strategic business unit supports the organization Stop TB. The initiative, launched in 2001, sets out to make high-quality diagnostics, treatment and health care available to anyone at risk of tuberculosis. In cooperation with the Foundation for Innovative New Diagnostics (FIND), ZEISS has developed a special microscope for this purpose: The ZEISS Primo Star iLED enables the reliable diagnosis of tuberculosis, even in areas without a power supply. Public health care institutions in those countries the World Health Organization has named most affected by this disease can purchase the microscope at a reduced price.

## Modern Ophthalmic Techniques

Together with the Christoffel Mission for the Blind, ZEISS has supported one of the eye clinics run by Fundación Vision in Paraguay for many years. In February 2018, a new special training center was opened to teach modern ophthalmic techniques. The training and continuing education of ophthalmologists is a key component for taking targeted action in the battle against preventable blindness in remote regions.

### Health

ZEISS is raising the bar in health care by offering solutions for ophthalmology and medical technology and is helping to drive medical progress by supplying microscopy products. The aim is to help improve the lives of patients everywhere. Furthermore, the company makes financial donations and in-kind donations in the form of ZEISS products and solutions through a variety of different projects in order to give people around the globe access to high-quality medical care. One example of ZEISS' long-term commitment to improving global health is the "Back to Bush" program it launched in 2007, which gives disadvantaged areas, particularly in the outback regions of Australia and Oceania, access to better surgical equipment.

### Nature conservation

For ZEISS, protecting plants and animal species is particularly important: Binoculars and spotting scopes from ZEISS allow people to get closer to nature, and they have an excellent reputation among nature lovers around the globe. ZEISS works with professional associations to support many conservation activities and educational programs for children and adults as well as research programs for the protection of endangered species. ZEISS also sponsors BirdLife International's scientific work on the "Red List of Birds." On this list, the partnership of bird conservation organizations with a total of 13 million members records all of the endangered bird species, including their conservation status. The figures are reported to the International Union for Conservation of Nature and Natural Resources (IUCN) and form the basis for impactful conservation efforts.

### Regional society

The stable growth of the company and the expansion of its international activities lead to investments in the development of innovation, production and service structures. This creates new jobs and vocational training positions and also generates contracts for local suppliers not working in the field of high technology. In turn, the company's development and production services for customers in the individual regions make possible an increase in scientific, technological, social, medical and environmental services.

The Carl Zeiss Promotion Fund, which was founded in 2011 in honor of the 20<sup>th</sup> anniversary marking the reunification of the German ZEISS sites, supports regional projects within Germany. The Executive Board Office is responsible for planning and monitoring the budget for donations and receives assistance from the Corporate Brand & Communications department in the organization and processing of inquiries. A fund manager evaluates the funding applications and makes a decision based on fixed criteria and in accordance with the available budget. This person reports directly to the Executive Board, which determines the budget. The sponsorship program covers the company's German sites in Aalen, Göttingen, Jena, Oberkochen and Wetzlar. In the past seven years, more than 800 projects have received support totaling around six million euros.

# GRI Content Index

*For the Materiality Disclosures Service, GRI Services reviewed that the GRI content index is clearly presented and the references for Disclosures 102-40 to 102-49 align with appropriate sections in the body of the report.*



GRI standard	Page reference	Comments
<b>General Disclosures</b>		
GRI 101: Foundation 2016		
GRI 102: General Disclosures 2016		
<b>Organizational Profile</b>		
GRI 102-1: Name of the organization	P. 8 (Company Profile)	
GRI 102-2: Activities, brands, products, and services	P. 7, 9, 10 (Company Profile, The Four Segments and Their Products)	
GRI 102-3: Location of headquarters	P. 8 (Company Profile)	
GRI 102-4: Location of operations	P. 8 (Company Profile)	
GRI 102-5: Ownership and legal form	P. 8 (Company Profile)	
GRI 102-6: Markets served	P. 7–10, 30 (Company Profile, The Four Segments and Their Products, Products and Value Chain)	
GRI 102-7: Scale of the organization	P. 7, 36 (Company Profile, Employees by region), Annual Report 2017/18: P. 43	
GRI 102-8: Information on employees and other workers	P. 36 (Global employee structure, Employees by region)	
GRI 102-9: Supply chain	P. 12, 33 (Products and Value Chain, Procurement and Supplier Management)	
GRI 102-10: Significant changes to the organization and its supply chain		No significant changes during the reporting year
GRI 102-11: Precautionary Principle or approach	P. 27, 31, 42 (Compliance, Product Safety and Product Development, Environment), Annual Report 2017/18: P. 34	
GRI 102-12: External initiatives	P. 17, 23 (Memberships and Initiatives, How ZEISS Supports the Achievement of the Global Sustainable Development Goals)	
GRI 102-13: Membership of associations	P. 17, 28 (Memberships and Initiatives, Public Policy)	
<b>Strategy</b>		
GRI 102-14: Statement from senior decision-maker	P. 5 (Foreword)	
GRI 102-15: Key impacts, risks, and opportunities	P. 13–15, 19–22 (Strategy and Sustainability, Material Sustainability Issues)	
<b>Ethics and Integrity</b>		
GRI 102-16: Values, principles, standards, and norms of behavior	P. 14, 27 (Goals and values, Compliance)	

GRI standard	Page reference	Comments
<b>Governance</b>		
GRI 102-18: Governance structure	P. 11, 36 (Corporate Governance, Employee Involvement), Annual Report 2017/18: P. 16–18	
GRI 102-19: Delegating authority	P. 16, 27, 29, 43 (Sustainability Organization, Compliance, Data Privacy, Efficient Use of Natural Resources)	
<b>Stakeholder Engagement</b>		
GRI 102-40: List of stakeholder groups	P. 6, 17 (About the Report, ZEISS Group stakeholders and communication formats)	
GRI 102-41: Collective bargaining agreements	P. 36 (Employee Involvement)	
GRI 102-42: Identifying and selecting stakeholders	P. 18 (Definition and prioritization of material sustainability issues)	
GRI 102-43: Approach to stakeholder engagement	P. 17, 18, 36 (ZEISS Group stakeholders and communication formats, Definition and prioritization of material sustainability issues, Employee Involvement)	
GRI 102-44: Key topics and concerns raised	P. 18 (Definition and prioritization of material sustainability issues)	
<b>Reporting Practice</b>		
GRI 102-45: Entities included in the consolidated financial statement	P. 6 (About the Report), Annual Report 2017/18: P. 98–102	
GRI 102-46: Defining report content and topic Boundaries	P. 18 (Definition and prioritization of material sustainability issues)	
GRI 102-47: List of material topics	P. 19–22 (Definition and prioritization of material sustainability issues)	
GRI 102-48: Restatements of information	P. 47 (CO <sub>2</sub> emissions [Scope 1 und 2])	
GRI 102-49: Changes in reporting		No changes during reporting period
GRI 102-50: Reporting period	P. 6 (About the Report)	
GRI 102-51: Date of most recent report		January 2018
GRI 102-52: Reporting cycle	P. 6 (About the Report)	
GRI 102-53: Contact point for questions regarding the report	P. 60 (Legal Information)	
GRI 102-54: Claims of reporting in accordance with the GRI Standards	P. 6 (About the Report)	
GRI 102-55: GRI content index	P. 52–59 (GRI Content Index)	
GRI 102-56: External assurance		None

Material issues

GRI standard	Page reference	Comments
<b>GRI 201 Economic Performance 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 12, 14, 49 (Business Model, Strategy and Sustainability, Social Engagement)	
GRI 201-1: Direct economic value generated and distributed	P. 7, 50, 51 (Company Profile and Business Model, Social Engagement), Annual Report 2017/18: P. 42	
GRI 201-2: Financial implications and other risks and opportunities due to climate change	P. 45 (Climate Protection at ZEISS)	
<b>GRI 203 Indirect Economic Impacts 2016</b>		
GRI 103 Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 20, 49–51 (Social Engagement)	
GRI 203-1: Infrastructure investments and services supported	P. 50, 51 (Scientific research and education, Health, Regional society)	
<b>GRI 205 Anti-corruption 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 19, 26–28 (Integrity and Compliance, Anti-Corruption)	
GRI 205-2: Communication and training about anti-corruption policies and procedures	P. 28 (Anti-Corruption)	
GRI 205-3: Confirmed incidents of corruption and actions taken		ZEISS does not report cases of corruption and actions taken as these disclosures are subject to confidentiality agreements.
<b>GRI 206 Anti-competitive Behavior 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 19, 26–28 (Integrity and Compliance, Anti-Corruption)	
GRI 206-1: Legal actions for anti-competitive behavior, anti-trust, and monopoly practices		ZEISS does not report on legal actions for anti-competitive behavior, anti-trust or monopoly practices as these disclosures are subject to confidentiality agreements.
<b>GRI 302 Energy 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 22, 42–46 (Environment, Efficient Use of Natural Resources, Guidelines, structures and processes, Objectives and results)	
GRI 302-1: Energy consumption within the organization	P. 46 (Performance Indicators)	
GRI 302-3: Energy intensity	P. 46 (Performance Indicators)	

GRI standard	Page reference	Comments
<b>GRI 303 Water and Effluents 2018</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 22, 42–46 (Environment, Efficient Use of Natural Resources, Guidelines, structures and processes, Objectives and results)	
GRI 303-1: Interactions with water as a shared resource	P. 44 (Water and effluents)	
GRI 303-2: Management of water discharge related impacts	P. 44 (Water and effluents)	
GRI 303-5: Water consumption	P. 46 (Performance Indicators)	
<b>GRI 305 Emissions 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 22, 42, 43, 45, 46 (Environment, Guidelines, structures and processes, Objectives and results)	
GRI 305-1 Direct (Scope 1) GHG emissions	P. 46, 47 (Performance Indicators)	
GRI 305-2: Energy indirect (Scope 2) GHG emissions	P. 47 (Performance Indicators)	Market-based Scope 2 values cannot be reported because there is no access to the individual energy suppliers' emissions factors. Starting in fiscal year 2017/18, separate statements are published for Scope 1 and Scope 2 emissions (calculated using a location-based approach with current emissions factors as per the VDA list, updated Jan. 2018).
GRI 305-4: GHG emissions intensity	P. 47 (Performance Indicators)	
<b>GRI 306 Effluents and Waste 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 22, 42–46 (Environment, Efficient Use of Natural Resources, Guidelines, structures and processes, Objectives and results)	
GRI 306-2: Waste by type and disposal method	P. 47 (Waste, Performance Figures)	
<b>GRI 307 Environmental Compliance 2016</b>		
GRI 103 Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 22, 48 (Environment, Environmental Compliance, Guidelines, structures and processes, Objectives)	
GRI 307-1: Non-compliance with environmental laws and regulations		The legal proceedings pertaining to the unapproved discharge of wastewater at the site in Oregon, USA were concluded in fiscal year 2017/18.

GRI standard	Page reference	Comments
<b>GRI 308: Supplier Environmental Assessment 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 19, 25, 33, 34, 48 (Products and Value Chain, Decent Work and Economic Growth, Procurement and Supplier Management, Guidelines, structures, Processes, Environmental Compliance, Results)	
GRI 308-1: New suppliers that were screened using environmental criteria	P. 33 (Processes)	
GRI 308-2: Negative environmental impacts in the supply chain and actions taken	P. 34 (Results)	
<b>GRI 401 Employment 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 21, 35, 36 (Responsibility toward Employees, Employees)	
GRI 401-1: New employee hires and employee turnover		Currently, ZEISS cannot report the turnover because these data are not available. The company has started collecting the relevant data. The turnover rate will be reported starting in FY 2019/20.
<b>GRI 402 Labor/Management Relations 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 21, 35, 36 (Responsibility toward Employees, Employees, Employee Involvement)	
GRI 402-1: Minimum notice periods regarding operational changes	P. 36 (Employee Involvement)	
<b>GRI 403 Occupational Health and Safety 2018</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 21, 40 (Responsibility toward Employees, Occupational Health and Safety)	
GRI 403-1: Occupational health and safety management system	P. 40 (Occupational Health and Safety)	
GRI 403-2: Hazard identification, risk assessment, and incident investigation	P. 40 (Occupational Health and Safety)	
GRI 403-3: Occupational health services	P. 40 (Occupational Health and Safety)	
GRI 403-4: Worker participation, consultation, and communication on occupational health and safety	P. 40 (Occupational Health and Safety)	
GRI 403-5: Worker training on occupational health and safety	P. 40 (Occupational Health and Safety)	
GRI 403-6: Promotion of worker health	P. 40 (Occupational Health and Safety)	



GRI standard	Page reference	Comments
GRI 403-7: Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	P. 48 (Environmental Compliance)	
GRI 403-9: Work-related injuries	P. 40, 41 (Occupational Health and Safety)	Currently, ZEISS cannot report the number of work-related accidents for non-ZEISS employees because these data are not available. The company plans to start collecting the relevant data in FY 2019/20.
<b>GRI 404 Training and Education 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 21, 35, 37 (Responsibility toward Employees, Employees, Training and Education)	
GRI 404-1: Average hours of training per year per employee	P. 38 (Key figures)	ZEISS cannot provide disclosures broken down by gender and employee category because the data are not available. ZEISS has set up a data collection process and initially plans to break these data down by gender with a focus on Germany beginning in FY 2018/19.
<b>GRI 405 Diversity and Equal Opportunity 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 21, 35, 38, 39 (Responsibility toward Employees, Employees, Diversity and Equal Opportunity)	
GRI 405-1: Diversity of governance bodies and employees	P. 36, 39 (Global Employee Structure, Global Age Structure), Annual Report 2017/18: P. 5, 18	
<b>GRI 406 Non-discrimination 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 21, 38 (Responsibility to Employees, Diversity and Equal Opportunity)	
GRI 406-1: Incidents of discrimination and corrective actions taken		ZEISS does not report cases of discrimination and corrective actions taken as any disclosures on these matters are subject to confidentiality agreements.
<b>GRI 407 Freedom of Association and Collective Bargaining 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 19, 21, 33, 34, 36 (Integrity and Compliance, Responsibility toward Employees, Procurement and Supplier Management, Employee Involvement)	
GRI 407-1: Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	P. 33, 34, 36 (Procurement and Supplier Management, Performance indicators, Employee Inclusion)	

GRI standard	Page reference	Comments
<b>GRI 408 Child Labor 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 19, 33, 34 (Integrity and Compliance, Procurement and Supplier Management)	
GRI 408-1: Operations and suppliers at significant risk for incidents of child labor		During the reporting period, ZEISS did not become aware of any significant risks of child labor incidents at sites belonging to ZEISS or its suppliers.
<b>GRI 409 Forced or Compulsory Labor 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 19, 33, 34 (Integrity and Compliance, Processes, Procurement and Supplier Management)	
GRI 409-1: Operations and suppliers at significant risk for incidents of forced or compulsory labor		During the reporting period, ZEISS did not become aware of any significant risks of forced or compulsory labor incidents at sites belonging to ZEISS or its suppliers.
<b>GRI 413 Local Communities 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 20, 49-51 (Social Engagement, Guidelines, structures and processes, Regional society)	
GRI 413-2: Operations with significant actual and potential negative impacts on local communities	P. 42, 48 (Environment, Environmental Compliance)	
<b>GRI 414 Supplier Social Assessment 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 19, 25, 33, 34 (Products and Value Chain, Decent Work and Economic Growth, Procurement and Supplier Management, Guidelines and structures, Processes, Results)	
GRI 414-1: New suppliers that were screened using social criteria	P. 34 (Procurement and Supplier Management)	
<b>GRI 415 Public Policy 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 19, 28 (Integrity and Compliance, Political Influence)	
GRI 415-1: Political contributions	P. 28 (Political Influence)	

GRI standard	Page reference	Comments
<b>GRI 416 Customer Health and Safety 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 19, 30–32 (Products and Value Chain)	
GRI 416-1: Assessment of the health and safety impacts of product and service categories	P. 31, 32 (Product Safety and Product Development)	
<b>GRI 418 Customer Privacy 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 19, 27, 29 (Integrity and Compliance, Compliance, Data Privacy)	
GRI 418-1: Substantiated complaints concerning breaches of customer privacy and losses of customer data		ZEISS did not become aware of any relevant incidents during the reporting period.
<b>GRI 419 Socioeconomic Compliance 2016</b>		
GRI 103 Disclosures on Management Approach 2016 (including 103-1, 103-2, 103-3)	P. 19, 26, 27 (Integrity and Compliance, Compliance)	
GRI 419-1: Non-compliance with laws and regulations in the social and economic area	Annual Report 2017/18: P. 36	

## Legal Information

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### **Disclaimer**

This report contains certain forward-looking statements concerning the development of the ZEISS Group. At the present time, ZEISS assumes that these forward-looking statements are realistic. However, such forward-looking statements are based both on assumptions and estimates that are subject to risks and uncertainties, which may lead to the actual results differing significantly from the expected results. ZEISS therefore assumes no liability for such a deviation. There are no plans to update the forward-looking statements for events that occur after the end of the reporting period.

Apparent addition discrepancies may arise throughout this Sustainability Report due to mathematical rounding.

This is a translation of the original German-language Sustainability Report of the ZEISS Group. The ZEISS Group shall not assume any liability for the correctness of this translation. If the texts differ, the German report shall take precedence.