

1946–2016



Annual Report 2015

**SICK**  
Sensor Intelligence.

SICK is one of the world's leading producers of sensors and sensor solutions for industrial applications. Founded in 1946 by Dr.-Ing. h. c. Erwin Sick, the company with headquarters in Waldkirch/ Germany ranks among the technological market leaders. With more than 50 subsidiaries and equity investments as well as numerous agencies, SICK maintains a presence all around the globe.

←  
SICK at a glance and  
SICK worldwide



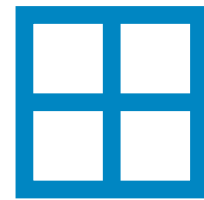
**Title:** 1955 – The LVU light curtain gives Erwin Sick a commercial breakthrough.

**This page:** 2015 – The LVU's modern counterpart: The deTec4 Prime safety light curtain.

# Continuity through change

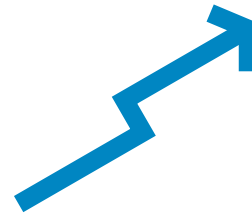
## Who we are

In the automation industry, SICK's product range is unique: No other sensor technology provider has such a wide-reaching portfolio. And it is this diverse product range that forms the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents, and preventing environmental damage. **Our portfolio p. 18**



## What we strive for

True industry insiders work at SICK: They know the processes of countless industry sectors inside out, and can apply solutions that have been successful in one industry to others. They all share one goal: To use smart products, systems, and services to create genuine added value for the customer. **Our markets p. 26**



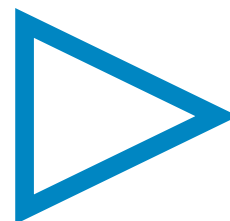
## What we are committed to

In SICK's corporate culture, the spirit of the family that founded the company still lives on: Employees are able to enjoy a workplace full of passion and flair for innovation – day in, day out. Not to mention the career opportunities and quality of life that are part and parcel of the job. Furthermore, environmental protection is at the very heart of the corporate strategy. **Our corporate culture p. 34**



## What lies ahead of us

Sensor intelligence from SICK enables Industry 4.0: Without sensor technology, the networked world of tomorrow would be nothing but a fantasy. Intelligence is making all of the most important data on ambient conditions available, and enabling simple, secure, and transparent integration with extensive IT systems. SICK is best placed to make this a reality. **Our vision for the future p. 42**



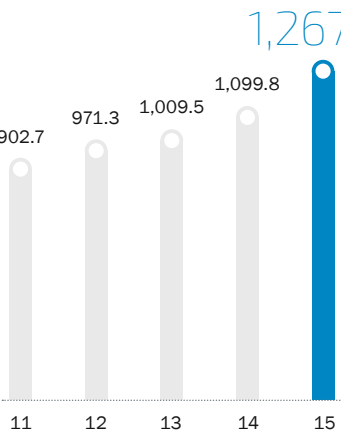
# SICK at a glance

## KEY FIGURES

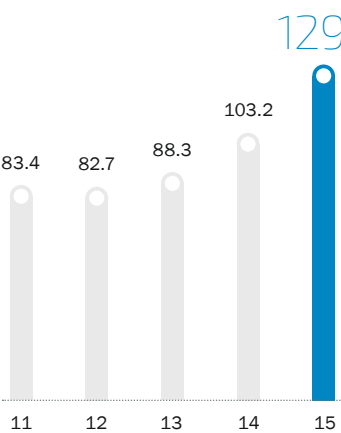
		2011	2012 <sup>1</sup>	2013	2014	2015	Change in %
Sales	in EUR million	902.7	971.3	1,009.5	1,099.8	1,267.6	15.3
EBITDA	in EUR million	114.8	117.9	125.9	144.1	175.4	21.7
EBIT	in EUR million	83.4	82.7	88.3	103.2	129.1	25.1
Net income	in EUR million	52.0	58.5	59.2	69.8	90.8	30.1
Cash flow	in EUR million	39.5	76.6	81.9	83.8	112.1	33.8
Employees							
on December 31		5,853	6,302	6,597	6,957	7,417	6.6
annual average		5,674	6,154	6,506	6,820	7,239	6.1
trainees <sup>2</sup>		211	239	260	255	267	4.7
Personnel expenses	in EUR million	361.8	404.2	429.0	464.2	526.3	13.4
Investments <sup>3</sup>	in EUR million	47.8	52.1	65.7	82.4	83.8	1.7
Depreciation	in EUR million	31.4	35.2	37.6	40.9	46.4	13.4
R&D expenditure	in EUR million	80.4	93.5	102.3	116.2	129.0	11.0
Total assets	in EUR million	576.3	611.5	649.2	762.9	862.9	13.1
Equity	in EUR million	269.3	282.9	321.6	374.6	451.8	20.6
Equity ratio	in %	46.7	46.3	49.5	49.1	52.4	
Net return on equity	in %	24.0	26.1	22.6	22.9	25.2	
ROCE	in %	21.5	19.5	19.2	19.1	21.1	
Net return on sales	in %	5.8	6.0	5.9	6.3	7.2	
Earnings per share	in EUR	1.99	2.23	2.26	2.66	3.47	30.5

<sup>1</sup> adjusted in accordance with IAS 19 revised  
<sup>2</sup> annual average  
<sup>3</sup> in property, plant and equipment and intangible assets

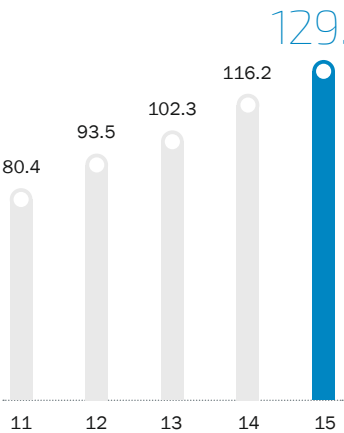
SALES IN EUR MILLION

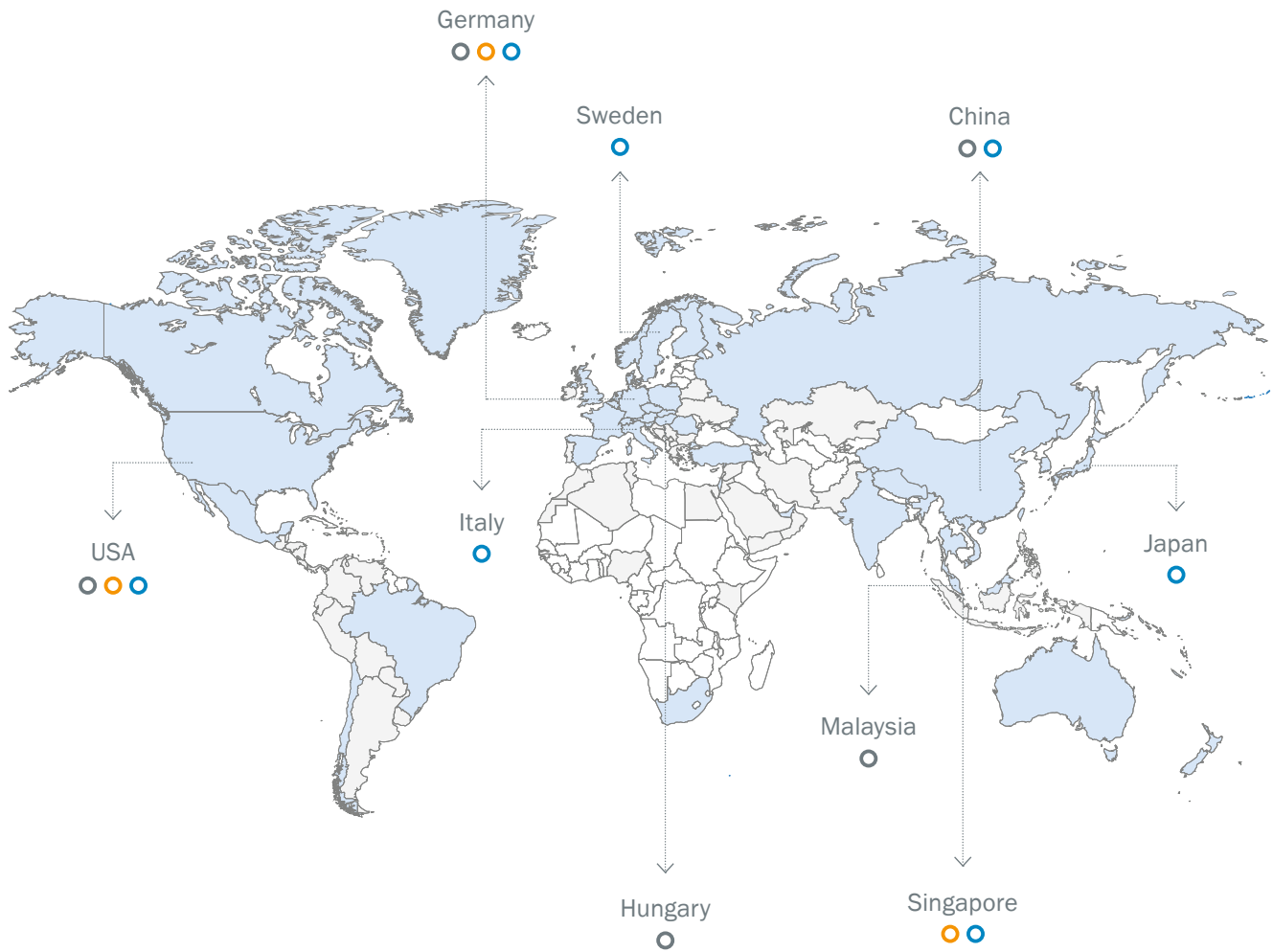


EBIT IN EUR MILLION



R&D EXPENDITURE IN EUR MILLION





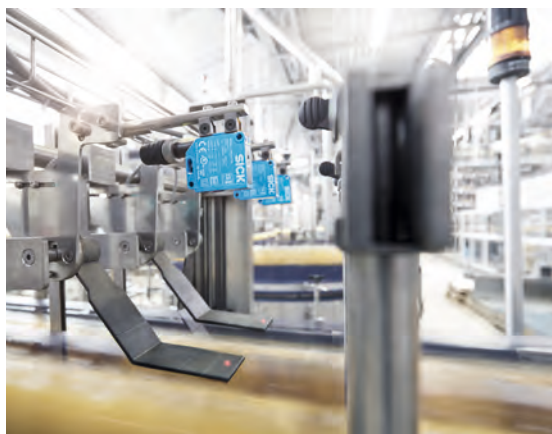
- Subsidiaries and representative offices
- Agencies
- Production
- Regional Competence Centers
- Development

# Our business fields

## Factory automation

The automotive and consumer goods industries, mechanical engineering, the electronics and solar industries, and drive technology are the target industries within the factory automation business field.

Non-contact sensors, camera systems, encoders, and distance measurement systems all serve to control manufacturing, packaging, and assembly processes, to carry out quality assurance, and to ensure machine safety.



## Logistics automation

In the logistics automation business field, the focus is on airports, industrial vehicles, building management, building safety and security, ports, trade and distribution centers, courier, express, parcel and postal service providers, cranes, and the traffic sector. In all of these areas, SICK's sensors shape and optimize the entire logistics chain: Whether automating material flow processes or increasing the speed, efficiency, and reliability of sorting, picking, and warehousing processes.



## Process automation

Within the process automation business field, SICK delivers sensors, customized systems, and services for analysis and process measurement technology. SICK thus provides smart solutions for waste incineration plants, power, steel and cement plants, oil and gas industry applications, as well as for chemical and hydrocarbon processing (HPI) plants. Together, these solutions make an important contribution to protecting our environment.



# Contents

## Company Report

8

Foreword by the Executive Board	8
Report by the Supervisory Board	10
<b>70 years of SICK: The future is shaped by the past</b>	18
<b>The SICK brand: "Sensor Intelligence." for factory, logistics, and process automation</b>	26
<b>Right from the start: Responsibility for employees, society, and the environment</b>	34
<b>Industry 4.0: "Sensor Intelligence." will organize the factory of the future</b>	42

## Financial Report

49

Group management report 2015	49
Group financial statements 2015	69
The Supervisory Board of SICK AG	128
Audit opinion	130
The Executive Board of SICK AG	131
Financial calendar 2016	132
Imprint	133

# 70 years of innovation

## DEAR SHAREHOLDERS, BUSINESS ASSOCIATES, EMPLOYEES, AND FRIENDS OF SICK,

With our company celebrating its 70th anniversary this year, it is the perfect time to pause and take stock. Firstly, to look back on the pioneering spirit, innovations, and above all the people who have defined this era – starting with Dr. Erwin Sick and Gisela Sick, who founded the company in Vaterstetten near Munich in 1946. However, we can also establish links between this history and the future, where sensor technology will play a very special role. In the world of Industry 4.0, sensors will record and process the data which will enable the factory of the future to make more efficient and sustainable decisions autonomously. This future will be shaped by SICK's employees (who now number over 7,400), with their enterprising spirit and expertise in technologies and applications – the same values which made our company a special place from day one.

It all started in a small barracks in 1946 with nothing but great courage and a multitude of ideas. Dr. Erwin Sick, who was granted a permit to found his own company by the American military government in Munich on September 26, 1946, was never content to settle for the technical status quo. The products that represented the breakthrough for the young company back then were innovative, reliable, and efficient from the beginning. They were complex sensors which were not only capable of performing simple detection tasks but, as in the case of contrast scanners and light curtains, provided additional benefits for customers with a disruptive approach. This alone shows that looking back 70 years is also a way of looking forward: The company's beginnings set us on the road to the position we are in now, where we are able to take advantage of the opportunities afforded by Industry 4.0 and the networked production environment of tomorrow.

Very early on, the company made the decision not to limit itself to one industry and one form of technology – differentiating the technical possibilities soon led to their use in a wide range of applications. In addition to using optical technology for automation, Dr. Erwin Sick was particularly interested in producing safety technology to protect people from machines. With this in mind, he not only developed the technology in the form of the first light curtain, but also became involved in developing safety standards and

principles. He was also keen for his inventions to be used in applications to protect the environment. Long before the emergence of the environmental movement, SICK was working to reduce power plant emissions by monitoring them in the stack itself.

Today, with our broad portfolio of serial products, systems, and services, we are performing tasks in the three business fields of factory automation, logistics automation, and process automation within the capital goods industry. In 2015, our orders received totaled EUR 1,270.5 million (+13.2 percent) and we achieved sales of EUR 1,267.6 million (+15.3 percent).

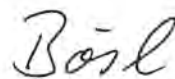
Our special corporate culture also has its roots in our history and the values of our founders, while at the same time looking toward the globalized and digitized future. It combines independent thinking and acting and extensive expertise and adaptability with respect for all people and the ambition to create innovations which provide added value for customers. These values have been the cornerstones of our success over the last 70 years, and will continue to ensure our success in the future.

We would therefore like to express our heartfelt thanks to all those who have played a part in the journey of the company and the Sick family thus far – our customers, partners, suppliers, employees, the residents of the towns and communities which surround SICK sites, and anyone who has supported and been a friend to our company. Thank you for your support over the last 70 years – we could not have done it without you. And we look forward to working with you to shape the future.

Sincerely yours,



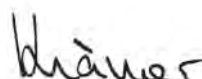
Dr. Robert Bauer  
(Chairman)



Reinhard Bösl



Dr. Mats Gökstorp



Dr. Martin Krämer



Markus Vatter





Reinhard Bösl, Dr. Mats Gökstorp,  
Dr. Robert Bauer, Dr. Martin Krämer,  
Markus Vatter (from left to right)

It all started in a small barracks in  
1946 with nothing but great courage  
and a multitude of ideas.

# Report by the Supervisory Board

The Supervisory Board of SICK AG is pleased to confirm that the SICK Group once again achieved a record result in the fiscal year 2015, as well as making significant progress with regard to aligning the company with the opportunities and changes presented by Industry 4.0. This is all the more remarkable given that last year was characterized by a precarious geopolitical situation and fluctuating economic conditions.

At the same time, the automation industry is undergoing a period of change brought about by the digitization and networking of industrial production. The Supervisory Board supports SICK AG's strategy of using the company's technological expertise and market position to play an active role in shaping developments in the field of Industry 4.0. Thus, SICK is on the right path to meet future challenges successfully and to continue to produce strong results.

## COOPERATION BETWEEN EXECUTIVE BOARD AND SUPERVISORY BOARD

In the fiscal year 2015, the Supervisory Board comprehensively and carefully performed all duties incumbent upon it under the law, the articles of incorporation, and the rules of procedure. It advised the Executive Board on the running of the company on an ongoing basis and continually monitored and reviewed its management activities. It focused in particular on the legality, regularity, and expediency of the group-wide management activities carried out by the Executive Board, along with their economic efficiency. The Supervisory Board discussed the organization of the company and the business with the Executive Board to assure itself of the performance capabilities of this organization. The Executive Board and Supervisory Board also agreed upon the strategic alignment of the company and discussed the progress of the strategy implementation at regular intervals. The Supervisory Board was directly involved in every decision with fundamental significance for the company which was made by the Executive Board.

In each case, the Executive Board notified the Supervisory Board – both verbally and in writing – promptly, in detail, and on a regular basis. This ensured that the Supervisory Board was constantly kept informed of the planning, the implementation of the strategy, the business situation and development of SICK AG and the Group including the risk situation, risk management, compliance, and business matters with particular relevance for the company and the Group. The Executive Board also referred to cases where the business development deviated from the set plans and targets and explained the reasons for these deviations.

The subject matter and scope of the reports submitted by the Executive Board complied fully with the requirements stipulated by the Supervisory Board. Along with the reports, the Supervisory Board obtained additional information from the Executive Board. In particular, the Supervisory Board meetings gave the Executive Board the opportunity to explain any issues and answer any questions. The Supervisory Board critically examined the information provided by the Executive Board, assessing it with regard to plausibility and challenging it where necessary. Between the meetings of the Supervisory Board and its committees, the Chairman of the Supervisory Board was constantly and extensively kept informed of developments by the Executive Board. In particular, the Chairman of the Executive Board had regular meetings with the Chairman



Klaus M. Bukenberger,  
Chairman of the Supervisory Board

of the Supervisory Board in order to discuss strategy, planning, the current business situation and development including the risk situation, risk management, and compliance, as well as key specific issues and decisions. The Chairman of the Supervisory Board was informed immediately of any important events which were of fundamental significance for the assessment of the situation and its development, as well as for the management of the SICK Group.

During the reporting year, no conflicts of interest involving members of the Supervisory Board emerged in connection with the execution of their duties.

#### MEETINGS AND DECISIONS OF THE SUPERVISORY BOARD

In the fiscal year 2015, the Supervisory Board of SICK AG held four ordinary meetings at the company headquarters. All members of the Supervisory Board attended all meetings. At these meetings, the Board addressed all issues with relevance for the company and made the necessary decisions. Added to this was a decision made by way of written circulation to approve construction projects which are subject to approval according to the rules of procedure. In line with established practice, the meetings are held without the Executive Board being present during the entire time of the meetings, which gives the Supervisory Board the opportunity to discuss points which either concern the Executive Board itself or which require internal discussion between the members of the Supervisory Board. In the reporting year, this was the case for all meetings held. At the Supervisory Board meetings, the following subjects in particular formed the focus of the consultations:

In the Supervisory Board meeting held on March 26, 2015, the Supervisory Board discussed the accounting and Group accounting of SICK AG for the fiscal year 2014, drawing on the audits of the financial statements conducted by Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft (EY) and the Executive Board's proposal for the appropriation of the retained earnings generated in the fiscal year 2014. The Audit Committee reported on all subject areas for which it is responsible in the context of accounting and Group accounting of SICK AG, in particular the nature and scope of its audit of the documents relating to the financial statements. The committee advised the entire Board to approve these documents. The auditor attended the accounts meeting and reported in detail on its audit. It also explained its audit results and discussion thereof at the meeting of the Audit Committee held on March 19, 2015. The audit results were discussed with the Supervisory Board, including an opportunity for the auditor to answer any questions. The Supervisory Board approved the result of the audit of the financial statements. Following the final results of its own review, the Supervisory Board had no objections to raise and approved the accounting and Group accounting of SICK AG for the fiscal year 2014. The Supervisory Board also reviewed the use for the retained earnings proposed by the Executive Board and approved this proposal on the recommendation of the Audit Committee. Furthermore, the Board passed its decision proposals for the agenda of the Annual General Shareholders' Meeting in May 2015.

The Supervisory Board meeting held on May 12, 2015 focused on the comprehensive analysis and discussion of the current business situation. The general discussion centered around an assessment of the market and the market changes to be expected from a technological, regional, and organizational perspective. Furthermore, the term of office and employment contract of Executive Board member Dr. Mats Gökstorp were extended for five years as of May 1, 2016.

In addition to analyzing and discussing the current business situation, the meeting held from September 24 to 25, 2015 centered around detailed discussion of all aspects of company strategy and operationalized company planning, risk planning, and financial planning in the medium term. In particular, the Board discussed



the consequences of the trends known collectively as Industry 4.0 with regard to industrial production, the automation engineering industry, and SICK's business model and market positioning. The Board also made decisions regarding implementation of new compliance requirements and additional reporting duties, as well as preparing plans for the audits of the financial statements for the fiscal year 2015 based on the report from the Audit Committee. Furthermore, the Supervisory Board approved a range of construction measures at the Waldkirch and Émerainville sites during this meeting.

At the ordinary meeting on December 15, 2015, the Executive Board reported on the state of business development and presented detailed planning for the fiscal year 2016 on this basis. Together with the Executive Board, the Supervisory Board discussed in detail the targets, framework conditions, and assumptions contained in these plans, along with the inherent opportunities and risks. This meeting also involved extensive discussion and redefinition of employee profit sharing plans. In particular, the decision was made to increase the profit-sharing bonus as soon as EBIT exceeds ten percent at Group level. The Supervisory Board also decided to award an anniversary bonus to celebrate SICK's 70th anniversary: In June 2016, every SICK Group employee will receive a special payment of EUR 70 for every full year of employment they have completed with the company. Furthermore, at this meeting, Executive Board member Dr. Robert Bauer was appointed as Chairman of the Executive Board of the company for a further five years as of October 1, 2016, and his employment contract was extended accordingly.

#### WORK IN THE SUPERVISORY BOARD COMMITTEES

The work of the Supervisory Board was supported by the committees, who are responsible for comprehensive preparation and monitoring of their assigned subject areas. The Audit Committee and Human Resources Committee both met several times in the reporting year, while the Investment Committee met once. At each of the subsequent plenary sessions, the relevant committee chair reported in detail on the work of their committee. As in previous years, it was not necessary to convene the Mediation Committee in accordance with Sec. 27 (3) MitbestG ("Mitbestimmungsgesetz": German Co-Determination Act). Thanks to the extensive preparatory work carried out by the committees, the entire Board was well-informed about all of the fields assigned to the committees and was able to engage with the relevant subject areas thoroughly and efficiently.

The committees are composed of the following individuals:

- Audit Committee: Prof. Dr. Mark K. Binz, Mr. Klaus M. Bukenberger, Mr. Roberto Hernandez, Dr. Matthias Müller, and Mr. Franz Bausch as the committee chair.
- Human Resources Committee: Mr. Franz Bausch, Mr. Roberto Hernandez, Ms. Renate Sick-Glaser, Mr. Hermann Spieß, and Mr. Klaus M. Bukenberger as the committee chair.
- Investment Committee: Mr. Franz Bausch, Mr. Engelbert Herbstritt, Mr. Roland Schiller, and Mr. Klaus M. Bukenberger as the committee chair.
- Mediation Committee in accordance with Sec. 27 (3) MitbestG: Ms. Renate Sick-Glaser, Mr. Roberto Hernandez, Mr. Hermann Spieß, and Mr. Klaus M. Bukenberger as the committee chair.

In 2015, the committees focused on the following key areas:

- The Audit Committee concentrated on its assigned duties regarding the preparation of the audits of the financial statements and recommendations for the entire Board regarding the financial statements. Its work also dealt with the fields of compliance, risk management, Group taxes, and financing.
- The Human Resources Committee focused on the structure and composition of the Executive Board and the remuneration of the Executive Board members. In this regard, the committee carried out the preparatory work to enable the contracts of Dr. Robert Bauer and Dr. Mats Gökstorp to be extended for a further five years. The extensions were subsequently passed unanimously by the entire Board.
- The Investment Committee's work focused on reviewing the investment plans for 2016 and the associated financing.

#### ANNUAL AND GROUP ACCOUNTING FOR THE FISCAL YEAR 2015

Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft (EY) was responsible for auditing the accounting and Group accounting of SICK AG for the fiscal year 2015. On May 12, 2015, EY was chosen as the auditor and Group auditor by the Annual General Shareholders' Meeting of SICK AG. In this regard, the Annual General Shareholders' Meeting followed the proposal of the Supervisory Board, which in turn corresponded to the recommendation from the Audit Committee. Prior to being proposed by the Supervisory Board for selection as the auditor by the Annual General Shareholders' Meeting, EY had confirmed that there were no circumstances which might compromise its independence as an auditor or justify any doubts as to its independence. EY also declared the scope of any services rendered to the company beyond the audit of the financial statements in the previous fiscal year and any services contractually agreed for the following year. EY audited the annual financial statements of SICK AG, which were prepared in accordance with the provisions of the HGB ("Handelsgesetzbuch": German Commercial Code), the consolidated financial statements, prepared in accordance with the International Financial Reporting Standards (IFRS), and the combined group management report and management report of SICK AG, and provided unqualified audit opinions. The auditor thus confirmed that, in its opinion and based on the findings of its audit in accordance with the applicable financial reporting framework, the annual financial statements and consolidated financial statements give a true and fair view of the net assets, financial position, and results of operations of SICK AG and the SICK Group. The auditor also confirmed that the group management report and management report of SICK AG are consistent with the corresponding annual financial statements and the consolidated financial statements and as a whole provide a suitable view of the position of SICK AG and the SICK Group and suitably present the opportunities and risks of future development. All Audit Committee and Supervisory Board members received the audit documents mentioned above, the audit reports prepared by EY, and the Executive Board's proposal concerning the appropriation of retained earnings in good time.

On February 22, 2016, the Executive Board of SICK AG finalized the accounting and Group accounting of SICK AG for the fiscal year 2015, comprising the annual financial statements, the consolidated financial statements, and the combined group management report and management report of SICK AG, and approved these documents for submission to the Supervisory Board forthwith.

At the meeting of the Audit Committee on March 17, 2016, and at the accounts meeting of the Supervisory Board on March 22, 2016, the Executive Board explained the accounting and Group accounting of SICK AG and its proposal concerning the appropriation of retained earnings. Furthermore, members of the Executive Board answered questions from the Audit Committee and the Supervisory Board.

After the Executive Board had explained them, the Audit Committee and the Supervisory Board reviewed the audit documents for the company and the Group in the light of EY's audit reports. The representative of the auditor who attended presented full reports on the audit and the results of the audit to the Audit Committee meeting and the Supervisory Board's accounts meeting and explained the audit reports. The auditor also reported that it had not found any material weaknesses in the company's internal control and risk management systems with regard to the accounting process. Both the Audit Committee and the Supervisory Board asked the auditor detailed questions about the form, scope, and results of the audit. The discussions with the auditor also dealt with the issue of the legality of the company management, of which the Supervisory Board has assured itself. Furthermore, the Audit Committee reported to the Supervisory Board on its own review of the accounting and Group accounting of SICK AG, its discussions with the Executive Board and with the auditor, and its supervision of the accounting process. It confirmed that as part of its supervisory function, it had addressed the effectiveness of the internal control, risk management, and internal auditing systems and found them to be effective.

The Audit Committee reported that EY had told it there were no circumstances that might give cause for concern about the auditor's impartiality. The Committee also reported that it had examined the auditor's independence, taking the non-audit services EY had rendered into consideration, and stated that, in the Committee's opinion, the auditor possessed the required degree of independence.

The Audit Committee and the Supervisory Board satisfied themselves that EY had conducted the audit properly. In particular, they concluded that both the audit reports and the audit itself fulfilled the legal requirements. The Supervisory Board discussed all audit documents for the company and the Group alongside information from EY and, on the basis of the Audit Committee's report and recommendation, approved the result of the audit of the financial statements. Since it had no objections to raise on completion of its own audit, the Supervisory Board gave its consent to the annual financial statements, the consolidated financial statements, and the combined group management report and management report of SICK AG. The annual financial statements were thus formally adopted. The Supervisory Board's assessment of the situation of the company and the Group coincided with that of the Executive Board as set out in the group management report and management report of SICK AG. The assessment of the Executive Board was also consistent with the reports submitted by the Executive Board to the Supervisory Board over the course of the year.

The Supervisory Board considered the proposal presented by the Executive Board concerning the appropriation of retained earnings with regard to the requirements of the dividend policy, the effects on the liquidity of the SICK Group, and the interests of the shareholders. The Supervisory Board then accepted and endorsed the Executive Board's proposal concerning the appropriation of retained earnings on the recommendation of the Audit Committee. Finally, the Supervisory Board adopted this report to the Annual General Shareholders' Meeting.

In addition, the Executive Board prepared a report on relationships with affiliated companies (dependent company report) and presented it to the Supervisory Board together with the audit report prepared by the auditor. The dependent company report was audited by the auditor who rendered the following audit opinion thereon: "Based on our audit and assessment in accordance with our professional duties, we confirm that

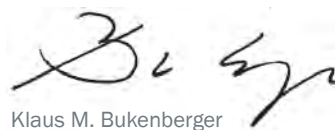
1. the factual information in the report is correct and
2. the company's contribution with respect to the legal transactions referred to in the report was not inappropriately high."

The Supervisory Board established in the framework of its own review of the report on the company's relationships with affiliated companies that no objections were to be raised with respect to the closing declaration of the Executive Board in the report on relationships with affiliated companies.

The Supervisory Board would like to thank the members of the Executive Board as well as all employees for their great commitment and performance during the fiscal year 2015.

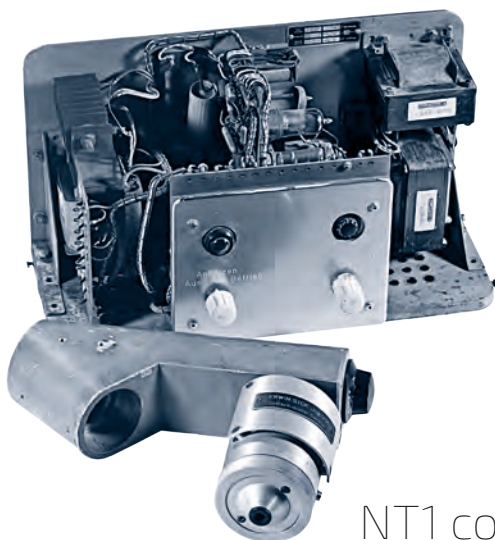
Waldkirch, March 22, 2016

On behalf of the Supervisory Board



Klaus M. Bukenberger  
(Chairman)

# Milestone / 1



NT1 contrast mark scanner

1951

This photoelectric control unit was used for scanning print marks (also known as contrast marks) on glossy, regularly reflective foils. These print marks were used for tasks such as folding and cutting paper. The patent application for this first print mark control unit was so important that it was appealed three times over the course of 14 years. In the end, the patent was not pursued – largely due to the fact that further applications registered in the years to follow were awarded patents.





## → KTM Prime contrast sensor 2013

Top performance for universal, space-saving use in the packaging industry – even in adverse conditions: The KTM Prime contrast sensor features high gray line resolution and is integrated into a small, tried-and-tested housing that is also available in stainless steel. The optimized OES4 ASIC technology and a response time of 35  $\mu$ s ensure reliable and accurate detection of contrast marks, even on glossy materials. The KTM reliably detects marks even in conditions with weak contrast

ratios and is therefore ideal for use in a wide range of applications; in the stainless steel version, it can even be used in harsh environments and areas which undergo intensive cleaning processes.



## WHO WE ARE

# 70 years of SICK: The future is shaped by the past

GERMANY WAS A VERY DIFFERENT PLACE IN 1946 – WITH ITS SOCIETY, CULTURE, AND ECONOMY ALL LYING IN RUINS. IT WAS AT THIS DIFFICULT TIME THAT A MAN CALLED ERWIN SICK CAME TO PROMINENCE WITH HIS PIONEERING SPIRIT, SHOWING THE COURAGE OF HIS CONVICTIONS IN THE TOWN OF VATERSTETTEN NEAR MUNICH.

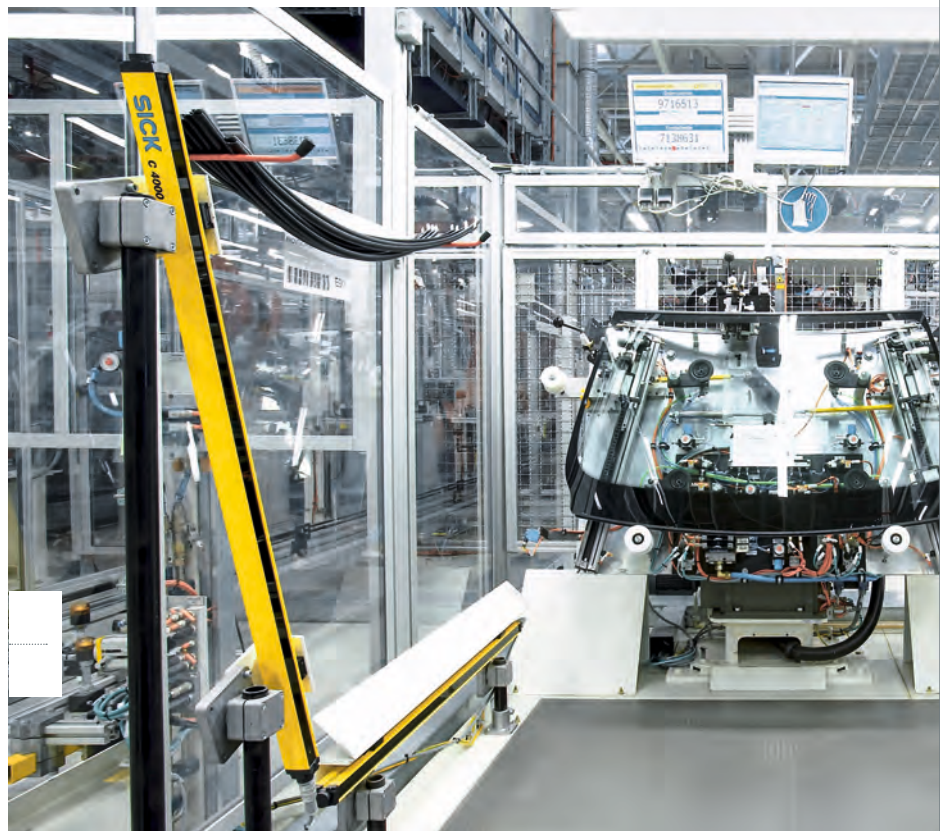
**H**is idea was to combine optics with electronics and use them in peaceful ways for the benefit of humanity. With a license from the American military government in his pocket, he and his wife founded an engineering firm in Vaterstetten near Munich. Referring to himself as the “Erfinder aus Leidenschaft” (“passionate inventor”), he wanted to develop devices with the “wow” factor. These would offer “greater capabilities than other devices” and would stand out from the crowd thanks to their innovation, quality, and distinctive benefits. The young founding family was motivated personally – and in its entrepreneurial endeavors – by a desire to protect people and the environment, but it was also this very factor that led the company in the direction of machine safety and emission monitoring very early on.

At the end of September 2016, SICK AG will celebrate its 70th anniversary. The company that Dr. Erwin Sick originally intended to become a “healthy medium-sized business with a select workforce of between 80 and 100” is now a world technology and market leader in the area of sensors and sensor solutions for industrial applications –

having become a global player with over 7,400 employees and having achieved a sales volume of EUR 1.2 billion in 2015.

Tall buildings need deep foundations – together, the two form an inseparable unit. The same goes for SICK – the company owes its current leading position to its unerring instinct for technology over the decades and its ability to identify market trends early.

Safety light curtains provide protection for hazardous areas in almost all industries these days – for example, in the automotive industry.



## THE SENSOR – THE NUCLEUS OF THE GROUP

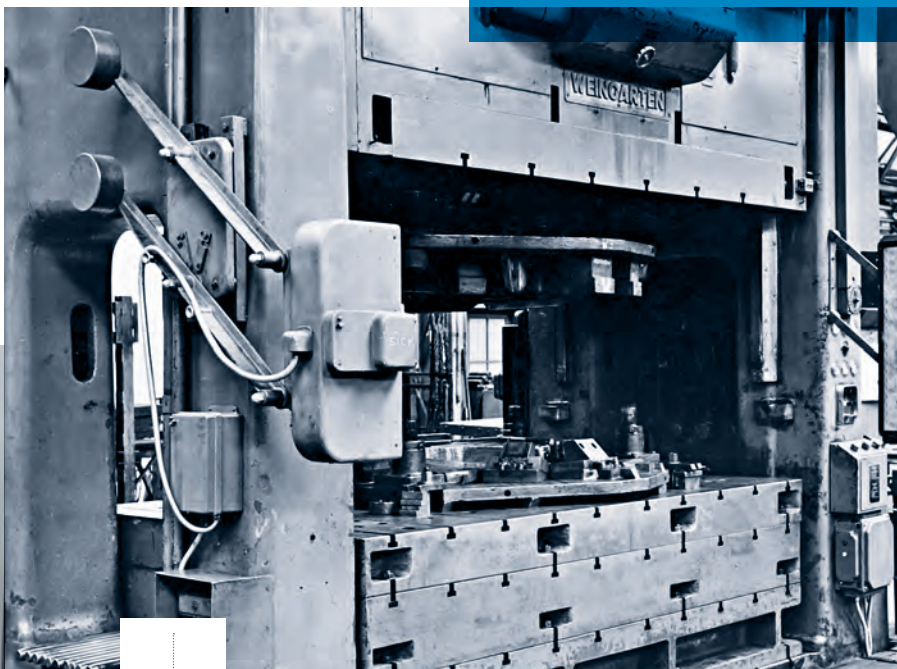
Neuroscience defines six different senses: Sight, hearing, touch, taste, smell, and balance. The sensory organs are activated by chemical, mechanical, and optical stimuli. A sensor – whether it is a human nerve cell or a detector in a machine – perceives and signals these stimuli. Erwin Sick – a trained optometrist and precision mechanic who spent many years working as a designer with a focus on optics – had set himself the challenge of taking the human sense of sight and using it to monitor machines and emissions. In 1952, he started receiving orders for the “patented Sick light curtain” from the emerging German automotive industry and the first device series was launched. Four years later, he produced the first opto-electronic measuring device for determining the soot concentration of exhaust gases.

The two sensor inventions represented the breakthrough for the company, both from an economic and a technological point of view. This is when Erwin Sick's philosophy was born – his sensors would not be “mass-produced rubbish,” to use his own rather dramatic turn of phrase; right from the beginning, his sensors would set the benchmark for modern technology, excellent reliability,

and exceptional customer value. To begin with, the company's work concentrated on giving a machine or a process “the power of sight” and signaling whatever the sensor saw to a control unit. Over the next few years, however, the development of opto-electronic sensors – whether it was photoelectric sensors, bar code readers, safety light curtains, area scanners, gas measuring devices, or distance sensors, to name but a few – focused not only on a simple detection function, but on providing an extra level of smart added value for the customer. Right from the beginning, SICK sensors were thus able to perform more complex tasks, which in turn revealed new directions for industrial automation. This development – which has since been extended to all other physical operating principles –

# 40,000

THE INDUSTRY'S MOST  
COMPREHENSIVE PRODUCT AND  
TECHNOLOGY RANGE,  
COMPRISING 40,000 PRODUCTS



The first application of the “light curtain”:  
Protecting the engagement area around presses.



Erwin Sick had set himself the challenge of taking the human sense of sight and using it to monitor machines and emissions.





SICK sensor solutions are used in almost every key industrial sector in every corner of the globe.



Expertise from day one – SICK continually invests around ten percent of its annual sales in research and development.

is still going strong today. In 2004, long before Industry 4.0 became a mega trend, SICK expanded its sensor technology to the field of sensor intelligence and, with the development of digital communication systems between sensors, actuators, and automation systems, the company has played a major role in the technological transformation of the market.

Even in the early years, SICK quickly became synonymous with innovative sensor solutions, as the number of challenges faced by the company and its engineers continued to grow. With the rise in automation – which benefited in particular from huge advances in the field of microelectronics – it became possible to solve problems of ever-increasing complexity. Now, as well as fitting individual sensors in a machine or plant, they could also be grouped together to form system solutions.

#### SYSTEM SOLUTIONS – THE LOGICAL CONSEQUENCE OF EXTENSIVE KNOWLEDGE

SICK sensor solutions are used in almost every key industrial sector in every corner of the globe – from automotive engineering and vehicle construction, handling and packaging technology, storage and conveyor systems, and the food and beverage industry to environmental and process technology, the chemical and pharmaceutical industry, mechanical engineering, electronics, and solar power. The company's expert advice, combined with innovation, individuality, and quality in execution, enables it to provide solutions for an ever-expanding range of tasks – from individual machines to an entire branch of industry. With their attention focused on their own core business, numerous companies have been enjoying the benefits of using sensor system solutions from



Thanks to their PinPoint technology and huge operating reserves, photoelectric proximity sensors W27-3 ensure reliable, precise detection even under adverse ambient conditions.

a single source for many years – more efficient planning and procurement processes, just one contact and solution partner, coordinated sensors, all ensuring optimal machine and plant availability. With its smart system technology, SICK is able to meet the requirements of its customers, no matter how complex they get.

#### INVESTING IN THE FUTURE

# 129.0

In 2015, the SICK Group spent EUR 129.0 million on its research and development efforts.

The business model is based on the principle of providing standard devices, systems, and services as a complete solution. The products are no longer merely for detection and signaling – now their functions also include controlling, regulating, analyzing, and networking. Having a system solution which enables the identification of an object and its environment by a sensor, the use of this information to trigger a specific action from the machine, and the possibility of evaluating sensor data objectively via a control unit means that even the most complex of requirements can be fulfilled reliably. This applies equally to automated check-in systems for baggage, security systems for the protection of buildings and open spaces, driver assistance systems for industrial transport vehicles, or profiling systems which monitor the entrances to road tunnels.

In the case of all of these solutions, the industry management activities which are central to the SICK organization play a crucial role by providing consistent support for system implementation. The resulting alignment of sensor, system, and service solutions with the individual requirements of the various branches of industry has led to the development of SICK's current market-oriented company structure with its three pillars of factory automation, logistics automation, and process automation.

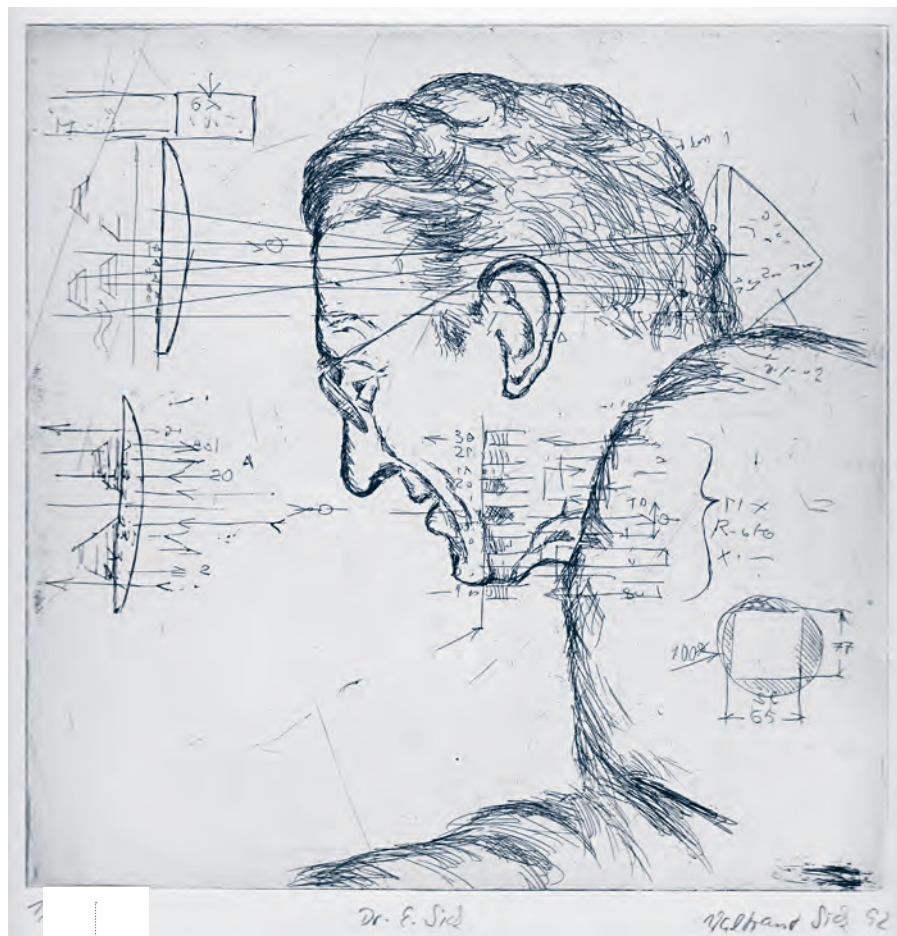


### SERVICES – THE SUPPORT PHILOSOPHY SPANNING THE ENTIRE PRODUCT LIFE CYCLE

With its sensor and system solutions, SICK is the leading technological innovator and pioneer bar none in many branches of industry. This is confirmed both by the company's penetration of a broad range of industries and by its high rate of innovation: Every year, SICK invests around ten percent of sales in research and development. At the same time, the conditions surrounding the use of sensors and sensor systems are becoming more and more

complex. In the field of automation engineering, designers now start to think about how sensors will be integrated into a machine at a much earlier stage than was previously the case. Rather than waiting until the machine construction phase, decisions are now made regarding the permissible mounting space and the connection concept as part of the initial project plans. The directives and standards governing safety technology are now so complex that only specialists can keep track of them – a trend which is also evident with regard to environmental legislation and,

hence, emission measurement technology. In the field of civil aviation, passenger numbers are constantly on the rise, with the resulting increase in baggage volumes requiring more and more powerful transport systems in international airports. The list of application fields is virtually endless. At the same time, all dynamic industries are dominated by the postulate of machine availability and system throughput – defined by factors such as performance, cycle rates, flexibility, reliability, and proactive serviceability.



Portrait of Dr.-Ing. h.c. Erwin Sick,  
drawn by his daughter Waltraud Sick  
in 1992.



With its sensor and system solutions, SICK is the leading innovator in many branches of industry.



Waldkirch is not just the location of the Group headquarters – it is also SICK's primary research and development site.

This means that the customers – whose core business generally has nothing to do with automation engineering – need to be actively supported over the entire service life of their machine or plant, from its “birth” on a CAD screen to its ultimate decommissioning in a proper and environmentally sound manner. In order to manage this complexity safely on behalf of its customers, SICK provides a



The production of optical sensors at the Waldkirch site is highly variable and provides rapid availability for customers all over the world – despite the fact that SICK has the broadest product portfolio in the industry.

comprehensive service portfolio: the SICK LifeTime Services. The range comprises product-independent consulting services, project planning and commissioning support, hardware and software engineering, machine-specific and plant-specific inspections and analyses, service and maintenance concepts, upgrades and retrofits, and decommissioning. These services enhance personal safety at work and increase machine and plant productivity to provide a solid foundation for sustainable industrial processes. They are based on almost 70 years of practical experience, comprehensive industry knowledge, and the sensor and system expertise that marks SICK out as a global market leader. At the same time, the SICK LifeTime Services are of crucial importance: They give all sensor and system solutions an extra level of added value to ensure that they maintain a unique position on the automation engineering market.

What began with the functionality of a single sensor has evolved into the highly complex automation solutions that we have today. The nature of the road ahead is already becoming apparent with the advent of Industry 4.0 – the next industrial revolution. The future is shaped by the past and, with its technological tradition, foresighted approach to business, adaptability, and versatility, SICK could not be better prepared for the Smart Factory.

# Milestone / 2



LVU light curtain for  
accident prevention

1955

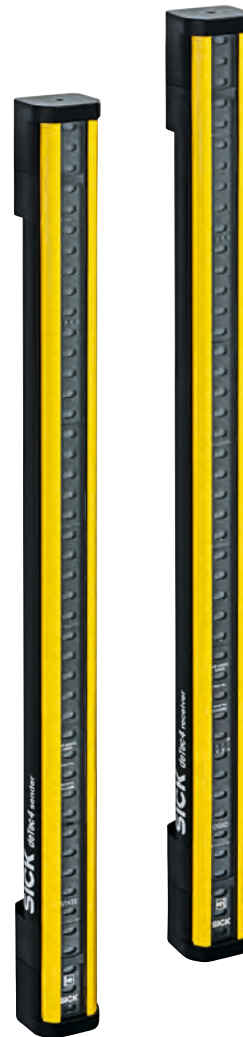
This photoelectric barrier was used to protect those working on machines from accidents, or to defend against theft and other threats. The surface to be monitored was not simply covered by a single “traveling beam,” but rather scanned by multiple light beams either simultaneously or in a swift chronological sequence, with the light beam traversing in a zigzag pattern over the surface, controlled by optical elements. Chronologically, this was SICK's first light grid design, and a real commercial breakthrough for Erwin Sick.





## deTec4 Prime 2015

The deTec4 Prime safety light curtain can be added to the deTec4 Core housing to extend its functionality and provide even more solutions for a wide range of applications. A protective field range of up to 21m can be measured automatically and the alignment displays equipped with four LEDs ensure quick and safe commissioning of the light curtain. Cascading up to three deTec4 Prime safety light curtains minimizes the wiring complexity and means that fewer safety capable inputs are required in the control cabinet.





WHAT WE STRIVE FOR

The SICK brand:  
"Sensor Intelligence."  
for factory, logistics, and  
process automation

TACKLING TOMORROW'S CHALLENGES TODAY –  
THIS WAS DR. ERWIN SICK'S LIFELONG PHILOSOPHY.





As an expert in sensor technology for logistics processes, SICK has created a modern and highly efficient hub for worldwide shipping in the form of its new distribution center.

This meant that the products he invented from the start of the 1950s onward were not just simple sensors – they were already complex sensor solutions featuring ideas for further applications, new industries, and generations of devices to come.

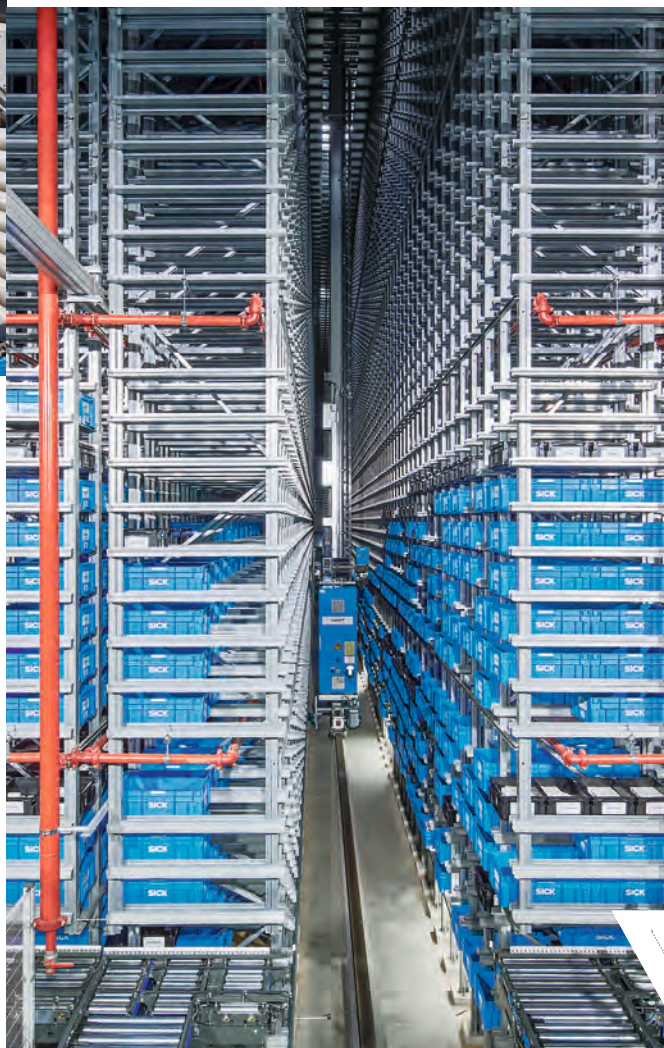
#### CREATING MARKETS THANKS TO TECHNOLOGY

With its roots in the fields of optics and electronics – as demonstrated by the name “Erwin Sick GmbH Optik-Elektronik” used over the following decades – the company's early focus on operational safety and environmental protection played a huge role in shaping its character. At the same time, the side of the business concerned with sensor solutions for automation engineering developed rapidly.

Photoelectric sensors were followed in the 1970s and 1980s by opto-electronic identification technologies such as bar code scanners. In all of these business fields, SICK has demonstrated its ability to adapt again and again thanks to its technological innovations and consistent market focus. Today, it is a recognized industry insider in over 40 key international industries with solution expertise in all areas of sensor technology.

#### ORGANIZATION FOCUSED ON CUSTOMERS

To a large extent, this development was made possible by the fact that Dr. Erwin Sick – in his own words, an “unwilling businessman” – had the foresight to hand over the company's sales management activities to a managing director in 1984. Over the following years, the



The design of the new distribution center in Waldkirch-Buchholz allows for further growth and will ensure that customers all over the world receive their products even more quickly.

managing director organized the company's activities into the four business areas of automation engineering, safety technology, environmental measuring technology, and automated identification. This put the company in a better position to tackle the different challenges posed by the short-term components business and the increasingly prevalent and more long-term system and project business within the various areas. With the onset of globalization and the broad expansion of the technology base, this consistent market focus was extended in 2004 with teams of experts organized by customer industry within the company. The industry teams, which are grouped into the three business fields of factory automation, logistics automation, and process automation, harness the technological expertise of the units responsible for creating products. In this way, the industry teams and the product-

creation units work together to develop standard products, systems, and services tailored to customer needs and optimized with in-depth industry knowledge.

#### FACTORY AUTOMATION: EFFICIENCY, SAFETY, QUALITY, AND AVAILABILITY FOR THE FACTORY OF THE FUTURE

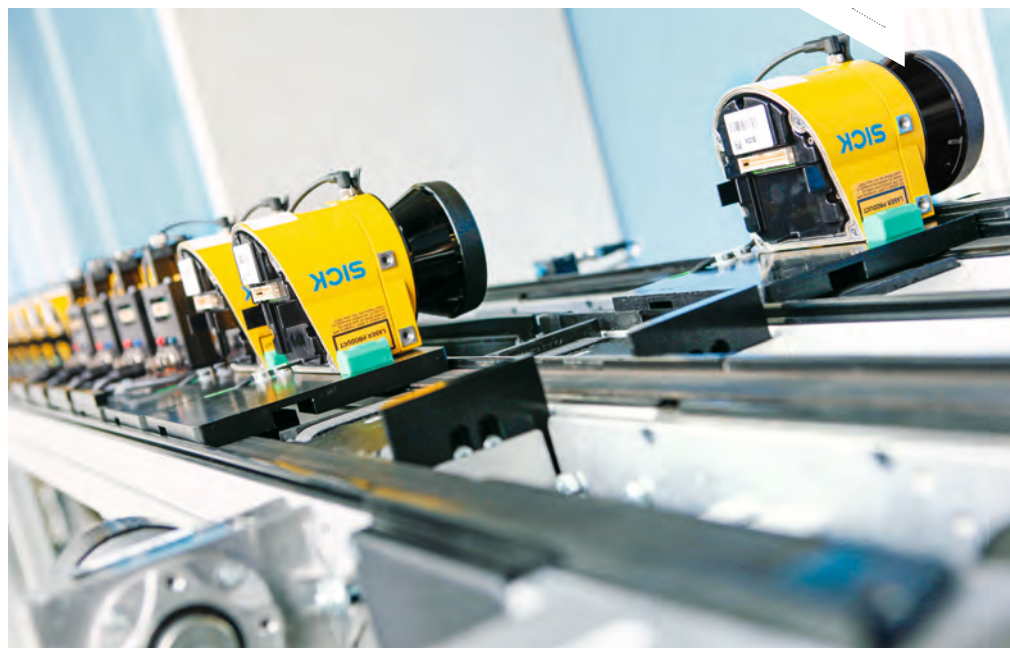
Today, with 40,000 products and additional system and service expertise, SICK offers an extremely broad product and technology portfolio. In the factory automation business field, more than two dozen manufacturing industries benefit from SICK solutions – including the automotive industry, the food and beverage industry, the packaging industry, mechanical engineering and plant construction, the electronics and solar industry, robotics, and handling and assembly technology. Smart and fault-resistant sensor equipment improves efficiency,

safety, quality, and availability. This is why all factory automation industries are keen to make use of the opportunities afforded by the innovative sensor concepts of photoelectric sensors, laser scanners, encoders, or identification systems. From a technological perspective, they are extremely future-proof as they are already well equipped for the production environment of tomorrow, i.e., for Industry 4.0, the Smart Factory, and the Internet of Things.

#### LOGISTICS AUTOMATION: EXPERTISE FOR INNOVATIVE LOGISTICS

Airports, seaports, and inland ports, building management and security, cranes and transport vehicles used in intralogistics, traffic technology, courier, express, parcel and postal services as well as storage and conveyor systems in industry, retail, and warehousing – all of these areas benefit from the technological

When producing safety laser scanners, the top priorities are checking quality and documenting each individual device.

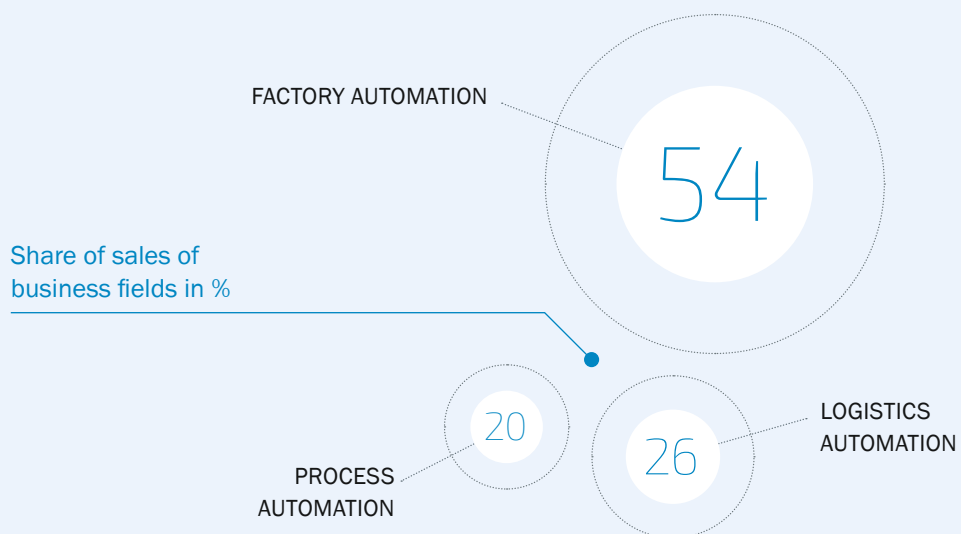


Smart and fault-resistant sensor equipment improves efficiency, safety, quality, and availability.



## Three pillars

The SICK Group has split its international sales activities into three business fields:



The S300 safety laser scanner at work in the automotive industry.

SICK analyzer systems ensure efficient combustion processes in applications such as cement plants.

# 3,000

patents and utility models protect innovative sensor solutions from SICK.

and application expertise of the logistics automation business field. Photoelectric sensors, distance sensors, safety laser scanners, safety light curtains, safety locking devices, inductive proximity sensors, bar code scanners, and volume measuring devices all help to optimize the storage, transport, sorting, picking, and shipping of goods. The sensors' intelligence, reliability, and availability are particularly evident in innovative logistics concepts, as developed for the growing e-commerce business area and for multichannel sales in retail and in online stores. The number of requirements placed on intralogistics and distribution logistics will continue to rise – for example, due to the fast-growing range of fresh and chilled goods available online. In terms of sensors, systems, and services, the logistics automation business field is in the best possible position to help shape and optimize automated supply chains with faster order processing and a high delivery quality.

## PROCESS AUTOMATION: ANALYSIS AND PROCESS MEASUREMENT TECHNOLOGY FOR SAFE PROCESSES AND A CLEAN ENVIRONMENT

Clean air, compliance with limit values, dust measurement as an indicator of faultless combustion processes – in the field of process automation, SICK is one of the leading suppliers of intelligent, continuous analyzers and measuring systems for gas, dust, and liquid components. Accompanying services, such as remote maintenance via the Internet, round

off the emission and process gas monitoring portfolio. Analysis and process measurement technology is used in fields including mining and power plants, metal and steel production, chemical and hydrocarbon processing (HPI), the cement industry, waste incineration and recycling plants, or in shipyards. Furthermore, ultrasound-based volume flow measuring devices are proven solutions for measuring flow when transporting natural gas from the gas field via the distribution stations to the end user. Emission measurement systems are





used on container ships and cruise ships to provide the low operating costs that ship owners require, as well as ensuring compliance with pollutant limits in emission-controlled zones and ports. By measuring the visual range, visibility, wind speed, and the size of oversized vehicles, tunnel sensors provide state-of-the-art traffic management technology with important information in order to keep traffic moving safely and smoothly.

SICK in-situ gas analyzers continually monitor exhaust gases directly at the stack.

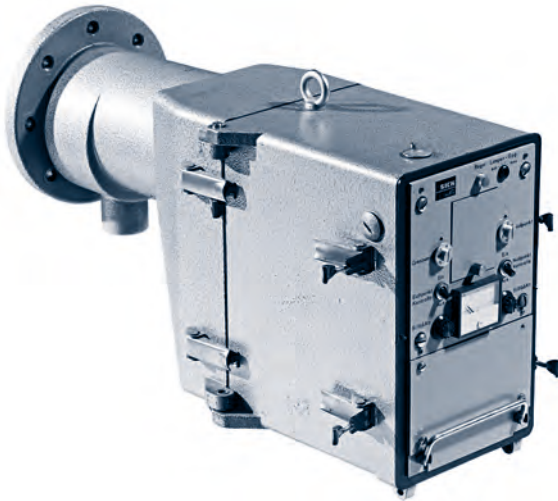
#### UNDERSTANDING THE CUSTOMER'S CHALLENGES

"Inside the industries" – with their customer-focused and market-focused range of sensors, systems, and services, SICK's business fields are consolidating their leading position in all growth regions. Understanding applications, identifying potential use, anticipating market developments, providing intelligent solutions with added value – the example set by Dr. Erwin Sick with his intuitive instinct for business from the 1950s onward has now become a fundamental part of the global SICK brand through its factory automation, logistics automation, and process automation business fields.



"Inside the industries" – with their customer-focused and market-focused range of sensors, systems, and services, SICK's business fields are consolidating their leading position in all growth regions.

## Milestone / 3



RM4 smoke density measuring device  
approx. 1970

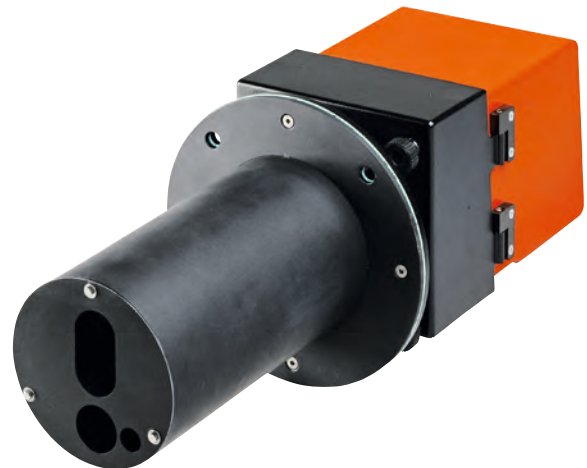
This invention featured a bundle of measuring beams which were directed through a stack. The strength of the reflection bouncing back from the opposite side of the stack differed according to the degree of smoke density. In order to be able to measure even weak smoke concentrations, the RM4 generated a control bundle parallel to the measuring

beams, comparing the intensity of both bundles. Furthermore, a zero point reflector was cyclically pivoted, allowing for the simulation of smoke-free conditions in the stack and for the device to be reset to the zero point. This device allowed for powerful air purification long before the environmental requirements were introduced.





## DUSTHUNTER SB100 2013



The DUSTHUNTER SB100 is a type-approved measuring device, designed to detect very low to moderate dust concentrations in challenging applications, such as in hot or volatile gases. The measurement method is based on the reverse scattering of light. The installation need only be carried out on one side of a channel, with two possible penetration depths, and

background radiation is automatically compensated for, meaning no light absorber is required. Automated testing of zero point and reference point is integrated into the device, as is a soiling check.

## WHAT WE ARE COMMITTED TO

FROM A ONE-MAN ENGINEERING FIRM IN MUNICH TO ERWIN SICK GMBH IN WALDKIRCH AND FROM THERE TO A GROUP WITH GLOBAL OPERATIONS: OVER THE PAST SEVEN DECADES, SICK AG HAS WRITTEN AN EXTRAORDINARY SUCCESS STORY.

# Right from the start: Responsibility for employees, society, and the environment

**T**his success is based on technological innovations, customer proximity, an instinct for market development, and the courage to grow as an organization, as well as the special corporate culture which can be traced right back to company founders Dr. Erwin Sick and Gisela Sick. This is demonstrated firstly by the subject areas which formed the initial focus of the young company: operational safety and environmental protection. Long before the first statements were made on these subjects, Dr. Erwin Sick had anticipated them by developing the accident prevention light curtain and an opto-electronic flue gas monitor.

Secondly, the company founders set an early example of what we now refer to as employee orientation or social responsibility. Anyone who has built up an enterprise from nothing by themselves knows that the real assets of a young, fast-growing company are its people, and that it is vital to show respect for the work done by employees. This has led to SICK's special corporate culture, which is still going strong today – even if the “healthy medium-sized business with a select workforce of between 80 and 100” that Erwin Sick originally had in mind has now become a global group with over 7,400 employees, which actively assumes responsibility for its workforce, society, and the environment.

SICK makes an effort to present itself as an innovative employer with attractive benefits for families and a sound economic reputation.

Attractive employer: SICK regularly scores top marks in competitions.



7,417

EMPLOYEES AND

267

TRAINEES WORLDWIDE

### QUALIFIED STAFF: THE MOST VALUABLE OF RESOURCES

Qualified and motivated staff are in short supply around the world. In Germany and in numerous other countries, demographic change will only compound the situation. At the same time, it is simply not possible for an innovative technology company like SICK to succeed without qualified staff and a program of continuous training and development. Responsibility for employees is, therefore, inextricably linked with overall responsibility for the company. This is why SICK makes such an effort to present itself as an innovative employer with attractive

benefits for families and a sound economic reputation – and this effort has not gone unrewarded. There are currently eight trainee positions available at SICK for young people looking to pursue commercial and technical careers. In addition, there are eight study programs available at Baden-Wuerttemberg Cooperative State University (DHBW). SICK recognizes the importance of internationality and offers trainees and students the opportunity to take part in a foreign exchange program. Students at the DHBW are given the chance to spend a semester abroad at an international subsidiary. There are also other support measures



The key values of expertise and respect are central to SICK's corporate culture.



As employees develop their skills, more career opportunities become available.

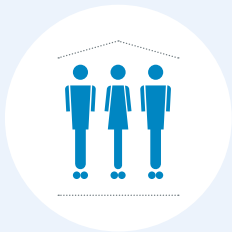


available, including grants, internships in the company, and the supervision of bachelor's and master's theses for external students. It is not only the broad spectrum of subject areas that makes SICK's training opportunities so attractive, but the quality of the training too. For almost 20 years, SICK trainees have triumphed at competitions such as the "Jugend forscht" youth science competition and WorldSkills, a professional skills competition – whether they are winning awards as successful inventors and innovators, the best industrial electronics engineers, or the top technical drafters again and again.



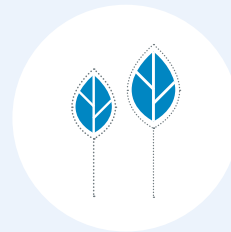
## Corporate responsibility

### FOR EMPLOYEES



SICK demonstrates high awareness of its corporate social responsibility. The HR department takes the wishes of employees seriously, reacting flexibly to their differing qualifications, circumstances, and needs. Employees are offered a comprehensive range of opportunities promoting a healthy lifestyle, as well as flexible working patterns to support a healthy balance between work and family life.

### FOR THE ENVIRONMENT



Adhering closely to the tradition of the company founder, Dr. Erwin Sick – who showed a passionate concern for the environment – SICK places a great deal of importance on sustainable development. In order to mitigate negative effects on the environment caused by the production process to the greatest degree possible, SICK follows a three-tiered climate and environmental protection strategy, having already developed an environmental and energy management system that has been firmly established within the company for a number of years.



In addition to its diverse training program, SICK also knows how important it is to encourage its employees to pursue qualifications alongside their careers, and to participate in continuing professional development. Life-long learning is the key to a successful future for the company and its employees. With over 80 internal and external advisors, the SICK Sensor Intelligence Academy is safeguarding this future – offering over 500 events which are individually tailored to the needs and qualification requirements of company staff.

As employees develop their skills, more career opportunities become available. To ensure that these opportunities for career development do not come into conflict with personal and family circumstances, SICK offers numerous services as part of its holistic, family-oriented HR policy. These include child-care for preschool children, the opportunity to eat lunch together in the company restaurant,

Top rankings in WorldSkills competitions attest to the high quality of training at SICK.

and homework assistance as well as leisure and holiday facilities for employees' children. In addition, flexible working models are available along with flextime accounts to enable employees to take a temporary leave of absence without financial penalties.

A healthy company needs healthy employees – both physically and mentally. SICK therefore offers numerous programs and measures to promote an active and healthy lifestyle. Workplaces and workflows are optimized based on ergonomic principles, employees can take part in around 30 different sports activities, and the company runs a wide range of health campaigns – for example, on healthy eating, staying active in the workplace, addiction prevention, and giving up smoking. At the end of 2015, SICK won the Corporate Health Award in recognition of its successful health management policy.

With its approaches to training, continuing professional development, the career and family balance, and health management, SICK proves itself to be an attractive employer offering positions which are actively sought out by well-trained technical and managerial staff with or without a family. This has been demonstrated for many years by the company's top rankings in national and international competitions such as Best Workplaces in Germany organized by the Great Place to Work® Institute.

#### COMMITTED TO THE COMMUNITY

SICK relies on strong partnerships with its customers, suppliers, and public bodies. SICK is not only committed to training, education, and science within the company, but in the wider community as well. The company supports universities and higher education institutions – for example, by providing an endowed professorship at the University of Stuttgart – as well as working closely with institutes and organizing the SICK robot day for universities and research institutions every two years. It also has a wide-ranging program demonstrating its regional and social commitment, including Girls' Day, Science Days, and the “Jugend forscht” competition. Furthermore, SICK recognizes its social responsibility by supporting nurseries, schools, the Red Cross, the fire service, and voluntary activities.



The Sensor Intelligence Academy provides further training for SICK employees.



### ECOLOGICAL AWARENESS MEANS SUSTAINABLE CONDUCT

SICK's environmental and energy management system has been firmly anchored in the company's policies for many years, and comprises a three-part sustainability concept: Avoid what can be avoided, reduce what cannot be avoided, and optimize what cannot be reduced. The aim is to minimize resource consumption and eliminate environmental pollution and adverse effects as far as possible with a proactive approach. Strict compliance with the latest statutory environmental regulations forms the basis for the company's sustainable, environmentally aware conduct – verified by independent audits – at every level. All sites in Germany and the manufacturing subsidiaries in Hungary, the USA, and Malaysia are certified according to the ISO 14001 environmental management standard. In addition to this, the headquarters in Waldkirch, the site in Reute, and SICK Vertriebs-GmbH in Düsseldorf have an environmental management system in accordance with EMAS (Eco-Management and Audit Scheme) and a certified energy management system according to ISO 50001.

SICK's climate and environmental protection strategy focuses on four central spheres of activity: CO<sub>2</sub> emissions, waste and wastewater, material consumption in production, and the use of SICK products at customers' sites. Just by using certified green power at all of its German sites, SICK avoids around 4,400 tons of CO<sub>2</sub> emissions every year. As stipulated in sustainable energy concepts for new and existing buildings, the use of geothermal energy, photovoltaics, and power from SICK's own gas-powered combined heat and power plant prevents or reduces the production of large quantities of greenhouse gases each year. The electromobility program at SICK also makes a small but valuable contribution: Electric cars and shuttle buses are provided for journeys between the Waldkirch and Reute sites, and many employees use electric bicycles to travel to work. Waste and wastewater, if they cannot be avoided, are continually reduced through the constant development of quality measures, and are recycled wherever possible.

Any remaining waste is monitored and disposed of correctly. Sustainable use of environmentally friendly materials and production methods begins right from the product development stage. Evaluating ecological considerations is, therefore, a fixed part of the development process. Wherever possible, hazardous substances are substituted and, for example, water-based primers or paints are used in place of solvent-based products. Processes

that endanger health and the environment are replaced with suitable alternatives. Examples include switching to a method of vapor degreasing for mechanical devices which does not involve solvents, and the use of lead-free soldering equipment. After CO<sub>2</sub> emissions, waste and wastewater, and material consumption, the fourth sphere of activity is the development and production of sensors and systems which perform emission monitoring,



A visible sign of our environmental strategy:  
Solar modules at the Waldkirch site.



Ecological impulse: SICK supports electromobility.



gas analysis, and process control functions at customers' sites. Whether they are optimizing manufacturing processes in the steel industry, monitoring combustion processes, making electric drive technology more energy-efficient,

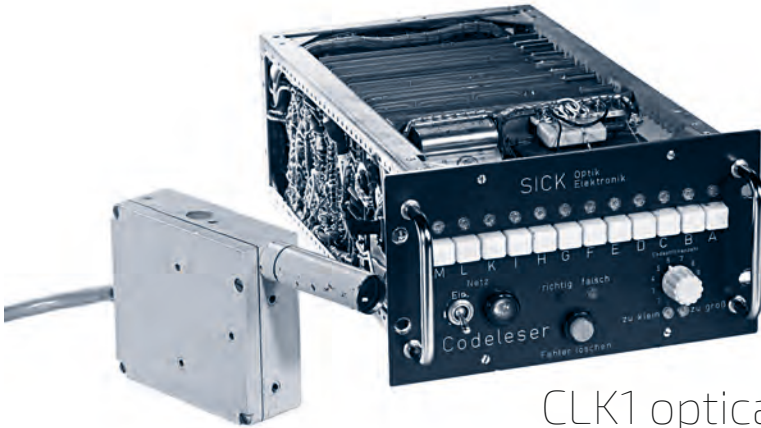
or helping to maximize the efficiency of wind power plants, SICK products and technologies play a key role in environmental protection.

SICK has always been shaped by its responsibility not only for the development and growth of the company, but for its employees, society, and the environment as well. The next few years will see the further globalization of the business world and the digital penetration of production and business processes, which will in turn bring about a fundamental cultural change. The processes of social change will be reflected in the further development of the company organization: Cooperation, transparency, and trust are the sustainable success factors in relationships with customers, employees, and the community. With its special corporate culture – representing its heritage and the duty that stems from its long history – and its continued, consistent focus on sensor intelligence, the company will play an active role in shaping the globalized, digitized, and networked future.

#### CO<sub>2</sub> NEUTRAL

SICK compensates for all unavoidable CO<sub>2</sub> emissions generated through the use of heat energy or travel (by rail, road, and plane) by supporting an environmental protection project.

# Milestone / 4



CLK1 optical head with  
CLE1 evaluation unit

approx. 1970

This invention allowed for the opto-electronic identification of an object which passed in front of the code reader, using the corresponding identification marks which consisted of many parallel wide and narrow coded strips. The width of the strips and the distances between them were dimensioned in such a way that the optical head was able to correctly

recognize the code – regardless of color and absolute value of the volume of light received. In the pharmaceutical industry, the CLK1 paved the way for an early form of code reading.





## Lector65x code reader 2014

Maximum performance and optimized throughput: The Lector65x image-based code reader from SICK stands up to the challenges of logistics and factory automation. Thanks to its 40 Hz frame repetition rate and real-time decoding, it reliably identifies 1D, 2D, and directly marked codes at the highest possible speed. In addition, an image resolution of 2 or 4 megapixels gives it a large field of view. In combination with its dynamic focus, the highest levels of flexibility are achieved for code positioning, object height, and transport speed.



## WHAT LIES AHEAD OF US

# Industry 4.0: "Sensor Intelligence." will organize the factory of the future

THERE IS A 70-YEAR TRADITION OF GROWING THROUGH CHANGE AT SICK.  
AN ENGINEERING FIRM BECAME A GROUP WITH OVER 7,400 EMPLOYEES,  
INDIVIDUAL PRODUCTS BECAME WHAT IS PROBABLY THE LARGEST SENSOR AND  
SYSTEM PORTFOLIO ON THE MARKET.

**A**nd the company founder's enthusiasm for sensor technology resulted in a global technology leader. But the greatest change is only just beginning: Industry 4.0.

### RIGHT AT THE HEART OF THE FOURTH INDUSTRIAL REVOLUTION

The concept of revolution generally denotes a fundamental structural change which happens over a relatively short space of time and has lasting consequences. This was the case with the first industrial revolution, when the mechanization of production using water and steam power in the 18th century heralded the transition from an agricultural to an industrial society. The second industrial revolution came around 300 years later and was characterized by the mass production of products such as cars using electrical, machine-driven continuous production lines. The third industrial revolution – the introduction of electronic control systems, information technology, and the increased use of sensors to further the automation of production, assembly, and logistics processes – followed less than 70 years later. The trend toward ever-shorter cycles continued: At the end of the second millennium, the era of digitization began.



Looking back now, this can be seen as the starting point for the fourth industrial revolution – also referred to as Industry 4.0 or the age of the Smart Factory.

At its heart are the concepts of digitization, intelligence, and networking, which will enable production and logistics systems to control and optimize themselves autonomously. It will no longer be the case that processes are planned and then corrected if necessary. Instead, what are known as cyber-physical production systems in the Smart Factory will organize themselves using huge amounts of up-to-date information to make independent decisions. Driven by more and more powerful Internet technologies and ever-increasing computer performance, data transmission rates, and memory capacities – thanks to cloud computing – the real and virtual

production and logistics worlds will merge to become the decentralized and dynamic Internet of Things.

For SICK, however, Industry 4.0 and its huge opportunities for growth do not come as a surprise. With the focus on “Sensor

The Visionary-T 3D snapshot camera makes it possible to analyze the environment around a forklift rapidly in order to prevent collisions.



2D laser scanners from SICK are the standard for automated guided vehicle systems – both in practical applications and in research, as is the case here with the PAN-Robots research project.



# 863

RESEARCH AND DEVELOPMENT  
EMPLOYEES WORLDWIDE, PREPARING  
SICK SENSORS FOR THE NETWORKED  
WORLD OF TOMORROW

With the focus on “Sensor Intelligence.” starting in 2004, the company anticipated this development early on and is now playing an active role in shaping this future.





Lector620 vision sensors  
detect codes or plain text with  
excellent reliability.

Intelligence.” starting in 2004, and the development and implementation of the IO-Link communication standard as the basis for exchanging data between intelligent sensors, actuators, and control systems just two years later, the company anticipated this development early on and is now playing an active role in shaping this future.

#### SMART SENSOR SOLUTIONS – ESSENTIAL FOR THE SMART FACTORY

Increased productivity in industrial production requires more efficient processes. The logistics area has led the way over the last few years by minimizing package delivery times and setting up a transparent tracking system for its customers. This means that distribution centers and courier, express, parcel and postal service providers are now able to respond flexibly to new requirements arising from areas such as e-commerce and multi-channel sales. In production logistics, on the other hand, there is still a lot of scope for improvement. Machines are now fast and highly automated, providing

excellent precision and high availability, but the way they are linked and networked still has a great deal of potential in terms of boosting efficiency if the flow of information in the process can be optimized. Intelligence and interaction are, therefore, the key factors when it comes to making production in the Smart Factory flexible, scalable, and efficient – even in the case of high product variance and small quantities, right down to a batch size of 1.



The analysis of smart sensor data  
provides new insights  
into production processes.



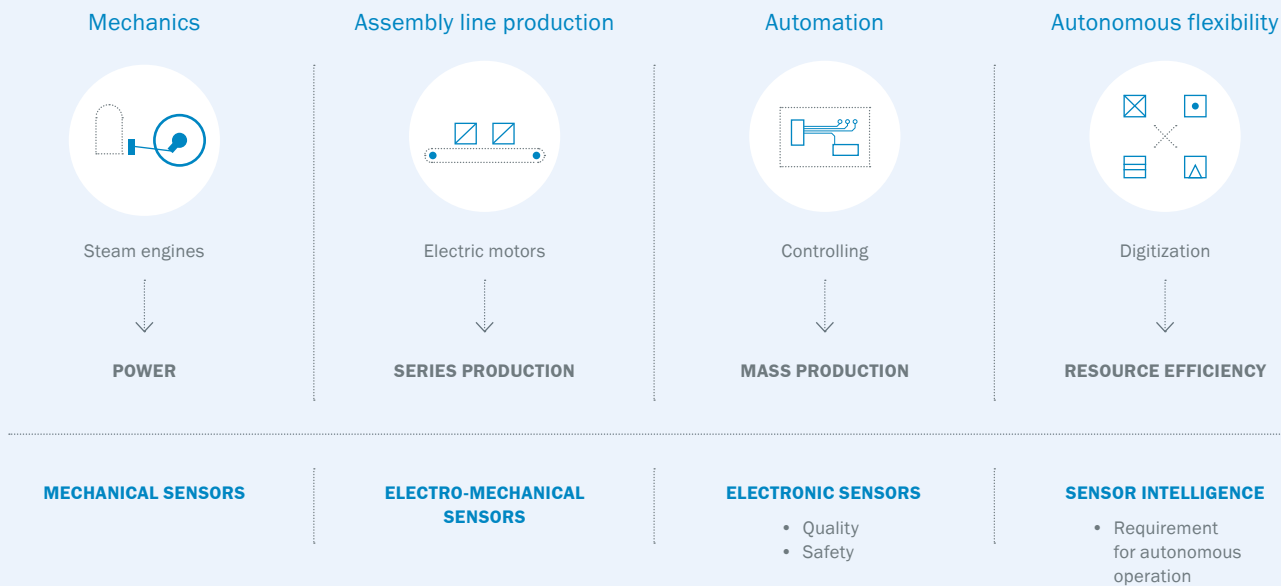
SICK Smart Sensors work together in a machine as intelligent and reliable data collectors.

As early as 2008, SICK lived up to its role as a technology driver by becoming the first company in the world to fit a packaging machine for table decoration materials with intelligent optoelectronics and communication technology in accordance with Industry 4.0 – providing seamless data and information continuity from the control unit right to the sensors. SICK Smart Sensors work together in a machine as intelligent and reliable

data collectors. There are two things to note about this data. Firstly, it is big data – large volumes of information about the status of the sensor, the operating conditions in the environment, and the function of the machine. Secondly, and at least as importantly, it is real data – i.e., actual, valid information which is generated reliably even under adverse detection and ambient conditions and is immediately available for the machine controller. Both big data and real data are essential to allow cyber-physical systems in the Smart Factory to identify errors, optimize processes, boost performance, enable transparent tracking, reduce costs, use resources efficiently, and interact safely with humans in the work process. These are the features of smart sensors which close efficiency gaps and generate added value – making investments in Industry 4.0 worthwhile and future-proof.

## The fourth industrial revolution

FROM THE INVENTION OF THE STEAM ENGINE TO THE SMART FACTORY



SICK, the Fraunhofer-Gesellschaft, the German Electrical and Electronic Manufacturers' Association (ZVEI), and

15

other companies came together to found the Industrial Data Space. Its goal: To integrate science and business to create sustainable solutions, and to shape the architecture of Industry 4.0.



#### THE BUSINESS MODEL IN FLUX

Integrating sensors and actuators into communication at the lowest field level makes the flow of information within an overall automation structure completely continuous. With Industry 4.0 and the Smart Sensor Solutions, the limits within the existing models are blurring or disappearing. The hierarchical automation pyramid is becoming a flat, networked automation system, and delivery and value-added chains are evolving into highly developed networks which also incorporate external business partners. This is placing new requirements on SICK's overall business model. Intelligence is becoming a necessity in sensors and sensor systems – and a unique selling proposition

and competitive advantage in many applications. Smart sensors will therefore become more and more prevalent in the SICK portfolio – across all product groups, sensor and system versions, and operating principles. SICK Remote Service, SICK's Internet-based remote machine maintenance, demonstrates what intelligent service is already capable of today. The range of services offers customers migration options and is compatible with the future machine environment of Industry 4.0. The interconnected production world of the Smart Factory will continue to increase demand for web-based operation and maintenance solutions. Whether customers are looking for sensors, systems, or

services, both the arguments used to sell these products and the investment appraisals carried out by the customers will take on new dimensions. The key is to quantify and qualify the cost and efficiency benefits for those who make the top-level decisions for the end customers of the machine and system manufacturers. Strategic cooperation with IT companies, software firms, cloud operators, and providers of manufacturing execution systems (MES), all of which have extensive experience with digital production management and automation systems, promises to become an innovative and successful business model for Smart Sensor Solutions, particularly in the case of new installations.

#### OPEN TO CHANGE – WITH RESPONSIBILITY FOR THE FUTURE

Since it was founded, SICK has proven itself to be highly adaptable and versatile – ideal prerequisites for the further development and growth of the company. Technology and applications will change, as will the productive interactions between humans, machines, and IT systems. What will stay the same is the company's responsibility for its employees, society,



Technology and applications will change, as will the productive interactions between humans, machines, and IT systems.





The use of RFID and bar codes in parallel is standard practice in applications such as baggage handling. In this case, an RFU620 RFID read/write and a Lector620 image-based code reader work as a team, triggered by a W27-3 photoelectric sensor.

and the environment. As dictated by company tradition, SICK will actively face the challenges arising from the expected organizational and staffing changes. The key will be to ensure demographic awareness and social balance when organizing work, while remaining open to alternative ways of working, such as collaborations between humans and machines. The technical changes in the future will be accompanied by training and further education, qualifications, knowledge transfer, the promotion

of social skills, the authority to delegate and make decisions, a holistic, family-oriented HR policy, and the further development of the corporate culture and its health management system. This will ensure that SICK continues to be a reliable partner for its employees, society, and the environment.

SICK's future as an innovation and technology leader, a versatile and global organization, an attractive employer and active member of society will be influenced significantly by the success of Industry 4.0 or the Internet of Things. In all areas, the ability to adapt – to new solutions, new markets, new business models, and new ways of working – will be crucial. With its strong roots, the right technology, the right corporate culture, and the necessary versatility, SICK has all the tools to manage change successfully.

And when it comes to change, as an innovative and economically independent company, SICK is in the driver's seat!



Sensor data is the most important basis for collaboration between humans and robots.

# Milestone / 5



"Optotrap" OTD  
testable scanner  
approx. 1976



This device featured a single turning-beam light curtain and a reverse reflector system, combined so as to allow rectangular surfaces to be monitored with any aspect ratio. The reverse reflector system on the edge of the opening to be monitored was dimensioned to ensure that a reverse reflector was in place to catch all turning beams up to a certain angle of impact, while a plane mirror

was mounted for any angles in excess of this limit. This plane mirror directed the turning beam towards another reverse reflector aligned at a right angle, which sent it back to the turning-beam light curtain. The scanner was chiefly used for monitoring elevator doors and pallet checking in high-bay warehouses.



microScan3  
2015

microScan3: The first in a new generation of safety laser scanners from SICK. The microScan3 reliably protects hazardous areas, accesses, and hazardous points, setting new standards with its innovative safeHDDM™ scan technology. It combines a compact design and a wide scanning range in one device. The housing of the microScan3 is rugged, with

outstanding reliability in dust and ambient light. Thanks to standardized interfaces, its smart connectivity saves costs during cabling, while the Safety Designer software allows the microScan3 to be intuitively configured and comfortably put into operation. In addition, the microScan3 indicates its operational status clearly via the multicolored display.

# Combined group management report and management report of SICK AG

FUNDAMENTAL INFORMATION ABOUT THE GROUP	.....	Business model	50
		Research and development	51
REPORT ON ECONOMIC POSITION	.....	Macroeconomic environment	53
		Environment in the sensor industry	54
		Order situation	54
		Results of operations	54
		Net assets	56
		Financial position	57
		Employees	57
SUBSEQUENT EVENTS	.....		59
OPPORTUNITY AND RISK REPORT	.....	Risk philosophy and policies	59
		Opportunity and risk management	59
		Compliance management and control	59
		Development of the overall risk situation	60
		Short-term risks and opportunities	60
		Financial risks and opportunities	60
		Performance risks	61
		Market risks	62
		Other risks	63
		Regulatory risks	63
REPORT ON EXPECTED DEVELOPMENTS	.....	Forward-looking statements	64
		Cautious growth forecast for the global economy in 2016	64
		Sensor intelligence as a prerequisite for Industry 4.0	64
		Sales forecast for the sales regions	64
		EBIT forecast	65
		Development of other financial performance indicators	65
		Development of non-financial performance indicators	65
		Overall conclusion	66
DEPENDENT COMPANY REPORT	.....		66
MANAGEMENT REPORT OF SICK AG	.....		66
		Setting targets for the equal representation of men and women in management positions	67



# Combined group management report and management report of SICK AG

for the fiscal year 2015

Pursuant to Sec. 315(3) HGB (“Handelsgesetzbuch”: German Commercial Code) in conjunction with Sec. 298 (3) HGB, the SICK group management report has been combined with the management report of SICK AG for the first time this year. The management report is therefore referred to in the following as the combined management report. The financial statements of SICK AG, prepared in accordance with HGB provisions, and the combined management report will be published in the German Federal Gazette (“Bundesanzeiger”) at the same time. Unless stated otherwise, the information provided below applies equally to the SICK Group and to SICK AG. Sections that contain information relating only to SICK AG are designated accordingly. Due to rounding differences, figures may differ slightly from the actual figures. The basis of consolidation is presented in detail in the IFRS notes to the consolidated financial statements.

The combined management report for the SICK Group and SICK AG for the fiscal year 2015 is presented below as of the end of the reporting period December 31, 2015:

## FUNDAMENTAL INFORMATION ABOUT THE GROUP

### Business model

#### ORGANIZATIONAL STRUCTURE OF THE GROUP

The organizational structure of the Group reflects the complex structure of the customers and markets. As a result, competence and production centers are located all over the world. The sales function is generally performed by the Group’s own sales and service companies in all key industrial countries. The product-generating entities are controlled from the German locations. Products for regional markets are developed and manufactured in Bloomington, USA, as well as in Singapore and in Johor Bahru, Malaysia. At the same time, these locations also have competence and application organizations for the respective region. This results in the following breakdown of the operating business: A total of four sales regions, namely Germany; Europe, Middle East and Africa (EMEA); Asia-Pacific and North, Central and South America (Americas), form the structure in which the Group operates. The largest manufacturing and development location is the Group’s headquarters in Waldkirch near Freiburg. It is from this head office that SICK AG

carries out the tasks of group management. It is managed by an Executive Board that comprises five members. A twelve-member Supervisory Board with equal numbers of employer and employee representative forms the oversight body.

#### BUSINESS PROCESSES AND PRODUCTS

In line with its brand claim “Sensor Intelligence.”, the SICK Group focuses on the development, production, and distribution of sensors, systems, and services for industrial automation technology. The company was founded by Dr. Erwin Sick in Vaterstetten near Munich in 1946. Business activities center on creating added value for customers from a wide range of target industries with intelligent sensor solutions. SICK offers these solutions globally in the form of components, systems including software, or individual services. The SICK Group divides its business activities into factory automation, logistics automation, and process automation business fields.

#### BUSINESS FIELDS

The **factory automation business field** is represented in many industries. In addition to the automotive industry and the field of consumer goods, these include the mechanical engineering, electronics and solar industries as well as drive technology. The most important tasks performed by the non-contact sensors and camera systems as well as the encoders and distance measurement systems in this field include controlling manufacturing, packaging, and assembly procedures as well as quality assurance. With special sensors that reliably detect invisible labeling, SICK protects against product and brand piracy, thus making a major contribution to the safety of customers and consumers. In order to reliably rule out dangers to staff working with potentially hazardous machines, SICK’s products, system solutions, and complete solutions under the safetyPLUS® brand in the area of safety technology avert potential accident risks. With the help of the bar code, 2D code, and RFID identification technologies as well as volume measurement technology, processes are managed to ensure top-quality end products while at the same time guaranteeing seamless tracking of packaging, an article, or an electronic component.

The **logistics automation business field** designs and optimizes the entire logistics chain by automating material flows or making sorting, picking, and warehousing processes more efficient, faster, and more reliable. Identifying and directing baggage on transportation and sorting units at airports is one of the areas where solutions from the logistics automation business field are used. Logistics centers as well as numerous courier, express, parcel and postal service providers use bar code readers and volume measurement systems from SICK to deliver millions of packages each year quickly and reliably to the recipient’s front door. SICK solutions in the distribution centers of well-known retail groups, clothing companies, automotive manufacturers, or specialist retail chains are also responsible for example for keeping the shelves in retail outlets

or boutiques constantly filled and for supplying car salesrooms and garages with supplies and spare parts at short notice. The automation of sea ports is another domain in which SICK's logistics automation business field operates. In this field, laser scanners have proved their worth in preventing cranes from colliding as well as in positioning containers or track monitoring for container transporters. In the field of traffic, SICK sensors are used in toll systems as well as in controlling ventilation and air circulation systems, thus improving air quality and safety in tunnels.

The **process automation business field** provides sensors as well as tailored system solutions and services for analysis and process measurement technology. With a broad range of products for gas analysis, the concentration of a large number of substances in gas mixtures can be detected. SICK supports its customers in reducing greenhouse gases with carbon dioxide analyzers for combustion, process, and drying units among others. In the field of dust measurement technology, SICK is in a position to detect dust concentrations precisely using different measurement principles, thus ensuring compliance with emission limits, or to identify process disruptions at an early stage. SICK sensor systems carry out various tasks in the area of volume flow measurement, for example determining volume flows in facilities and measuring natural gas volumes for the natural gas industry, or monitoring emissions in industrial processes. With all of these products for waste incineration plants, power, steel and cement plants, for the oil and gas industry as well as for chemical and hydrocarbon processing (HPI) plants, SICK makes an important contribution to maintaining an environment worth living in.

## SALES MARKETS

The main sales markets for the SICK Group are industrialized countries as well as those growth regions that are on the cusp of industrialization. We extend our regional reach by setting up new sales companies and by continuously maintaining a global network of distributors. To enable faster supply to our sales and service entities around the globe, we invested in building a new distribution center at the Buchholz location near Waldkirch during the reporting period. The center will commence operations in the first half of 2016.

## EXTERNAL FACTORS INFLUENCING THE BUSINESS

The main external factors influencing the business of SICK include changes in the economic environment as well as sector-specific economic developments. These are explained below in "Macroeconomic environment." Other external factors influencing the business and their effects, for example changed price levels due to technical advancement, changing legal framework conditions and norms, changes in prices of commodities and intermediate products as well as exchange rate fluctuations, are presented in the opportunity and risk report.

## Research and development

In view of the tough competitive environment, continuous investment is needed in research and development (R&D) in order to retain our leading market position. At SICK, innovation has one objective, namely to help customers master a complex problem. In this way, our components, system solutions, and services ensure that productivity is raised, flexibility is increased, or resources are saved.

To meet this high demand, the SICK Group expanded the area of R&D once again in the past fiscal year and invested EUR 129.0 million (prior year: EUR 116.2 million). This is equivalent to 10.2 percent of sales revenue (prior year: 10.6 percent). R&D expenses include amortization of development expenses capitalized in prior years of EUR 7.9 million (prior year: EUR 7.0 million). An additional EUR 7.7 million (prior year: EUR 6.5 million) was capitalized this year utilizing third-party services on a small scale only.

Thanks to the intensive R&D activities, we have a highly diversified product portfolio that meets the requirements of very different industries and also serves markets ranging from those that respond quickly to cyclical fluctuations to those that are slower to respond. This makes it easier for us to compensate for any uneven development in our target industries, provoked for instance by cyclical swings.

Further impetus for R&D comes especially from intensive dialog with customers, universities, and research institutes. Gearing the global sales organization consistently to the industries served also creates a basis for understanding customers' requirements and translating these into new products, system solutions, and service concepts. An average of 864 employees contributed to translating innovative ideas into marketable products in the fiscal year 2015. This figure is up 5.8 percent on the prior year, due to the expansion of R&D capacities at the foreign locations in particular. Staff numbers there increased by an average of 10.3 percent in the fiscal year 2015 to now 118 R&D employees.

## PRODUCT INNOVATIONS

The fiscal year 2015 saw the SICK Group drive forward innovations in all product areas, thus supplementing its widely diversified portfolio in key areas. The most important new developments from the past year are presented below:

Since 2015, the yardstick in reliable long-range detection has a new name: **PowerProx**. At ranges of between 5 centimeters and 3.8 meters, nothing gets past this **MultiTask photoelectric sensor** undetected. To make sure of this, SICK has packed all of the benefits of time-of-flight technology into the smallest housing of its kind worldwide to date – while at the same time increasing detection speed. PowerProx can now be used for the reliable detection of even fast-moving objects, small and flat objects as well as jet-black and shiny objects over large sensing ranges. The photoelectric sensor provides consistent detection results even over a large detection angle and is not sensitive to ambient light.

A further addition to the market was the **IMB inductive proximity sensor**. This is a reliable sensor for use in harsh conditions, whether in contact with cooling lubricants or for outside use. Its high-precision sensing ranges thanks to SICK ASIC technology means that IMB ensures reliable and stable processes. Its broad specification limits allow IMB to be used even in areas where special devices were needed in the past. This is an advantage in terms of product selection and storage. The optical adjustment indicator and self-locking nuts save time during commissioning and help to reduce errors. For more flexibility and automation functions, communication via IO-Link is possible.

With **microScan3**, the SICK Group launched the new generation of **safety laser scanners** in the fiscal year 2015. It combines the innovative scanning technology safeHDDM™, a compact design, and a large range in just one device. Even in challenging conditions, the patented measuring principle keeps a sharp focus and allows for exceptional performance data. The scanning angle is 275 degrees, with a protective field range of 5.5 meters. The new Safety Designer software can be used for intuitive configuration and easy commissioning of microScan3. The areas of application for microScan3 are varied: It secures hazardous areas at loading and unloading stations, multi-side access on machines and material transfer applications, machines in harsh environments as well as danger zones. It also offers presence detection to prevent the accidental restart of a machine.

The **deTec4 Prime safety light curtain** extends the functional scope of deTec4 Core – in the same housing. It therefore offers even more solutions for a vast range of applications. deTec4 Prime is configured without a computer and via four different M12 system plugs. The protective field range of up to 21 meters can be measured automatically, while the alignment displays fitted with four LEDs guarantee fast and safe commissioning of the light curtain. By cascading up to three deTec4 Prime units, less wiring is needed and fewer safety capable inputs are necessary in the control cabinet. deTec4 Prime also offers reliable protection for fingers and hands. The IP 65 and IP 67 enclosure ratings and ambient operating temperature of -30 °C to +55 °C make the safety light curtain suitable for use even in harsh environments.

In the field of traffic sensor systems, the **VISIC50SF smoke detector** was developed for the detection of tunnel fires. The device is particularly compact and can be commissioned immediately in the tunnel without alignment. It can withstand the harsh and even corrosive conditions that prevail in tunnels as well as the regular tunnel cleaning with high-pressure cleaners. The smoke detector is based on the scattered light measurement principle and can detect fires even before the appearance of any open flames or the occurrence of a noticeable temperature increase. As a consequence, the product makes a significant contribution to improving tunnel safety.

The **MARSIC300 analyzer solution** was developed to measure emissions on ships. The device makes use of the tried-and-tested hot-extractive photometric measurement principle and facilitates the measurement of sulfur oxides and nitrogen oxides as well as carbon dioxide and other flue gases. It thus enables compliance with the new emissions norms for ships in coastal areas and makes it possible to monitor and optimize engine efficiency and flue gas cleaning. The device was developed in particular with ease of maintenance and repair in mind, allowing for errors to be resolved all over the world.

As the successor to the successful FLOWSIC600, the **FLOWSIC600-XT ultrasonic gas flow meter** raised the bar in its market segment in the fiscal year 2015. Available in four different versions, FLOWSIC600-XT meets the requirements of any application, whether as a stand-alone device or as part of a system solution, without compromising measurement performance. The predecessor model, FLOWSIC600, already guaranteed unparalleled long-time stability under extreme conditions. The four versions in the FLOWSIC600-XT product family combine these properties with a unique level of user-friendliness. Over their entire life span, they fulfill all of the requirements for safe, stable, and calibratable gas volume measurement. FLOWSIC600-XT features i-diagnostics™, the intelligent application diagnosis ability with the integrated solution assistant, as well as PowerIn Technology™, which allows measurement to continue for up to three weeks in the event of a power cut.



The past fiscal year saw the market launch of **DFS60S**, the first **safety encoder** from SICK. DFS60S is available in various mechanical designs and was developed in line with the requirements of a new inspection norm for safe rotary encoders. In combination with the Drive Monitor FX3-MOC safety controller, it meets the requirements of safety integrity level 2.

2015 also marked the completion of the **EFS50/EFM50 motor feedback system**, another product with a HIPERFACE-DSL® interface. The device is extremely high performing, offering 23-bit resolution and thus very high precision levels. The motor feedback system likewise meets the requirements of safety integrity level 2. Thanks to the option of connecting an external sensor, the product is ideally prepared for Industry 4.0.

**TriSpector1000** is a configurable stand-alone sensor for low-cost 3D inspections of moving parts. Regardless of the shape, color, or alignment of the part, the sensor can rise to the challenge. It is now possible to inspect content, completeness, and emptiness in all dimensions. It is ideally suited to quality control in the consumer goods and packaging industries. Thanks to its intuitive user interface, TriSpector1000 can be commissioned and operated very simply. It is even possible to quickly exchange a device with ease thanks to the guaranteed field of view and the option to reuse stored settings.

Another highlight was the introduction of **RFU65x**, a measuring RFID read/write device with integrated passage and direction detection. So far, conventional RFID devices were only able to derive the direction of movement of an object using additional external antennas and intelligent algorithms. RFU65x puts an end to this limitation, determining the position from which the transponder responds. The additionally integrated logic uses this information to calculate the direction of movement of an object from passage detection.

Other new products available on the market since the fiscal year 2015 include **3vistor-T 3D vision sensors**. These sensors offer innovative 3D-snapshot technology that makes them entirely flexible for indoor use. Based on time-of-flight measurement, 3vistor-T provides real-time depth information for each pixel, even for stationary applications. The output can be either pure 3D raw data or reduced data that suits the respective application – tailored to the respective application. High-performance visualization tools and reliable 3D data output make the 3vistor-T the ideal solution in intralogistics, robotics, or industrial vehicles for example.

In the area of **fluid sensors**, new variants of the LFP TDR level sensor were brought to market. These include in particular new versions of the probe design as well as a range of extended software functionalities that ensure reliable level measurement even at higher temperatures, for larger tank heights, or in tighter installation conditions.

## REPORT ON ECONOMIC POSITION

### Macroeconomic environment

In 2015, the global economy was shaped by low energy and commodities prices. This adversely affected the economic development in commodities-exporting countries such as Russia and Brazil in particular. The export and industry-driven growth model of the Asian countries and emerging countries reached its limits on account of weak global trade levels. Especially China was responsible for the slowing pace of growth in Asia as well as globally. In the industrial nations, economic growth was relatively robust in the first three quarters. The International Monetary Fund (IMF) predicts that global gross domestic product will rise by 3.1 percent.

The mechanical engineering industry, which is the largest target market for SICK sensors, also experienced a modest global development, with flash points and unrest around the globe leading to investor uncertainty. In the USA as well as in China and Japan, sales forecasts had to be corrected downwards over the course of the year. China's development in particular is a decisive yardstick, as that is where around 35 percent of the world's mechanical engineering sales are recorded. As a result, the VDMA ("Verband Deutscher Maschinen- und Anlagenbau e.V.": German Engineering Federation) now expects year-on-year growth in the global mechanical engineering industry to stand at just over one percent.

**Germany's** economy benefited particularly from the low oil price and the depreciating euro. The resilient domestic market formed the backbone for growth, buoyed especially by high private consumption levels. Capital expenditure was, however, also on the up. In addition, Germany's foreign trade regained pace in 2015, due chiefly to the high demand from the USA and other European countries.

In the region of **Europe, Middle East and Africa (EMEA)**, economic development was uneven. The region was dominated by Europe, which developed better than forecast at the beginning of the year. The devaluation of the euro had a positive effect on exports. Overall, there was a moderate recovery in Europe over the course of the year. Economic growth in the countries outside of Europe was essentially moderate, though Russia was hit especially hard by the collapse of commodities prices.

Within the **North, Central and South America (Americas) region**, the USA in particular proved to be the pillar shoring up economic growth. The continuous improvement in employment figures, higher wages as well as low fuel prices along with the very advantageous financing conditions there are creating exceptionally positive conditions for consumption. By contrast, some industry segments were negatively affected by the appreciation in the US dollar and the weak level of demand from abroad. For this reason, the pace of investment slowed somewhat over the course of the year. Brazil, however, saw no economic growth, due to the low commodities prices and the general political and economic situation.

The economic development of the **Asia-Pacific region** hinges on China's economic situation. Private consumption there continued to rise in 2015, but was unable to compensate in full for the fall-off in investment activity. In addition, Chinese foreign trade lagged far behind expectations – primarily because the increase in value of the renminbi against the euro made exports more expensive. At the same time, imports fell, prompting the government's current moves to invest in expanding the infrastructure in order to prevent further economic decline. There is a similar situation in Japan, where current opinion considers the economy to have only narrowly escaped recession. Growth in private consumption was especially hesitant there.

### Environment in the sensor industry

Our business model is founded primarily on the existence of an independent market for sensor systems and on our conviction that by concentrating on sensor solutions, it is possible to offer intelligent and high-quality products and to produce these efficiently. In line with its "Sensor Intelligence." claim, SICK thus focuses on sensor technology for industrial applications while exploiting all possibilities and facets that sensor technology offers. These possibilities, in particular in the form of higher-performance processors and storage technologies as well as the integration of application knowledge in the software of individual products, ensure that SICK sensors are moving more and more towards sensor intelligence. Such intelligence is essential in order to succeed in moving industrial manufacturing and logistics processes forward towards a Smart Factory, otherwise known as the "Industry 4.0" discussion. Industry 4.0 thus promises huge growth potential for SICK sensors. In order to exploit this potential, it is essential that SICK's products are compliant with as many automation systems as possible. Consequently, one of SICK's focal areas of development is connectivity. SICK is involved in the industry bodies of various associations in order to promote the continued development of open and defined interfaces. The Group also monitors other technologies and trends considered relevant for the future development of the SICK Group and, after appropriate appraisal, incorporates these in development or cooperation processes. For SICK, solutions are not just about products. This is why the business model is additionally supported by the system and service business.

Both areas concentrate on providing customers with complex solutions that go beyond the individual product and that have been customized in line with the respective requirements.

### Order situation

The SICK Group continued on its course for growth in the fiscal year 2015. With **orders received** of EUR 1,270.5 million in total, the prior-year figure (EUR 1,122.8 million) was surpassed by 13.2 percent. This is a particularly significant achievement in view of the modest global economic environment. In line with the trend observed in prior years, new business developed relatively cautiously in the first quarter before consistently remaining at a virtually identical high level in the following three quarters.

### Results of operations

The very pleasing development also continued in relation to **sales**, which grew dramatically and totaled EUR 1,267.6 million as of the end of the year (2014: EUR 1,099.8 million). This is 15.3 percent more than in the prior year. In view of the fact that the VDMA expects global growth in the mechanical engineering industry of just one percent in 2015, the SICK Group has developed excellently and achieved above-average sales growth. The high single-digit growth forecast at the beginning of the past fiscal year has thus been comfortably surpassed. The main reason for this development is the increase in value of the US dollar against the euro; adjusted for currency effects, sales growth comes to just under ten percent. The start to the fiscal year 2015 was equally modest for sales and for orders received, but the situation improved gradually over the course of the following quarters. Because of the strong surge in sales at the end of the year, the book-to-bill ratio of 100.2 percent as of December 31, 2015 was down on the prior year (102.1 percent).

Thanks to its global alignment, the growth of the SICK Group was once again broad-based in the fiscal year 2015. In addition to the presence on the established markets, the sales activities in the growth regions around the world also help to increase sales further.

The economic environment on the home market of **Germany** was just as varied in the past fiscal year as it had been in the prior year. However, exports did benefit from the persistently weak euro. Sales growth was highest in process automation, buoyed first and foremost by demand from the oil and gas industry and the primary industries. In logistics automation, it was chiefly the transport logistics business that experienced growth. By contrast, sales with factory automation customers fell somewhat short of expectations. Sales for the region were up 8.0 percent on the prior year in total, which was a little below the range forecast at the beginning of the fiscal year.

Growth was stronger in the **Europe, Middle East and Africa (EMEA)** region, with sales up by 11.6 percent. The lasting economic recovery in this sales region predicted at the beginning of the year eventuated in full, and the forecast range was slightly exceeded. This development is attributable especially to the excellent business development in logistics automation. But factory automation and process automation also recorded robust growth rates in a year-on-year comparison.

Sales growth in **North, Central and South America (Americas)** was almost twice as high as in the EMEA region, with a rise of 22.7 percent compared to the prior year. This means that the forecast sales were exceeded significantly in this region too, due in the main to the appreciation of the US dollar against the euro. The growth is reflected in all business fields, though the largest growth impetus was experienced in the logistics automation business field.

There was even slightly higher percentage sales growth in the **Asia-Pacific region**. It was in this region that the forecast for 2015 was exceeded most, with a 23.6 percent increase – influenced primarily by the currency effect on the back of the strengthening Chinese renminbi. Process automation continued to benefit from strong demand for environmental measuring technology in China. In the factory automation business field, safety technology was the main sales driver, particularly in China. Nevertheless, it was once again logistics automation that provided the largest growth impetus in Asia and the Pacific region.

The **regional distribution of sales** was as follows in the fiscal year 2015:

#### SALES BY REGION

in EUR million	2015	2014	Change in %
Germany	265.8	246.0	8.0
Europe, Middle East and Africa (EMEA)	476.6	427.2	11.6
North, Central and South America (Americas)	273.9	223.3	22.7
Asia-Pacific	251.3	203.3	23.6
<b>TOTAL</b>	<b>1,267.6</b>	<b>1,099.8</b>	<b>15.3</b>

At EUR 376.4 million, **cost of materials** was 14.1 percent higher than in the prior year (EUR 329.8 million). However, the increase was lower than the rise in sales. This is due to currency effects in particular as well as to continuous improvements in procurement management. As a result, the ratio of cost of materials to sales fell from 30.0 to 29.7 percent.

**Personnel expenses**, on the other hand, rose by 13.4 percent to EUR 526.3 million in total (prior year: EUR 464.2 million) – and thus also at a lower rate than sales – owing chiefly to the global increase in headcount, an obligation to provide for a special anniversary bonus as well as the negotiated pay increase in Germany.

Investment activity of the past fiscal years is reflected in the **depreciation and amortization**. Major construction work was once again seen in 2015, including various new buildings at the Waldkirch location in particular. At EUR 46.4 million, depreciation and amortization in the fiscal year 2015 was 13.4 percent higher than in the prior year (EUR 40.9 million).

**Other operating expenses** also increased, amounting to EUR 209.8 million (2014: EUR 179.4 million). The 16.9 percent increase is principally due to higher selling and administrative expenses, expanding sales promotion measures, higher purchased services as well as the climb in expenses for repairs and maintenance. **Other operating income** jumped significantly by 34.8 percent to EUR 9.2 million (prior year: EUR 6.8 million), mostly on account of the rise in income from grants and from asset disposals. Consequently, the **net balance of other operating income and other operating expenses** changed from EUR 172.6 million to EUR 200.6 million. This is 16.2 percent more than in the prior year.



The **currency results** deteriorated somewhat, running counter to sales. Earnings from hedging transactions as well as operating currency risks totaled EUR -5.2 million as of the end of the reporting period. This corresponds to a drop of 36.8 percent compared to the prior year (2014: EUR -3.8 million).

**Net investment expense** went from EUR 0.4 million to EUR 0.7 million in the past fiscal year, chiefly because further start-up investments were necessary for the new entities in the SICK Group.

Earnings developed exceptionally well on the whole in the fiscal year 2015: **Earnings before interest and tax (EBIT)** of EUR 129.1 million were recorded in total, constituting a 25.0 percent rise on the prior-year level, when EBIT stood at EUR 103.2 million. The main factors contributing to this upward trend are the sales growth as well as the development of the US dollar and Chinese renminbi, which gave a particular boost to the SICK Group. The **EBIT margin** as a percentage of sales climbed to 10.2 percent as a result (prior year: 9.4 percent). This meant that the high single-digit figure forecast at the beginning of the past fiscal year was surpassed – mostly because the intensity of the currency effect was not yet fully foreseeable at the beginning of the year.

The **tax rate** improved from 28.9 percent in the prior year to 27.2 percent on the back of non-recurring effects attributable to the completion of the tax audit in particular. The Group's overall **tax expense** climbed from EUR 28.6 million to EUR 34.3 million on account of the higher pretax earnings.

After deducting the tax burden, the share in the **consolidated net income for the year** that is attributable to the shareholders of SICK AG amounts to EUR 90.8 million. This constitutes a rise of 30.0 percent on the prior year (EUR 69.8 million), due in part to the favorable development of the interest rates. Because of this very positive development, the **net return on sales** increased to 7.2 percent (prior year: 6.3 percent).

## Net assets

**Total assets** rose by 13.1 percent to EUR 862.9 million (prior year: EUR 762.9 million), a disproportionately low increase compared to sales growth in the fiscal year 2015.

At EUR 339.7 million, **non-current assets** rose by 15.1 percent on the prior year (EUR 295.2 million). This development was mostly due to **property, plant and equipment**, which rose by 17.0 percent from EUR 211.9 million to EUR 247.9 million, chiefly in connection with construction projects at the German locations and the purchase of machines and supplies. There was an even sharper rise in **deferred taxes** to EUR 29.5 million, up 29.3 percent on the end of the prior year (EUR 22.8 million). This was due in the main to deferred tax effects on the change in the

elimination of intercompany profits and losses. **Financial assets** were up 16.0 percent to EUR 2.6 million (prior year: EUR 2.3 million). **Intangible assets** amounted to EUR 59.7 million, thus virtually on a par with the prior-year level (EUR 58.3 million, up 2.4 percent).

The sales growth in the course of the reporting year is also reflected in the development of **current assets**. These saw a rise of 11.9 percent to EUR 523.1 million (prior year: EUR 467.7 million). **Inventories** increased further – albeit not at the same rate as sales – and amounted to EUR 227.5 million as of the end of the reporting year, which is a rise of 7.9 percent on the prior year (EUR 210.9 million). This development was caused first and foremost by improved inventory management. Days of Inventory Outstanding (DIO) decreased by four days to 65 days as a result (prior year: 69 days). In line with the rise in business activity, especially at the end of the year, **trade receivables** also increased by 16.4 percent to EUR 234.5 million as of the end of the reporting period (prior year: EUR 201.4 million). Because they increased at a faster rate than sales, Days of Sales Outstanding (DSO) rose by one day to 67 days as of the end of the year (prior year: 66 days). **Other assets** grew marginally by 4.9 percent from EUR 36.2 million to EUR 38.0 million. Moreover, **cash and cash equivalents** climbed by 23.0 percent to EUR 18.4 million (prior year: EUR 15.0 million).

On the equity and liabilities side, the SICK Group recorded a further increase in **equity** thanks to the positive development of earnings. Equity amounted to EUR 451.8 million at the end of the year, which represents a 20.6 percent jump on the prior year (EUR 374.6 million). As a result, the **equity ratio** increased considerably to 52.4 percent (prior year: 49.1 percent) because lower working capital requirements in relation to sales meant that debt capital rose at a lower rate than equity. Even the dividend distribution at a customary level did not detract from this extremely positive development.

In order to guarantee stable and future-proof financing of the Group, **non-current liabilities** were raised in the fiscal year 2015, coming to EUR 167.4 million as of the end of the reporting period (prior year: EUR 150.5 million). This corresponds to a rise of 11.2 percent. **Non-current financial liabilities** increased accordingly from EUR 76.9 million to EUR 88.0 million, especially on account of taking out two bank loans. **Non-current provisions** rose to EUR 77.5 million, thus exceeding the prior-year level of EUR 71.9 million by 7.7 percent. For information on the nature, terms to maturity, currency, and interest rates of liabilities, including their main terms and conditions, as well as information on undrawn credit lines available, reference is made to the comments in G. (35) "Financial risk management" in the IFRS notes to the consolidated financial statements.

The higher sales volume in the fiscal year 2015 resulted in a marginal increase in **current liabilities**, which grew by a mere 2.5 percent to EUR 243.7 million (prior year: EUR 237.7 million). Because the low interest level led to a shift within the financing structure in favor of non-current financial liabilities, current financial liabilities fell by 61.2 percent to EUR 11.3 million (prior year: EUR 29.1 million). **Current trade payables** were up 9.5 percent from EUR 89.2 million to EUR 97.5 million due to the higher business volume. **Other current liabilities** also jumped 19.4 percent to EUR 96.8 million (prior year: EUR 81.1 million). This is chiefly a result of a rise in performance-related pay at SICK AG. **Other current provisions** also increased, up 9.3 percent from EUR 19.3 million to EUR 21.1 million on account of higher warranty provisions. There was a decline in **tax liabilities**, however, which had fallen to EUR 16.9 million as of the end of the year, marking a drop of 11.1 percent on the prior year (EUR 19.0 million).

Because the high sales level led to a rise in current trade receivables and in inventories that could not be compensated for by the growth in current liabilities, **working capital** rose by 12.8 percent to EUR 364.5 million (prior year: EUR 323.1 million). Since working capital did not match the rate of increase of sales, Days of Working Capital (DWC) fell from 106 to 103 days. **Net debt** was reduced substantially, in particular due to high levels of payments received at the end of the year and a further improvement in cash management. At EUR 80.9 million, it was considerably lower than in the prior year (EUR 91.1 million) – despite the continued high level of investment activity.

## Financial position

At EUR 157.7 million, **cash flow from ordinary operations** is much higher than in the prior year (EUR 107.0 million), mainly on account of higher earnings and improved management of working capital. A dividend of EUR 18.3 million was paid in the fiscal year 2015 that was financed from the **cash flow from operating activities**. This cash flow of EUR 112.1 million (prior year: EUR 83.8 million) was also used to finance intensive investment activity.

**Investments** during the fiscal year 2015 totaled EUR 83.8 million excluding financial assets, a rise of 1.7 percent on the prior year (EUR 82.4 million). Of this amount, EUR 17.4 million was attributable to intangible assets, while EUR 66.4 million was channeled into property, plant and equipment. Overall investment activity focused on **Germany**, with 87.3 percent of the investment volume involving the German locations. Activity was mostly related to construction measures, including the construction of a new distribution center in Buchholz and the construction of new development and office buildings in Waldkirch. In addition, SICK Engineering GmbH purchased a site at the Dresden location. There was also capital expenditure in technical equipment and machinery, in particular at SICK AG and SICK STEGMANN GmbH in Donaueschingen. Investment activity **abroad** centered around the subsidiary in Hungary, where new technical equipment and machinery was also acquired to enhance the competitiveness of the production location.

## OVERALL ASSESSMENT

The net assets, financial position, and results of operations developed even better in the fiscal year 2015 than in the past fiscal years, as evidenced by the unusually large rise in EBIT and consolidated net income for the year. The SICK Group thus has an extremely solid capital base, which forms an excellent foundation for the further expansion of business activities and thus further growth for the Group.

## Employees

In connection with the sales growth, the global headcount also increased further in the past fiscal year, with a total of 460 employees joining the Group. At the end of the year, the headcount at the SICK Group was thus 7,417 in total, which is 6.6 percent more than at the end of 2014 (6,957 employees). The forecast figure was thus exceeded slightly. These new skilled staff allowed SICK in particular to strengthen the areas of R&D as well as global sales further. As of the end of the year, 4,388 employees or 59.2 percent of the workforce worked in **Germany**. This signifies a rise of 5.8 percent on the level at the end of the prior year (4,147 employees). The largest percentage increase in headcount in Germany was at the subsidiary SICK Engineering GmbH in Dresden. The percentage increase in headcount was somewhat greater internationally than in Germany, with the workforce increasing by 7.8 percent compared with the end of 2014 to reach 3,029 as of December 31, 2015. This is 219 more staff than in the prior year. In the **EMEA** region, it was the subsidiaries in Dubai, Russia, and Poland that experienced most growth. New staff were hired at various locations in the **Americas** region. The workforce of the Canadian subsidiary also continued to grow. In the **Asia-Pacific** region, the largest increase in the number of employees was at the production and development locations in Malaysia and Singapore. In addition, the subsidiary in China responsible for the factory and logistics automation business fields invested in hiring more staff and expanding sales capacities.

## EMPLOYEES AS OF DECEMBER 31

	2015	2014	Change in %
Germany	4,388	4,147	5.8
Europe, Middle East and Africa (EMEA)	1,350	1,278	5.6
North, Central and South America (Americas)	652	593	9.9
Asia-Pacific	1,027	939	9.4
<b>TOTAL</b>	<b>7,417</b>	<b>6,957</b>	<b>6.6</b>

The average age of SICK's workforce was 40.2 in 2015, which is thus somewhat lower than in the prior year (40.4). The average length of service also dropped slightly to 9.1 years (prior year: 9.3 years). The percentage of women in the workforce of the SICK Group has risen marginally, however, with women accounting for 36 percent of the workforce and men making up the remaining 64 percent in the past fiscal year. In the prior year, these figures were 34 percent and 66 percent respectively. The SICK Group employed an average of 267 trainees in the fiscal year 2015 (prior year: 255).

SICK is especially committed to binding its employees to the Group for the long term, offering flexible working time models as well as active promotion of healthy living and tailored advanced training, which is coordinated by the internal Sensor Intelligence Academy (SIA). At EUR 9.3 million, the cost of basic and advanced training and thus of the global addition of skills was thus 16.3 percent higher in the past fiscal year than in the prior year (EUR 8.0 million). The advanced training offerings focus on developing specialist knowledge for new business fields, for example system construction or service, and on promoting skills for efficient collaboration throughout the Group.

The offering is complemented by extensive programs to promote healthy living. These go far beyond what is required by law and are seamlessly integrated in the daily work routine.

A system of integrated risk assessment to deal with physical, psychological and psychosocial strains in the workplace has now become an integral component in the Group. The workplaces are analyzed systematically in terms of potential risks. Measures are then developed to reduce or eliminate these risks and the effectiveness of these measures is assessed on a continuous basis. The system of integrated risk assessment at SICK AG acts as an early warning system to detect critical developments in everyday working life at an early stage.

Reintegration management helps employees to overcome their incapacity for work, eases their return to work, and supports them in preventing a repeat absence.

In addition, the Azubifit program aims to raise the health awareness of the apprentices by offering health promotion activities tailored to the target group. The chief topics addressed include prevention of addiction, nutrition, and exercise as well as stress management.

In the past fiscal year, SICK AG received the Corporate Health Award in the "Consumer goods/Electronics" category for its excellent corporate health management system. This involved examining and assessing the structure, strategy, and benefits of the corporate health management system.



## SUBSEQUENT EVENTS

No subsequent events of particular significance for the net assets, financial position, and results of operations occurred after the close of the fiscal year 2015.

## OPPORTUNITY AND RISK REPORT

### Risk philosophy and policies

Independence, innovation, and leadership are all parts of our mission statement. Within these, it is the core function of leadership that represents the main framework conditions of our management culture. The central component involves delegating responsibility and agreeing individual targets based on the long-term company objectives. To implement these objectives, the managers responsible use institutionalized management systems to manage their areas independently and gear them to the future. The group-wide planning systems play a key role here. Clear rules and company guidelines also define the scope for action by those responsible. This is monitored continuously by those responsible with the help of group-wide control systems.

### Opportunity and risk management

In addition to opportunities management, which is institutionalized via the group-wide planning systems, risk management also presents and assesses risks across all management levels. The company's defined risks are discussed, reported on, and assessed at regular intervals. Group-wide processes supported by different databases have been put in place for this purpose. Risk management is communicated to the management on a regular basis. Agreement is reached on the definition of further company risks, which are then rolled out via the individual responsibilities. Each of the risks in the risk catalog is monitored and hedged using appropriate measures that are stored in a central risk database. One means of hedging risks is the central insurance management. From an organizational perspective, the planning and risk management systems are managed in Corporate Controlling.

## Compliance management and control

The aim of the compliance management system at SICK and the main task of its compliance organization is to be aware of and comply with all statutory regulations and internal guidelines that apply to SICK AG and its group entities. The Executive Board introduced the compliance management system back in 2010 and expressly emphasized its fundamental expectation that all employees in the SICK Group around the world would observe the regulations relevant for SICK.

The Code of Conduct provides the underlying structure for all compliance activities at SICK. In addition to the requirement for conduct that is in line with the law, it addresses all of the core issues of compliance, for example by unequivocally denouncing any type of corruption or arrangements that infringe anti trust law. In addition, the Code of Conduct addresses matters such as environmental protection, occupational health and safety, equal opportunities for employees and the confidential handing of trade secrets, and also requires staff to observe the relevant external and internal rules.

The Executive Board's compliance principles describe the organizational structure of compliance management at SICK. The Compliance Officer and the employees with compliance duties at the subsidiaries and organizational units are responsible for implementing, monitoring, and continuously refining compliance management in the Group. If no Compliance Officer has been appointed, it remains the responsibility of that business area's management. The Compliance Committee defines the compliance requirements in the Group and supports the operating entities in introducing and maintaining appropriate measures. It monitors the effectiveness of compliance management and initiates additional compliance activities as required. The committee is supported by regular internal audits that examine both potential breaches as well as weaknesses in the compliance processes. All of the Group's compliance-relevant areas are represented on the Compliance Committee, in particular officers responsible for data protection, occupational health and safety, and the environment alongside the works council and risk management.

Risk management and compliance officers examine risks – including compliance risks – across the Group on an annual basis using the same systems. This harmonized approach is particularly suitable when seeking out new compliance risks, as it is often not possible to clearly demarcate economic, litigation and compliance risks.

## Development of the overall risk situation

The industry environment remained more or less unchanged in the reporting year. However, the ongoing discussion about Industry 4.0 and the fact that intelligent sensors are essential as a data basis for the Smart Factory open up major opportunities for technological growth for SICK. Connecting sensor systems to upstream cloud solutions as well as the topic of data protection are particularly relevant.

The general economic conditions in the fiscal year 2015 were very uneven across the globe. Growth rates in Germany were muted, while the USA and Asia in particular noted strong growth. It was primarily currency effects that boosted the development of sales in those two regions, and these effects are likely to weaken markedly in the current fiscal year. In addition, little tailwind is expected from the global economy.

It was chiefly due to the favorable development of the US dollar that the sales and earnings development of the SICK Group outstripped some forecasts quite considerably in the past year. This reduced the overall risk in relation to net assets, results of operations, and financial position, also because earnings were very positive and cash flow was higher than calculated. This is an excellent basis from which to drive further expansion of the Group. Banks continue to provide us with all of the necessary funding at attractive rates.

On the whole, the overall risk continues to be at a level typical for the business. The Executive Board is therefore confident that the individual risks described below for the SICK Group are manageable and do not jeopardize its continued existence.

## Short-term risks and opportunities

To increase the transparency and clarity of the risk report, the short-term risks and opportunities described below were summarized into key categories for the SICK Group. The going concern risks are analyzed in detail on an ongoing basis as part of risk management, and adequate measures are taken to hedge these risks.

## Financial risks and opportunities

### VALUATION ALLOWANCES

Default risks from receivables are minimized by ongoing monitoring of the creditworthiness of the counterparty and by limiting the aggregated risks from the individual counterparty. One major component here is a set of rules that contains guidelines for granting and monitoring credit limits. By applying these rules, the default rate for receivables (as a percentage of sales) is maintained at a constant low level (0.12 percent in the fiscal year 2015).

### CURRENCY RISKS AND OPPORTUNITIES

The global business activities of the SICK Group entail a large number of cash flows in different currencies. We are particularly exposed to currency fluctuations between the euro and the US dollar. Other significant foreign currencies include the Chinese renminbi, the pound sterling, and the Australian dollar. Depending on the expected risk potential, exchange rates are hedged using traditional forward contracts or options over varying periods. In the past fiscal year, parts of the exposure for the main currencies for the SICK Group expected for 2016 were hedged.

### INTEREST RATE RISKS

The SICK Group responds to interest rate risks by entering into fixed-interest agreements over the term of its loans. When structuring loan maturities, we try to ensure that these fall due for extension in different fiscal years. Only working capital requirements are financed at floating interest rates in the short term.

### FINANCING RISKS

The debt finance of the SICK Group is primarily denominated in euro and takes the form of long-term loans and loans against a promissory note. The Group's creditors are banks and insurance companies with which a long-term trusted business relationship exists. From a current perspective, there are sufficient credit lines for future investment needs to ensure liquidity. The counterparty credit risk in financing is countered by limiting business relationships to dealings with banks with investment grade credit ratings.

For further explanations on risk reporting on the use of financial instruments, reference is made to the disclosures in the IFRS notes to the consolidated financial statements under G. (35) "Financial risk management."

## Performance risks

### QUALITY RISKS AS WELL AS PRODUCT LIABILITY AND RECALL RISKS

Due to the safety and process-related requirements of its products, systems, and services, the SICK Group is obliged to comply with high quality standards. Because of the environment in which certain products are used, malfunctions can lead to personal injury, financial loss, or environmental damage as well as consequential loss. For this reason, both the quality management system and process management in development and production are of particular significance for the SICK Group. The high quality and reliability of the products is thus ensured by a quality and environmental policy with a zero tolerance approach to errors at its core as well as an integrated quality management system. Measures start at the very outset at the product development stage using analytical methods. The requisite quality of suppliers is ensured by always entering into quality assurance agreements and monitoring the quality of supplier parts. The quality assurance measures continue throughout the individual stages of the production process, right through to a precisely defined approval procedure for the production and sale of products. This due care is supplemented by field observation after delivery of the products. Quality assurance and monitoring procedures are employed for this purpose. Critical errors are countered with a precisely defined action plan. Additional quality standards and processes apply to products designed for personal safety and accident prevention and devices that need to meet the special requirements for explosive environments. Here too, compliance is monitored by independent inspection institutes. A process has also been installed for managing complaints that is used to identify corrective action in order to reduce the risks of recalls. Audit management is carried out to assess the processes and the quality management. The effectiveness of the measures as a whole is assessed continuously by external ISO 9000 audits.

The existing business and product liability insurance covers the financial risks from liability for damage to property and personal injury caused by one of our products. The amount of coverage is based on past experience as well as the volume of sales. All consolidated SICK entities are integrated in this cover.

### BUSINESS INTERRUPTION IN PRODUCTION

The risk of business interruption exists in particular if production facilities or tools are damaged or break down completely. Depending on the extent of the damage and the duration of the interruption, on-time delivery to customers could be at risk. We counter this risk with a large number of measures that are anchored in the group-wide risk management system.

The risk of a fire is limited by a fire protection system and a sprinkler system in the main areas as well as by other preventive measures.

Beyond that, in our view the risk of outage of an entire location stems solely from external factors that are not within our control. Such risks stem primarily from natural disasters and other force majeure. Damage from natural disasters is mitigated by means of security precautions that are applied throughout the SICK Group and regularly assessed by external advisors. Based on our current assessment, the risk of outage of an entire location can therefore be virtually excluded. The existing global property and business interruption insurance also covers the financial risks arising for the SICK Group from damage to property and the resulting business interruption. All consolidated SICK entities are included in this cover. The insured amount is based on property, plant and equipment as well as the Group's sales.

### START-UP AND RAMP-UP RISKS

There are a range of risks connected with the start-up and ramp-up of new series production. Initially, there are capacity utilization risks, as advance investment has to be made, for example in the form of providing suitable capacities and inventories. Additionally, experience has shown that production undergoes a learning curve during start-up and ramp-up phases. Efficiency is still at a relatively low level in the beginning, but then increases continually. Flexible processes, professional engineering, and prudent advanced quality planning help to accelerate this learning process and work with high efficiency from the very outset.

### ENVIRONMENTAL RISKS

The main environmental aspects and their risk for the environment are determined annually pursuant to ISO 14001. The most relevant process to date in environmental terms was the parts degreasing in production. Since successfully substituting the cleaning agent perchloroethylene with modified alcohols in November 2014, this potential risk has been reduced substantially. This is also reflected in the fact that the monitoring duty pursuant to the Second BImSchV ("Verordnung zur Durchführung des Bundes-Immissionsschutzgesetzes": German Federal Ordinance on the Implementation of the Federal Immission Control Act) no longer applies with respect to this process. The use of solvent-based paints is equally relevant for the environment. Preparations were made in the past fiscal year to transition to environmentally friendly water-based paints. This will be implemented in 2016 in order to reduce the solvent emissions considerably. All other internal company processes bear a low environmental risk. Hazardous substances are always stored and used in the collection devices prescribed by water conservation law so that any environmental contamination is prevented in the event of leakage.

Compared to other locations of the SICK Group, the Waldkirch and Reute locations are the most relevant in terms of the environment, which is why these locations are also certified in accordance with the EU's Eco-Management and Audit Scheme, "EMAS."

SICK's overarching objective is to improve corporate environmental protection above and beyond compliance with official regulations. An internal control system and external audits ensure compliance with quality and environmental management requirements and processes. Matrix certification was carried out successfully once again by TÜV NORD in the reporting year, confirming that SICK AG and all of the German subsidiaries in the SICK Group apply a quality and environmental management system that satisfies the requirements of DIN EN ISO 9001 and DIN EN ISO 14001. As part of the environmental management system, all operating requirements and processes related to the environment are analyzed in order to minimize or, if possible, eliminate negative effects on the environment. An interdisciplinary committee of experts examines new and amended statutory regulations and norms in terms of their relevance for SICK and advises the areas concerned of any steps that need to be implemented. Moreover, conformity with norms is ensured by internal and external inspections (compliance audits), by open and direct dialog with the authorities responsible, and by involvement in external professional bodies. A detailed description of the environment-relevant processes including documentation of environmental KPIs is published once a year in the form of a validated environmental declaration.

#### R&D RISKS

In addition to constantly monitoring market developments, the SICK Group has a systematic product development process that takes account of all key market-related, technical, and economic aspects with the aim of achieving technological leadership. This is because only permanent product and process innovations constitute significant success factors for securing and expanding our competitive position. Because new developments are becoming more and more complex, however, risks in the form of misjudgment or exceeding development and start-up costs are also becoming more prevalent. Nevertheless, the opportunities outweigh the risks. Especially when complex solutions need to be developed which frequently have to satisfy very different requirements depending on the industry, our extensive industry competence and our deep technical understanding help us to translate customer requirements into a competitive solution. We are continuing to work on expanding these competencies, thus reducing the risk of excessive development costs. The decades of innovation at SICK are evidence of the fact that we know how to leverage opportunities in this area successfully and are in a position to mitigate the risks.

## Market risks

#### ECONOMIC RISKS

Changes in the global economic framework conditions have an impact on the markets relevant for SICK and thus have a significant influence on the risk situation of the SICK Group. SICK therefore counters the risk of weak economic performance in significant target industries by diversifying its customer base. In addition, the factory, logistics, and process automation business fields are subject to different market mechanisms. Slowing global economic growth can nevertheless affect the net assets, financial position, and results of operations of the SICK Group in a negative manner. For example, an economic downturn impacts on customers in the form of a drop in sales or increased difficulty in accessing the capital markets. This could prevent customers from paying their outstanding invoices on time or in full, which would be detrimental to earnings and cash flows.

However, times of economic crisis also bring with them opportunities for SICK, as these are often the times when customers scrutinize existing processes in order to realize cost savings by means of process optimization. The pressure on industry to rationalize and to optimize production processes and make them more flexible has been and continues to be an opportunity for SICK, because such activities require state-of-the-art automation systems. SICK takes advantage of this opportunity to continue to work on innovative and tailored products, systems, and services while at the same time using targeted training measures to develop sales know-how further.

#### PROCUREMENT RISKS

The consistent implementation of procurement strategies that are geared to specific groups of goods paid off once again in the fiscal year 2015. The expansion of strategic partnerships with existing and new suppliers contributed significantly to stable procurement. The carefully coordinated internal selection of suppliers, timely and comprehensive agreements with suppliers as well as a clearly defined inventory strategy for all parts and components helped considerably to minimize procurement risks. The established internal classification system that evaluates major suppliers from a technical, commercial, and strategic perspective also proved its worth.

Regular application of the process to stock strategically relevant parts is another fixed component of risk management. This process defines additional measures that influence stock levels depending on the degree of dependency. This means that buffer stock requirements are secured if a risk does eventuate. There is also sufficient time to use alternative procurement sources.



New laws, guidelines, or their extension to additional areas of application are having more and more influence on the procurement of goods and services. In order to meet these additional requirements, suppliers are obliged to follow a Code of Conduct for suppliers that is based on the Group's Code of Conduct. Suppliers also have to adhere to the statutory requirements necessary for the manufacture, distribution, and supply of SICK products (e.g., relevant European Union substance bans). As part of our commitment to ethical and moral conduct, we acknowledge the transparency objective of the Dodd-Frank Act to prevent the support of conflicts involving human rights abuses and we regularly carry out corresponding investigations at the relevant suppliers and endeavor to raise their awareness of the issue.

As part of the compliance organization, a compliance unit was set up within the Procurement department in the reporting year. It is responsible for decentralized implementation of centralized compliance measures and runs the compliance help desk. The help desk coordinates and responds professionally to a wide range of queries from employees and suppliers.

#### COMMODITY PRICE RISKS

Sudden price fluctuations due to the cost of materials or supply bottlenecks for certain product groups are countered using a forward-looking planning system that includes strategies to safeguard prices in good time. In general, the SICK Group is not overly affected by price fluctuations on the commodities markets, as substantial value added flows into the products through refining processes which take place at the suppliers. Nevertheless, the most important commodities indices are subject to continuous monitoring (e.g., aluminum and copper). Timely arrangements to cover requirements by means of corresponding purchase obligations ensure that price fluctuations remain manageable in a very volatile environment.

#### Other risks

##### IT RISKS

Some of the most important strategic success factors for the SICK Group include the confidentiality, integrity, and availability of data. This is why we have established a comprehensive and modern IT infrastructure in the areas of administration, sales, and production. Continuous investment is made in modern IT systems, thus ensuring that competitive, future-proof, and fit-for-purpose IT solutions are used throughout the Group.

A long-lasting outage of this complex IT infrastructure or the loss of data could result in considerable business disruption. As a result, the aim of our IT security policy is to identify and analyze IT risks at an early stage and to make them manageable by taking appropriate action.

Such action includes continuous investment in the technical standards of IT security as well as a constant accumulation of know-how and expertise on the part of the employees in this area. In addition, regular internal audits ensure compliance with processes, standards, regulations, and rules of procedure at all locations worldwide.

#### AVAILABILITY OF SKILLED LABOR

The economic success of an innovative high-tech firm like SICK is not possible without highly qualified specialist staff. In response to the intensifying competition for qualified staff, which is compounded by demographic change, SICK's approach has been to actively present itself as an attractive and secure employer on the global labor market in line with its mission statement. For some years now, SICK has also been using social media channels very successfully to address specifically younger skilled workers in a manner that is appropriate for the target group. The international alignment of the Group with manufacturing and development facilities located in the most important growth regions of the world is additionally reducing dependence on regional labor markets. The SICK Group offers the 12-month trainee program SensorING to graduates with qualifications in natural sciences or with technical degrees in order to hire and promote high potentials in a targeted manner. In addition to comprehensive training in different technologies, development tools and project management methods, the graduates are given the opportunity to participate in various development projects and to take on responsibility for subprojects. There is also an option to spend time at an international subsidiary in the SICK Group in order to gain experience in the process of cooperation at an international level. In the past fiscal year, the lack of skilled labor was moderate and did not pose a major problem for the SICK Group when recruiting new employees.

#### Regulatory risks

##### PATENT INFRINGEMENT

Developing new products entails the risk of infringing industrial rights of third parties, for example patents, utility models, designs, or trademarks. On the one hand, protective rights that have been registered but not yet granted constitute a risk because the scope of a protective right is not defined until it is granted. On the other, they are a risk because they are unknown prior to publication (which generally takes 18 months). Infringement of these rights could lead to unplanned license fee arrears or even the need to develop work-arounds. We limit this risk by means of a large number of simultaneous measures. These include for example employing trained patent lawyers, constantly monitoring (at two-week intervals) the publications of the main patent offices in the relevant patent classes and from the main competitors, researching on a case-by-case basis for older rights when creating a product as well as continuously building on the product and industry expertise of our employees in the area of product development.

## COMPLIANCE RISKS

The Executive Board sees comprehensive transparency and the trust of customers, suppliers, employees, and all other stakeholders as the strategic foundation and basic prerequisites for the long-term economic success of the SICK Group. It therefore does not regard compliance with the law and observing rules in isolation. Instead, it sees this as a vital component of all business activities which aim to achieve permanent and sustainable success. The task is to communicate this to all employees, in particular also to new employees in the Group's constantly-growing workforce.

As a result, all compliance activities at SICK are geared to this purpose, and the processes and organization are designed in such a way that new compliance risks or compliance risks that need to be weighted are given adequate consideration. This is the only way to prevent compliance risks, which are always inherently present, from becoming compliance issues that could harm the reputation and image of SICK or result in official penalties. SICK's compliance management system is designed to avoid this at all costs.

## REPORT ON EXPECTED DEVELOPMENTS

### Forward-looking statements

The forward-looking statements in this management report are based on assessments of future developments made by the Executive Board. The statements and forecasts were made on the basis of the information available at the present time. Unknown risks, uncertainties, and other factors could mean that the actual results, developments, or the performance of the Group may deviate from the forecasts, estimates, and statements. In view of the opportunities and risk situation described as well as assuming that the composition of the Group will not change from the prior year, we expect the following developments in the fiscal year 2016:

### Cautious growth forecast for the global economy in 2016

The global economy is likely to recover only gradually in the current fiscal year. This conservative forecast applies in particular to the developing countries and emerging economies. The principal reasons for this include the slowing of growth in China as well as low prices of commodities. The price of oil is expected to remain stubbornly at its current level until 2017, which will further slow the growth of oil-exporting countries. In addition, the US Federal Reserve will gradually pull back from its expansive monetary policy, resulting in additional pressure on the emerging countries. The IMF expects global GDP to grow by 1.7 percent in 2016.

The mood in our industry was also dampened at the beginning of 2016, with more and more indications in the USA and some Asian countries in particular that growth was slowing down. Moreover, the weak level of productivity growth suggested that the long-term growth potential of the global economy is likely to decline. As a result, sales growth in mechanical engineering is expected to be just as low in 2016 as in the past year, with current estimates putting the figure at one percent. The VDMA assumes that low growth and heightened global competition will in the future be the new normal for mechanical engineering.

### Sensor intelligence as a prerequisite for Industry 4.0

Global pressure to rationalize production, logistics, and other processes remains high. The discussion surrounding Industry 4.0 adds a new dimension to this topic, which offers major development opportunities for SICK. The idea of a Smart Factory can only be implemented if rugged and intelligent sensor systems reliably record the data volumes required for Industry 4.0 concepts. In other words, big data is not possible without sensor systems. In the future, SICK will gear its product portfolio to recognizing interrelationships at the customer and thus increasing the transparency in the customer's application so that the customer can make better decisions. SICK sensors have to solve the customer's problems in a simple manner that contributes to improving performance or conserving resources. This applies to all target industries. Another pivotal area involves data privacy, to which SICK as a founding member of Industrial Data Space e.V. has made a very firm commitment. Thanks to its broad product and service portfolio, its system and solution competence, its extensive industry expertise and global presence, the SICK Group is in an excellent position to respond to customer demands for intelligent automation solutions that provide this added value, particularly in the context of Industry 4.0.

### Sales forecast for the sales regions

Based on its current assessment, the Executive Board therefore assumes that the sales growth of the SICK Group will be in the single-digit percentage figures in the current fiscal year despite the modest economic framework conditions outlined above and the slackening tailwind from currency developments. In the sales region **Germany**, where growth is more difficult to achieve on account of the strong market position, we expect the relatively positive economic prospects to fuel medium to high single-digit percentage growth. We are forecasting medium single-digit percentage growth for the **Europe, Middle East and Africa (EMEA)** sales region. Inflation is likely to continue at a very low level in 2016 and growth will be modest, not least because of the various current uncertainties surrounding collaboration within the European Union. We view the development in the **North, Central and South America (Americas)** sales region with more optimism, anticipating high single-digit percentage sales growth even though the tailwind from the

appreciation of the dollar will subside. We predict sales growth at the same level for the **Asia-Pacific** region. In Japan especially, we are expecting further economic recovery and the ensuing increase in demand – despite the difficult competitive situation. Despite the slow-down in growth in China, it still constitutes an important sales market for us, with the topic of automation receiving more and more attention as labor costs continue to rise. The same applies with respect to India.

### EBIT forecast

In view of the planned sales growth, a careful approach to non-personnel expenses in line with sales development as well as a focus at the same time on expanding efficient group-wide collaboration, we expect EBIT to constitute a high single-digit percentage of sales once again in the coming fiscal year.

### Development of other financial performance indicators

To secure our competitive position, we will continue to press ahead with R&D activities in the current fiscal year. Alongside expanding the existing product portfolio, we will focus on the connectivity of our sensor systems in the context of Industry 4.0 as well as on the topic of data security. In view of the strategic significance of these innovations, we assume that the share of R&D expenses as a percentage of sales will remain at the same high level in the fiscal year 2016 as in the reporting year, amounting to roughly ten percent of sales.

Capital management will once again be pursued in the current fiscal year such that liquidity and the equity ratio are maintained at a stable high level. At the same time, we will ensure a low-risk and flexible financing structure. Dividend payments will continue to be made within the target corridor for the planned capital base taking investment requirements into account. The Group's further growth will also be safeguarded by maintaining sufficient liquidity as well as short-term and long-term credit lines that offer flexibility in covering refinancing needs.

### Development of non-financial performance indicators

In the coming fiscal year, corporate environmental management at SICK will continue to pursue the aim of creating measurable ecological added value for the Group by taking a sustainable approach to the environment. Focal points include the reduction of CO<sub>2</sub> emissions, environmentally friendly production (especially in terms of resource and energy efficiency as well as the management of harmful substances), and the development of products that make a contribution to environmental protection.

The personnel policy of the SICK Group will continue to be geared to its global commitment to being a fair employer with high performance standards that employees enjoy working for and where they remain for a long period. This is because particularly in times of challenging market conditions, qualified and high-performing employees are the basic prerequisite for stable growth. As a result, personnel activities in the fiscal year 2016 will focus on the area of basic training as well as applicant management in order to forge links between SICK and potential skilled staff at an early stage and kindle their enthusiasm for the company. We assume that the headcount of the SICK Group will rise by a low to medium single-digit percentage figure in the coming fiscal year. A variety of health promotion and occupational health and safety measures, including in particular the company-wide application of the system of integrated risk assessment, will make a vital contribution towards maintaining the capacity of employees at its current level. Flexible working times as well as the childcare facilities offered allow SICK employees to achieve a balance between work and family life. Through intensive competency management, the SICK Group will also ensure that the employees are involved in continuous further development, both professional and personal, and that executives in particular are trained in contributing actively to the strategic further development of the Group and can contribute to the Group's growth. There will be a special focus on strengthening the competencies for cross-departmental cooperation in a global environment.

## Overall conclusion

Despite the caution surrounding economic prospects, the outlook for the coming fiscal year is thus still very positive. At the same time, we are aware that it is unlikely that we will have a repeat performance of the excellent development in the fiscal year 2015, not least due to the macroeconomic environment described above. 2016 will again be characterized by the challenge that various factors may cause the economic environment to change very quickly and that it will be more difficult to predict business development as a result. Nevertheless, our global presence, our broad portfolio of solutions, and the fact that we are adopting a proactive approach to the challenges of Industry 4.0 at a technological and organizational level provide an excellent basis from which to continue to grow further in the 70th year of the company's existence.

## DEPENDENT COMPANY REPORT

More than 50 percent of the shares in SICK AG are held by Sick Holding GmbH, which in turn belongs to the Sick family that founded the company. As a result, the Executive Board prepared a dependent company report in accordance with Sec. 312 AktG ("Aktiengesetz": German Stock Corporation Act). The Executive Board declares the following pursuant to Sec. 312 (3) AktG: "In the legal transactions listed in the dependent company report, and according to the circumstances that were known to us when those legal transactions were performed, our company received an appropriate consideration in each legal transaction. We did not undertake, or refrain from taking, any actions motivated by or in the interest of the controlling company or its affiliates."

The following management report explains the development of SICK AG in the fiscal year 2015:

# Management report of SICK AG for the fiscal year 2015

SICK AG has its headquarters in Waldkirch near Freiburg in the state of Baden-Württemberg in Germany. This is the head office of the SICK Group and is also its largest development and production location. The development of the Group's international sales and service companies is closely coordinated with the Waldkirch location in order to mitigate risks. However, to a large extent the companies have their own responsibilities in terms of day-to-day operations.

The financial statements of SICK AG are prepared in accordance with the requirements of the HGB, while the consolidated financial statements are prepared in accordance with International Financial Reporting Standards (IFRS).

The basic statements in the combined management report, in particular in relation to the market and strategy as well as the opportunities and risks relating to business activities, also apply with respect to SICK AG.

The reporting year developed very well for SICK AG, with sales increasing precisely as forecast. Sales totaled EUR 817.5 million as of the balance sheet date, exceeding the prior-year figure of EUR 740.9 million by 10.3 percent.

SICK AG had 3,103 employees as of the balance sheet date, an increase of 7.1 percent compared with the prior year (2,899 employees). In addition to this, 204 trainees were employed at the company (2014: 215). Due to this increased headcount and as a result of the collective wage increase in Germany, personnel expenses rose by 10.9 percent from EUR 227.5 million to EUR 252.2 million.

The disproportionately high rise in depreciation and amortization (up 12.5 percent to EUR 24.3 million) compared to sales shows the strong level of investment activity at the locations of SICK AG in recent fiscal years.

There was also an above-average increase in other operating expenses by 18.6 percent to EUR 184.5 million. The principal factors involved here were higher purchased services for the R&D function as well as expenses for maintenance and servicing.



The financial result increased from EUR 49.8 million to EUR 53.7 million (up 7.8 percent) thanks to higher income from equity investments in affiliates as well as a slight improvement in the interest result.

On the whole, the items described yielded a large increase in the result from ordinary operations, which rose from EUR 71.2 million to EUR 87.5 million. This is an increase of 22.9 percent.

The tax rate fell from 24.7 percent to 22.0 percent on the back of non-recurring effects attributable to the completion of the tax audit. Net income for the year increased to EUR 67.6 million in total (2014: EUR 53.1 million).

Capital increases at two affiliates meant that the financial assets of SICK AG rose by 7.7 percent to EUR 89.1 million. In addition, the 22.3 percent rise in property, plant and equipment to EUR 165.7 million due to the high level of investment activity resulted in an increase in total assets. This figure totaled EUR 619.4 million as of the end of the year (up 13.1 percent).

On the equity and liabilities side of the balance sheet, this is reflected in a year-on-year rise in liabilities of 7.6 percent to EUR 199.2 million. These include higher liabilities to affiliates, which could not be compensated for by the lower liabilities to banks. The increase in provisions to EUR 98.9 million (up 9.2 percent) is due first and foremost to provisions for performance-related pay.

In addition, equity increased substantially at SICK AG, improving to EUR 321.3 million on the back of the higher net income for the year and higher retained earnings. This 18.1 percent increase led to an improvement in the equity ratio from 49.7 percent to 51.8 percent.

In view of the business development, the statements contained in the Group's opportunity and risk report also apply to a large extent with respect to SICK AG. In light of the modest economic environment and the slackening tailwind from the exchange rate development, we expect the percentage sales increase at SICK AG to be at a somewhat lower level than that of the SICK Group in the fiscal year 2015. We expect the result from ordinary operations to rise by a high single-digit or low double-digit percentage figure.

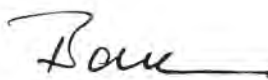
## Setting targets for the equal representation of men and women in management positions

Effective as of September 30 of the past fiscal year, the Supervisory Board of SICK AG set a target of 17 percent of women on the Supervisory Board of SICK AG in accordance with Sec. 111 (5) AktG. In addition, the target for the percentage of women on the Executive Board of SICK AG was set at zero percent. As "flexible" targets, both targets should be met or exceeded by June 30, 2017.

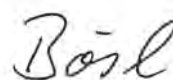
Furthermore, effective as of September 30, 2015, the Executive Board of SICK AG set a target of six percent pursuant to Sec. 76 (4) AktG for the percentage of women in management positions at the level directly below the Executive Board of SICK AG, i.e., the managers who report directly to members of the Executive Board. This target should be met or exceeded by June 30, 2017. For management positions at the second level below the Executive Board of SICK AG, i.e., the managers who report directly to the first-level managers described above, a target of six percent was likewise set effective as of September 30, 2015 that should be met or exceeded by June 30, 2017.

Waldkirch, March 17, 2016

The Executive Board



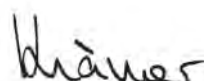
Dr. Robert Bauer  
(Chairman)



Reinhard Bösl



Dr. Mats Gökstorp



Dr. Martin Krämer



Markus Vatter

# Milestone / 6



DME2000 distance measurement device

approx. 1990



This invention used time-of-flight to measure distances. Here the transmitted light was impressed with a pattern, or “modulation,” allowing the time delay of the modulation (known as the phase) of the reflected light to be compared to the transmitted light in order to determine time-of-flight. The device solved problems by comparing phases between the reference value and its own measurement. The DME2000 operated over a scanning range of up to 130 meters and a resolution of a single millimeter.



The distance sensors of the Dx100 product family combine leading edge technology with innovative design. The product’s phase-shift measurement technology ensures the highest performance, which, in cooperation with drive manufacturers, has been optimized for perfect integration into closed control loops. The alignment bracket, the smallest housing in its sensor class to date, as well as the intelligent quick lock system with fast connectors, offers optimized handling and reduced costs of ownership.

Dx100  
2011



# Group financial statements

CONSOLIDATED INCOME STATEMENT	.....	70
CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME	.....	70
CONSOLIDATED STATEMENT OF CASH FLOWS	.....	71
CONSOLIDATED STATEMENT OF CHANGES IN EQUITY	.....	72
CONSOLIDATED STATEMENT OF FINANCIAL POSITION	.....	74
IFRS NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS	.....	
	A. General disclosures	76
	B. Consolidation principles	77
	C. Accounting policies	80
	D. Consolidated statement of cash flows	88
	E. Notes to the consolidated income statement	89
	F. Notes to the consolidated statement of financial position	93
	G. Other notes	103
CONSOLIDATED STATEMENT OF CHANGES IN NON-CURRENT ASSETS	.....	120
CARRYING AMOUNTS AND FAIR VALUES	.....	124
LIST OF MAIN SHAREHOLDINGS	.....	126

# Group financial statements of SICK AG for the fiscal year 2015

## CONSOLIDATED INCOME STATEMENT OF SICK AG FOR THE PERIOD FROM JANUARY 1 TO DECEMBER 31, 2015

in EUR k	Notes	2015	2014
Sales	(1)	1,267,587	1,099,785
Changes in inventory		-3,305	-2,406
Own work capitalized	(2)	20,380	17,629
Cost of materials	(3)	376,424	329,782
<b>GROSS PROFIT</b>		<b>908,238</b>	<b>785,226</b>
Personnel expenses	(4)	526,260	464,224
Depreciation and amortization	(5)	46,373	40,880
Other operating expenses	(6)	209,776	179,420
Other operating income	(7)	9,189	6,818
Currency results	(8)	-5,241	-3,843
<b>OPERATING RESULTS</b>		<b>129,777</b>	<b>103,677</b>
Net investment income / expense	(9)	-703	-442
of which net income / expense from investments accounted for using the equity method		-748	-473
<b>EARNINGS BEFORE INTEREST AND TAX (EBIT)</b>		<b>129,074</b>	<b>103,235</b>
Interest expense	(10)	3,437	4,452
Interest income	(11)	394	340
<b>EARNINGS BEFORE TAX</b>		<b>126,031</b>	<b>99,123</b>
Income tax	(12)	34,252	28,599
<b>CONSOLIDATED NET INCOME</b>		<b>91,779</b>	<b>70,524</b>
of which attributable to shareholders of SICK AG		90,804	69,827
of which attributable to non-controlling interests		975	697
<b>EARNINGS PER SHARE (BASIC AND DILUTED) IN EUR / SHARE</b>	(13)	<b>3.47</b>	<b>2.66</b>

## CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME OF SICK AG FOR THE PERIOD FROM JANUARY 1 TO DECEMBER 31, 2015

in EUR k	Notes	2015	2014
<b>CONSOLIDATED NET INCOME</b>		<b>91,779</b>	<b>70,524</b>
Other comprehensive income			
Items that will never be reclassified to profit or loss			
Remeasurement of pension obligations		-3,041	-9,112
Tax effect		433	2,494
Remeasurement of pension obligations		-2,608	-6,618
Items that were or that can be reclassified to profit or loss			
Currency translation differences		6,597	6,183
Tax effect		0	0
Currency translation differences		6,597	6,183
<b>OTHER COMPREHENSIVE INCOME</b>		<b>3,989</b>	<b>-435</b>
<b>COMPREHENSIVE INCOME</b>		<b>95,768</b>	<b>70,089</b>
of which attributable to shareholders of SICK AG		94,679	69,240
of which attributable to non-controlling interests		1,089	849



CONSOLIDATED STATEMENT OF CASH FLOWS  
OF SICK AG FOR THE PERIOD FROM JANUARY 1 TO DECEMBER 31, 2015

in EUR k	Notes	2015	2014
<b>CONSOLIDATED NET INCOME</b>		<b>91,779</b>	<b>70,524</b>
<b>Adjustments for:</b>			
Income tax		34,252	28,599
Net interest		3,043	4,112
Depreciation and amortization		46,373	40,880
Losses (income) from the disposal of non-current assets		-431	210
Expenses / income from financial investments		748	473
Other non-cash transactions		304	9,232
Change in inventory		-14,057	-27,348
Change in trade receivables and other assets		-29,911	-31,849
Change in non-current provisions		2,959	1,556
Change in trade payables and other liabilities		22,662	10,566
<b>CASH FLOW FROM ORDINARY OPERATIONS</b>		<b>157,721</b>	<b>106,955</b>
Interest paid		-2,653	-3,220
Interest received		394	340
Income tax paid		-43,347	-20,272
<b>CASH FLOW FROM OPERATING ACTIVITIES</b>		<b>112,115</b>	<b>83,803</b>
Cash received from disposals of non-current assets		1,193	466
Cash paid for investments in property, plant and equipment		-66,427	-68,190
Cash paid for investments in intangible assets		-17,361	-11,866
Cash paid for investments in financial assets		-290	-1,211
Cash paid for the acquisition of a business unit		-512	-2,400
<b>CASH FLOW FROM INVESTING ACTIVITIES</b>		<b>-83,397</b>	<b>-83,201</b>
Sale / acquisition of treasury shares		-35	-67
Cash paid to owners		-18,343	-17,032
Payment of finance lease liabilities		-1,037	-1,434
Cash received from loans		22,312	57,594
Cash repayments of loans		-27,952	-36,807
<b>CASH FLOW FROM FINANCING ACTIVITIES</b>		<b>-25,055</b>	<b>2,254</b>
Net increase (decrease) in cash and cash equivalents		3,663	2,856
Effect of changes in foreign exchange rates and changes in consolidated entities on cash and cash equivalents		-224	265
<b>CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE PERIOD</b>		<b>14,969</b>	<b>11,848</b>
<b>CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD</b>		<b>18,408</b>	<b>14,969</b>

For additional explanations, reference is made to the disclosures in the IFRS notes to the consolidated financial statements in D. "Consolidated statement of cash flows."

# CONSOLIDATED STATEMENT OF CHANGES IN EQUITY OF SICK AG AS OF DECEMBER 31, 2015

in EUR k	Issued capital	Capital reserves	Treasury shares
<b>BALANCE AS OF JANUARY 1, 2014</b>	<b>26,405</b>	<b>22,119</b>	<b>-3,360</b>
Consolidated net income			
Other comprehensive income			
Comprehensive income			
Change in treasury shares		69	-67
Dividend payment			
Other changes			
<b>BALANCE AS OF DECEMBER 31, 2014</b>	<b>26,405</b>	<b>22,188</b>	<b>-3,427</b>
<b>BALANCE AS OF JANUARY 1, 2015</b>	<b>26,405</b>	<b>22,188</b>	<b>-3,427</b>
Consolidated net income			
Other comprehensive income			
Comprehensive income			
Change in treasury shares		41	-35
Dividend payment			
Other changes			
<b>BALANCE AS OF DECEMBER 31, 2015</b>	<b>26,405</b>	<b>22,229</b>	<b>-3,462</b>

Other comprehensive income includes effects from the remeasurement of pension obligations and from currency translation.

	Revenue reserves	Equity attrib- utable to the shareholders	Non-controlling interests	Equity
	275,228	320,392	1,219	321,611
	69,827	69,827	697	70,524
	-587	-587	152	-435
	69,240	69,240	849	70,089
	0	2		2
	-17,032	-17,032		-17,032
	68	68	-101	-33
	327,504	372,670	1,967	374,637
	327,504	372,670	1,967	374,637
	90,804	90,804	975	91,779
	3,875	3,875	114	3,989
	94,679	94,679	1,089	95,768
	0	6		6
	-18,343	-18,343		-18,343
	-165	-165	-88	-253
	403,675	448,847	2,968	451,815

## CONSOLIDATED STATEMENT OF FINANCIAL POSITION OF SICK AG AS OF DECEMBER 31, 2015

[illegible]



## EQUITY AND LIABILITIES

in EUR k

	Notes	2015	2014
<b>A. Equity</b>			
I. Issued capital	(22)	26,405	26,405
II. Capital reserves	(23)	22,229	22,188
III. Treasury shares	(24)	-3,462	-3,427
IV. Revenue reserves	(25)	403,675	327,504
Equity attributable to the shareholders		448,847	372,670
V. Non-controlling interests		2,968	1,967
		<b>451,815</b>	<b>374,637</b>
<b>B. Non-current liabilities</b>			
I. Financial liabilities	(27)	87,968	76,931
II. Provisions and other liabilities	(28)	77,507	71,899
III. Deferred taxes	(12)	1,916	1,682
		<b>167,391</b>	<b>150,512</b>
<b>C. Current liabilities</b>			
I. Financial liabilities	(27)	11,324	29,149
II. Other provisions	(28)	21,093	19,298
III. Tax liabilities	(29)	16,902	19,022
IV. Trade payables	(30)	97,541	89,191
V. Other liabilities	(31)	96,791	81,078
		<b>243,651</b>	<b>237,738</b>
		<b>862,857</b>	<b>762,887</b>

# IFRS notes to the consolidated financial statements of SICK AG

## as of December 31, 2015

### A. GENERAL DISCLOSURES

#### General

The consolidated financial statements of SICK AG, Waldkirch, Germany, for the year 2015 were prepared according to the International Financial Reporting Standards (IFRS) issued by the International Accounting Standards Board (IASB), London, United Kingdom, as adopted by the EU, and according to the additional requirements of German commercial law pursuant to Sec. 315a (1) HGB ("Handelsgesetzbuch": German Commercial Code). The consolidated financial statements consist of the consolidated income statement, consolidated statement of comprehensive income, consolidated statement of financial position, consolidated statement of cash flows, consolidated statement of changes in equity, and IFRS notes to the consolidated financial statements. SICK AG also prepared a group management report.

SICK AG, with registered offices in Waldkirch, Erwin-Sick-Str. 1, Germany, and filed with the commercial register of Freiburg local court under HRB 280355 is the parent company of the SICK Group.

#### Economic background

SICK is one of the leading global manufacturers of intelligent sensors and sensor solutions for industrial applications. The Group has been in the sensor technology business for 70 years, has over 7,400 employees worldwide today, and comprises 43 consolidated subsidiaries in over 30 countries as well as numerous equity investments and agencies.

The company has production sites in Germany, China, Malaysia, Hungary, and the United States. SICK is well positioned internationally and has a worldwide distribution network with its own subsidiaries, equity investments, and agencies in all major industrial countries.

#### Summary of significant accounting policies

All IFRS subject to mandatory adoption as of December 31, 2015 have been applied. These include the International Accounting Standards (IAS) as well as the interpretations of the International Financial Reporting Interpretations Committee (IFRIC) and the Standing Interpretations Committee (SIC). The Group has decided not to early adopt standards or interpretations that are not yet effective. These standards and interpretations are listed in G. (41) "Accounting Standards not early adopted."

The fiscal year of the SICK Group and all the entities included in consolidation is the calendar year.

The group currency is the euro. As a rule, all amounts are stated in thousands of euro (EUR k). Deviations from this rule are indicated accordingly. Due to rounding-off, it is possible that some figures do not add up precisely to the sums stated.

The consolidated financial statements have been prepared on the basis of the historical cost convention, apart from derivatives, equity-settled share-based payment transactions, financial instruments classified as available for sale, and current receivables and liabilities in foreign currency. These are reported at fair value.

The income statement has been prepared using the nature of expense method.

## Effects of new accounting standards

The accounting principles applied were virtually unchanged on the prior year, except for the following new and amended IFRS and IFRIC interpretations effective as of 2015.

IFRIC 21	"Levies"
Improvements to IFRS (2011 – 2013)	Amendments to various standards (IFRS 1, IFRS 3, IFRS 13, and IAS 40)

The changes mentioned in the table have not materially impacted the Group's financial position or performance.

## B. CONSOLIDATION PRINCIPLES

### Consolidation methods

The consolidated financial statements include the financial statements of SICK AG and its subsidiaries as of December 31, 2015. Subsidiaries are fully consolidated from the date of acquisition, being the date on which the Group obtains control, and continue to be consolidated until the date that such control by the parent ceases.

For a list of group entities, reference is made to pages 126 and 127 of this Annual Report.

The financial statements of the subsidiaries are prepared for the same reporting period as the parent company, using consistent accounting policies.

All intra-group balances, transactions, unrealized gains and losses resulting from intra-group transactions and dividends are eliminated in full.

Comprehensive income within a subsidiary is attributed to the non-controlling interest even if it results in a deficit balance. A change in the ownership interest of a subsidiary which does not involve a loss of control is accounted for as an equity transaction.

Business combinations are accounted for using the acquisition method. The cost of an acquisition is the aggregate of the consideration transferred, measured at acquisition date fair value, and the amount of any non-controlling interest in the acquiree. For each business combination, the Group elects whether it measures the non-controlling interest in the acquiree either at fair value or at the proportionate share of the acquiree's identifiable net assets. Costs incurred in the course of the acquisition are expensed.

If the business combination is achieved in stages, the acquisition date fair value of the acquirer's previously held equity interest in the acquiree is remeasured to fair value at the acquisition date through profit or loss.

Goodwill is initially measured at cost being the excess of the aggregate of the consideration transferred and the amount recognized for the non-controlling interest over the net identifiable assets acquired and liabilities of the Group assumed. If this consideration is lower than the fair value of the net assets of the subsidiary acquired, the difference is recognized in profit or loss after reexamination.

Associates and joint ventures are consolidated using the equity method.

### Basis of consolidation

Besides SICK AG, the consolidated financial statements include five (prior year: five) German and 38 (prior year: 38) fully consolidated foreign subsidiaries (purchase method) in which SICK AG has the direct or indirect majority of voting rights as of the end of the reporting period December 31, 2015.

### CHANGES IN THE BASIS OF CONSOLIDATION

Effective January 1, 2015, SICK Maihak, Inc., Minneapolis, Minnesota, USA, was merged into SICK, Inc., Minneapolis, Minnesota, USA.

As of July 1, 2015, the newly incorporated subsidiary SICK NZ Ltd., Auckland, New Zealand, started operations. The subsidiary has taken responsibility for distribution and service in New Zealand.

### Currency translation

Foreign currency business transactions are translated at the exchange rate prevailing on the date of the transaction. Gains and losses from the settlement of such business transactions and from the translation of monetary assets and liabilities are disclosed in the income statement.

The separate financial statements of foreign subsidiaries are translated using the functional currency method in accordance with IAS 21 "The Effects of Changes in Foreign Exchange Rates." Generally speaking, the entities work independently of one another for financial and economic purposes. The functional currency is the local currency of these entities.

Assets and liabilities and contingent liabilities and other financial obligations are translated at the closing rate. The income and expenses in the income statement and thus the net profit or loss for the year disclosed in the income statement are translated at the annual average rate.

The currency difference arising from translation is offset against the revenue reserves in the item currency translation difference.

Goodwill and adjustments of assets and liabilities resulting from the purchase of a foreign entity are translated at the closing rate.

When translating the financial statements of foreign entities accounted for using the equity method, the equity is measured in accordance with the same principles used for consolidated subsidiaries.



Currency translation was based on the following exchange rates:

Exchange rate 1 EUR =	ISO code	Closing rate Dec. 31, 2015	Average exchange rate 2015	Closing rate Dec. 31, 2014	Average exchange rate 2014
Australia	AUD	1.5005	1.4778	1.4989	1.4731
Brazil	BRL	4.1977	3.6923	3.2704	3.1232
Canada	CAD	1.5161	1.4185	1.4199	1.4674
Chile	CLP	772.4500	725.9113	741.3600	757.6238
China	CNY	7.0831	6.9746	7.5977	8.1898
Czech Republic	CZK	27.0330	27.2823	27.7225	27.5348
Denmark	DKK	7.4617	7.4587	7.4403	7.4549
Hong Kong	HKD	8.4654	8.6078	9.4733	10.3077
Hungary	HUF	313.7500	309.9035	314.7200	308.6583
India	INR	72.4370	71.2008	77.7550	81.0899
Israel	ILS	4.2468	4.3155	4.7924	4.7487
Japan	JPY	131.5450	134.3666	147.0650	140.4435
Malaysia	MYR	4.7046	4.3341	4.2549	4.3492
Mexico	MXN	18.7561	17.6029	17.9555	17.6636
New Zealand	NZD	1.5897	1.5914	1.5667	1.6004
Norway	NOK	9.4978	8.9470	9.0740	8.3563
Poland	PLN	4.2371	4.1834	4.2984	4.1851
Russia	RUB	78.8982	68.0173	68.3769	50.9893
Singapore	SGD	1.5437	1.5260	1.6160	1.6832
South Africa	ZAR	16.7135	14.1605	14.1711	14.4030
South Korea	KRW	1,278.7200	1,256.2977	1,341.3500	1,399.2354
Sweden	SEK	9.1453	9.3570	9.5784	9.0987
Switzerland	CHF	1.0843	1.0684	1.2031	1.2145
Taiwan	TWD	36.0793	35.2511	38.7467	40.2812
Thailand	THB	39.4200	38.0127	40.2404	43.1565
Turkey	TRY	3.1816	3.0227	2.8346	2.9065
United Arab Emirates	AED	4.0120	4.0768	4.4839	4.8823
United Kingdom	GBP	0.7379	0.7263	0.7853	0.8064
USA	USD	1.0923	1.1103	1.2210	1.3292

## C. ACCOUNTING POLICIES

### Significant accounting judgments, estimates, and assumptions

The preparation of the Group's consolidated financial statements requires management to make judgments, estimates and assumptions that affect the reported amounts of income, expenses, assets and liabilities, and the disclosure of contingent liabilities, at the end of the reporting period. However, uncertainty about these assumptions and estimates could result in outcomes that require a material adjustment to the carrying amount of the asset or liability affected in future periods.

The main judgments, estimates, and assumptions are explained in detail below:

Impairment tests for goodwill are carried out at least once a year at the level of the cash-generating unit. The recoverable amount of the cash-generating units has been determined based on a value in use calculation. To calculate this, cash flow projections are based on medium-term planning approved by the management. The basic assumptions and the carrying amounts are explained in more detail in F. (14) "Intangible assets."

Development costs are capitalized in accordance with the accounting policy presented. Initial recognition of development costs is based on an assessment by management that the development is both technically and economically feasible. In determining the amounts to be capitalized, management makes assumptions regarding the expected future cash generation of the project, discount rates to be applied, and the expected period of benefits. For a presentation of the carrying amounts of the capitalized development costs, reference is made to pages 120 and 121 of this Annual Report.

Uncertainties exist with respect to the interpretation of complex tax regulations and the amount and timing of future taxable income. Given the wide range of international business relationships and the long-term nature and complexity of existing contractual agreements, differences arising between the actual results and the assumptions made, or future changes to such assumptions, could necessitate future adjustments to tax income and expense already recorded.

Deferred tax assets are recognized for all unused tax losses to the extent that it is probable that taxable profit will be available against which the losses can be utilized. Significant management judgment is required to determine the amount of deferred tax assets that can be recognized, based upon the likely timing and the level of future taxable profits together with future tax planning strategies. Further details on taxes are presented in E. (12) "Income tax."

The cost of defined benefit plans and the present value of the pension obligation are determined using actuarial valuations. An actuarial valuation involves making various assumptions that can differ from actual developments in the future. These include future anticipated increases in salaries and pensions, the determination of discount rates as well as of biometric data. Due to the complexity of the valuation, the underlying assumptions, and its long-term nature, a defined benefit obligation is highly sensitive to changes in these assumptions. All assumptions are reviewed at each reporting date. Further information about the assumptions used is given in F. (28) "Provisions and other liabilities."

### Revenue recognition

Revenue contains sales of products and services as well as freight and packaging revenue, less discounts and rebates. Revenue for sales of products is recognized upon transfer of risk and title to the customer when the compensation has been contractually agreed or is determinable and the associated receivables are likely to be settled. If the contract prescribes inspection by the customer, the revenue is generally not recognized until this inspection has been performed. Revenue from the provision of services is recognized when the services are rendered.

### Recognition of expenses and other income

Operating expenses are recognized upon utilization of the underlying services or on the date they are incurred. Interest expenses and income are recognized in the income statement in the period in which they are incurred or generated.

### Goodwill

After initial recognition, goodwill is measured at cost less any accumulated impairment losses. Goodwill is not subject to scheduled amortization, but tested for impairment at least annually in accordance with IAS 36.

For the purpose of impairment testing, goodwill acquired in a business combination is, from the acquisition date, allocated to each of the Group's cash-generating units that are expected to benefit from the business combination. Further details are presented in F. (14) "Intangible assets."

### Intangible assets (excluding goodwill)

Intangible assets acquired separately are initially measured at cost. The cost of an intangible asset acquired within the scope of a business combination is its fair value on the date of acquisition. Following initial recognition, intangible assets are carried at cost less any accumulated amortization and any accumulated impairment losses. Internally generated intangible assets are capitalized. As regards intangible assets, it is initially important to determine whether they have a finite or an indefinite useful life. Intangible assets with a finite useful life are amortized over their useful life and tested for impairment whenever there is an indication that the intangible asset may be impaired. The amortization period and the amortization method for an intangible asset with a finite useful life are reviewed at the end of each fiscal year at the latest. Changes in the expected useful life or the expected pattern of consumption of the future economic benefits embodied in the asset are accounted for by changing the amortization period or method, as appropriate, and treated as changes in accounting estimates. Amortization of intangible assets with a finite useful life is reported in the income statement under the expense category depreciation and amortization. Intangible assets with an indefinite useful life are tested for impairment at least once a year either individually or at the cash-generating unit level. Such intangibles are not subject to systematic amortization.

Industrial rights and similar rights and assets as well as licenses to such rights and assets disclosed under intangible assets are amortized on a straight-line basis over a useful life of three to eight years.

Development costs are capitalized at cost if the recognition criteria of IAS 38 are met. The capitalized development costs generally relate to product innovations; the other internally generated intangible assets include process-related developments and software developments.

Production costs comprise the costs directly allocable to the development process. Borrowing costs are capitalized if the recognition criteria are met. Capitalized development costs and other internally generated intangible assets are amortized systematically over a useful life of four to six years.

### Property, plant and equipment

Property, plant and equipment is measured at cost less systematic depreciation over the estimated useful life. These costs comprise the costs for replacement parts which are recognized at the time they are incurred, provided they meet the recognition criteria. The cost of self-constructed plant and equipment includes all costs which can be directly allocated to the production process as well as an appropriate portion of production-related overheads. This also includes production-related depreciation, a proportionate amount of production-related administrative expenses as well as pro rata welfare costs. Borrowing costs for long-term construction projects are capitalized if the recognition criteria are met. Depreciation of property, plant and equipment is mainly charged using the straight-line method of depreciation. The depreciation period and the depreciation method are reviewed at least at each fiscal year end and adjusted for any significant changes.

Specifically, the carrying amounts are based on the following useful lives:

Buildings	10 – 50 years
Technical equipment and machinery	3 – 15 years
Other equipment, furniture and fixtures	3 – 15 years

### Impairment losses

An impairment test is performed for all intangible assets (including goodwill) and items of property, plant and equipment if the situation or changes in circumstances indicate that the carrying amount of the assets exceeds the recoverable amount. In addition, goodwill is subjected to an annual impairment test.

If the recoverable amount of the asset falls short of the carrying amount, an impairment loss is recognized. The recoverable amount is the higher of the fair value of the assets less costs to sell and the value in use. The fair value less costs to sell is the amount obtainable from the sale of an asset in an arm's length transaction less the costs necessary to make the sale. Value in use is the present value of estimated future cash flows expected to arise from the continuing use of an asset and from its disposal at the end of its useful life. The recoverable amount is determined for each asset individually or, if that is not possible, for the cash-generating unit to which the asset belongs.

With the exception of goodwill, impairment losses recognized in prior years are reversed where there is an indication that the impairment recognized for the asset no longer exists or has decreased. The reversal is posted as a gain in the income statement. A reversal or reduction of an impairment loss, however, may not exceed the carrying amount of the asset which would have resulted if no impairment losses had been recognized in prior periods.



## Financial instruments

A financial instrument is any contract that gives rise to both a financial asset of one entity and a financial liability or equity instrument of another entity.

The Group's financial assets mainly include cash, trade receivables, unlisted financial instruments, loan receivables, other assets, and derivative financial instruments with a positive fair value.

The Group's financial liabilities chiefly include trade and other payables, bank overdrafts, loans and borrowings, liabilities from finance leases, and derivative financial instruments with a negative fair value. SICK does not make use of the option to classify financial assets or financial liabilities at fair value through profit or loss upon initial recognition (fair value option).

Financial instruments are split into the following classes based on their nature:

- financial assets and liabilities measured at (amortized) cost
- financial assets and liabilities measured at fair value
- finance lease liabilities

For further information, reference is made to G. (36) "Financial instruments."

Financial instruments are recognized in the consolidated statement of financial position if a contractual obligation results from the financial instrument. Regular way purchases or sales of financial assets, i.e., purchases or sales under a contract whose terms require delivery of the asset within the time frame established, generally by regulation or convention in the marketplace concerned, are recorded on the date of trading. Financial instruments are initially measured at fair value. The Group takes the directly attributable transaction costs into account in the calculation of the carrying amount only if the financial instruments are not measured at fair value through profit or loss.

Subsequent measurement of financial assets and liabilities depends on their classification into the following categories:

- available-for-sale financial assets
- loans and receivables
- financial liabilities measured at amortized cost or
- financial assets and financial liabilities held for trading

The Group does not make use of the category "for financial instruments held to maturity."

### Available-for-sale financial assets

Available-for-sale financial assets are non-derivative financial assets that are designated as available-for-sale or are not classified in any of the other categories. After initial measurement, available-for-sale financial assets are measured at fair value with unrealized gains or losses recognized in other comprehensive income until the investment is derecognized, at which time the cumulative gain or loss recorded in other comprehensive income is recognized in the income statement, or determined to be impaired, at which time the cumulative loss recorded in other comprehensive income is recognized in the income statement. Under available-for-sale assets, the Group mainly reports shares in unlisted entities, which were valued at amortized cost, since the fair value could not be determined reliably due to a lack of market values. A sale is not planned.

If the fair values of available-for-sale financial assets fall below cost and there is objective evidence, such as a downgraded credit rating or decline in earnings capability, that the asset is impaired, the Group reverses the accumulated loss recognized directly in equity and releases it to the consolidated income statement. The Group reinstates impairment losses of debt instruments in subsequent periods if the reasons for impairment cease to apply.

### Loans and receivables

The Group measures financial assets classified as loans and receivables at amortized cost less impairments using the effective interest method. Impairments that serve to take into account the expected default risks are recognized in the form of allowances for individual risks or general credit risks. To determine allowances for general credit risks, financial assets that could potentially be impaired are grouped together by similar credit risk characteristics and collectively evaluated for impairment and impaired as necessary. The carrying amount of the asset is reduced through the use of an allowance account and the amount of the loss is recognized in the income statement. Receivables and associated allowances are derecognized when there is no realistic prospect of future recovery and all collateral has been realized or has been transferred to the Group.

Interest-free loans and receivables or those with low interest compared to the market level due in more than one year are discounted.

### Financial liabilities

With the exception of the derivative financial instruments, financial liabilities are measured at amortized cost using the effective interest method.

### Derivative financial instruments and hedge accounting

The Group uses derivative financial instruments such as forward currency contracts and interest rate swaps to hedge its foreign market risks and interest rate risks respectively. Such derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative.

The Group did not conclude any derivative financial instruments during the fiscal years 2015 and 2014 that meet the criteria for hedge reporting pursuant to IAS 39.

### Offsetting of financial instruments

Financial assets and financial liabilities are offset and the net amount reported in the consolidated statement of financial position if, and only if, there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, or to realize the assets and settle the liabilities simultaneously.

### Inventories

Inventories are measured at the lower of cost and net realizable value. In addition to direct costs, cost includes an appropriate portion of necessary materials and production overheads as well as production-related depreciation that can be directly allocated to the production process. Administrative and welfare costs that can be allocated to the production process are also considered. Inventories having a similar nature are measured using the weighted average cost formula. Borrowing costs are not capitalized. Appropriate allowance is made for inventory risks associated with slow-moving stocks, reduced salability, etc. When the circumstances that previously caused inventories to be written down below cost no longer exist, the write-down is reversed.

### Deferred taxes

Deferred tax assets and liabilities are recognized for all temporary differences between the carrying amounts in the tax accounts and the IFRS statement of financial position in accordance with the balance sheet liability method. Deferred tax assets also include tax credits that result from the expected utilization of existing unused tax losses in subsequent years and the realization of which can be assumed with reasonable assurance. Deferred tax assets and liabilities are measured at the tax rates that are expected to apply based on tax laws that have been enacted or substantively enacted in the individual countries at the time of realization.

The carrying amount of a deferred tax asset is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profit will be available to allow the benefit of part or all of that deferred tax asset to be utilized. Unrecognized deferred tax assets are reviewed at the end of each reporting period and recognized to the extent that it has become probable that future taxable profit will allow the deferred tax asset to be realized.

For transactions and other events recognized in other comprehensive income, any taxes on income are also reported in other comprehensive income, not through profit or loss.

Deferred tax assets and deferred tax liabilities are offset if the Group has a legally enforceable right to offset current tax assets and current tax liabilities and these relate to income taxes levied by the same taxation authority on the same taxable entity.

### Treasury shares

Own equity instruments that are reacquired (treasury shares) are recognized at cost and deducted from equity. No gain or loss is recognized in the income statement on the purchase, sale, issue, or cancellation of the Group's own equity instruments.

### Share-based payments

Members of the Executive Board of SICK AG receive a remuneration component in the form of equity instruments ("equity-settled transactions") that is measured at fair value. For more details, reference is made to the comments on the remuneration of the members of the Executive Board of SICK AG in G. (38) "Related party disclosures."

### Provisions for pensions and similar obligations

The Group's post-employment benefits include both defined contribution plans and defined benefit plans.

The Group's net obligation in terms of defined benefit plans is calculated separately for each plan by estimating the future payments that the employees have earned in the current period and in earlier periods. This amount is discounted and the fair value of any plan assets is deducted from that figure.

The calculation of the defined benefit obligations is carried out annually by a recognized actuary using the projected unit credit method. If the calculation results in a potential asset for the Group, the asset recognized is limited to the present value of any economic benefit in the form of any future reimbursements from the plan or reductions in future contributions to the plan. Any applicable minimum funding requirements are taken into consideration in the calculation of the present value of any economic benefit.

Remeasurements of the net liability from defined benefit plans are recognized directly in other comprehensive income. Remeasurement involves the actuarial gains and losses, the return on plan assets (excluding interest), and the effect of any limit on a defined benefit asset (excluding interest). The Group calculates the net interest expenses (income) on the net liability (asset) from defined benefit plans for the reporting period by applying the discount rate that was used to measure the defined benefit obligations at the beginning of the annual reporting period. This discount rate is applied to the net liability (asset) from defined benefit plans as of that date. Any changes are taken into account which result in the net liability (asset) from defined benefit plans during the reporting period as a result of contributions and benefit payments. Net interest expenses and other expenses for defined benefit plans are recognized in the interest result.

If the plan benefits are amended or a plan is curtailed, the resulting amendment is recognized directly in profit or loss. The Group recognizes gains and losses from the settlement of a defined benefit plan on the settlement date.

Under defined contribution plans, the entity pays fixed contributions into a state or private fund in accordance with legal or contractual provisions or on a voluntary basis and will have no legal or constructive obligation to pay further contributions. The current contribution payments are disclosed in the personnel expenses of the respective year.

Further details about pension obligations are given in F. (28) "Provisions and other liabilities."

### Other provisions

Pursuant to IAS 37 "Provisions, Contingent Liabilities and Contingent Assets," provisions are recognized when an entity has a current obligation from a past event which will probably lead to an outflow of resources embodying economic benefits in future and a reliable estimate can be made of the amount of the obligation. The amount recognized as a provision for recognizable risks and uncertain obligations is based on its probability of occurrence and is not offset against rights of recourse. The amount needed to settle the obligation also includes any expected cost increases at the end of the reporting period. Provisions for warranty claims are recognized taking account of the past or estimated future claims pattern. Non-current provisions due in more than one year are discounted where the effect of the time value of money is material.



### Accounting for leases – the Group as the lessee

Leases are classified as finance leases if substantially all the risks and rewards incidental to ownership of an asset have been transferred to the lessee. All other leases are operating leases.

At the inception of the lease, the Group recognizes finance leases and the corresponding liabilities to the lessor as assets in its statement of financial position at amounts equal to the fair value of the leased asset or, if lower, the present value of the future minimum lease payments, and liabilities from finance leases. Depreciation is charged over the shorter of the lease term of the asset and its useful life. The outstanding liability is reduced over the lease term. At the beginning of the lease, the difference between the total lease obligation and the fair value of the leased asset is the finance charge which is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

Lease and rent payments paid by the Group under an operating lease are recognized as an expense on a straight-line basis over the lease term.

### Government grants

Government grants related to assets are generally deducted from the cost of the subsidized asset.

Government grants related to income are recorded as other operating income to reflect the effect of the corresponding expenses on profit and loss.

### Borrowing costs

Borrowing costs directly attributable to the acquisition, construction, or production of an asset that necessarily takes a substantial period of time to get ready for its intended use or sale are capitalized as part of the cost of the respective assets. All other borrowing costs are expensed in the period they occur. Borrowing costs consist of interest and other costs that an entity incurs in connection with the borrowing of funds. The Group capitalizes borrowing costs for all qualifying assets.

### Fair value measurement

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. This applies regardless of whether the price is directly observable or has been estimated using a valuation technique.

When calculating the fair value of an asset or a liability, the Group takes into account certain features of the asset or liability that market participants would also take into consideration when setting the pricing for the purchase of the respective asset or the transfer of the liability as of the end of the reporting period. In these consolidated financial statements, the fair value for measurement and / or disclosure requirements is calculated on this basis.

The fair value is not always available as a market price. Often, it has to be calculated based on different measurement parameters. Fair value is rated as Level 1, 2, or 3 depending on the availability of observable parameters and the significance of those parameters for the calculation of the fair value as a whole. The breakdown as of the end of each reporting period is based on the following:

- Level 1: quoted (unadjusted) prices in active markets for identical assets or liabilities
- Level 2: other techniques for which all inputs which have a significant effect on the recorded fair value are observable, either directly or indirectly (derived from prices)
- Level 3: techniques which use inputs that have a significant effect on the recorded fair value that are not based on observable market data

### Contingent liabilities/assets

Contingent liabilities pursuant to IAS 37 "Provisions, Contingent Liabilities and Contingent Assets" are defined as a possible obligation whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the entity. This pertains to obligations which are not likely to lead to an outflow of resources embodying economic benefits or for which it is not possible to measure the amount of the obligation with sufficient reliability. Pursuant to IAS 37, contingent liabilities are not disclosed in the statement of financial position. They are, however, disclosed in the notes unless the possibility of an outflow of resources embodying economic benefits is remote.

Contingent assets are not shown in the statement of financial position. However, they are disclosed in the notes to the financial statements when an inflow of economic benefits is probable.

### Exemption from the duty of stock corporations to prepare financial statements

For the fiscal year 2015, the following subsidiaries made use of the exemption pursuant to Sec. 264 (3) HGB:

- SICK Engineering GmbH, Ottendorf-Okrilla
- SICK Management GmbH, Waldkirch
- SICK STEGMANN GmbH, Donaueschingen
- SICK Vertriebs-GmbH, Düsseldorf

## D. CONSOLIDATED STATEMENT OF CASH FLOWS

### General

The consolidated statement of cash flows presents the source and utilization of cash flows. In accordance with IAS 7 "Statement of Cash Flows," a distinction is made in the statement of cash flows between cash flows from operating activities and cash flows from investing and financing activities.

The cash and cash equivalents presented in the statement of cash flows contain all cash and cash equivalents shown in the statement of financial position, i.e., cash in hand, checks, and bank balances provided they are available within three months. Cash and cash equivalents are not subject to any restrictions.

Cash flows from investing activities and financing activities are derived from the actual cash payments, while cash flows from operating activities are calculated indirectly from consolidated net income. When performing the indirect calculation, changes in items of the statement of financial position considered in connection with ordinary activities are adjusted for effects from currency translation and from acquisition and sales of subsidiaries and other business units. Interest paid and received and included as cash inflow from operating activities as well as dividends received and income taxes paid are disclosed separately. Investing activities comprise additions to property, plant and equipment and financial assets, as well as additions to purchased intangible assets. This item also shows any additions resulting from the recognition of development costs and other internally generated intangible assets.

## E. NOTES TO THE CONSOLIDATED INCOME STATEMENT

### (1) Sales

For a breakdown of sales by region, reference is made to the group management report.

### (2) Own work capitalized

in EUR k	2015	2014
Capitalized development work	7,674	6,473
Own work for self-constructed intangible assets and property, plant and equipment	12,706	11,156
<b>TOTAL</b>	<b>20,380</b>	<b>17,629</b>

### (3) Cost of materials

in EUR k	2015	2014
Cost of materials and supplies and of purchased goods	356,658	311,243
Cost of purchased services	19,766	18,539
<b>TOTAL</b>	<b>376,424</b>	<b>329,782</b>

### (4) Personnel expenses and number of employees

in EUR k	2015	2014
Wages and salaries	437,857	386,752
Social security, pension, and other benefit costs	88,403	77,472
<b>TOTAL</b>	<b>526,260</b>	<b>464,224</b>

The wages and salaries item includes termination benefits of EUR 1,350 k (prior year: EUR 2,339 k).

## EMPLOYEES

	2015			2014		
	Germany	Abroad	Total	Germany	Abroad	Total
Average headcount (excluding trainees):	4,038	2,934	6,972	3,843	2,722	6,565
of which in R&D	(746)	(118)	(864)	(710)	(107)	(817)
Trainees	251	16	267	238	17	255
<b>TOTAL</b>	<b>4,289</b>	<b>2,950</b>	<b>7,239</b>	<b>4,081</b>	<b>2,739</b>	<b>6,820</b>

## (5) Depreciation and amortization

This item pertains to intangible assets and property, plant and equipment.

## (6) Other operating expenses

in EUR k	2015	2014
Administrative and selling expenses	96,605	84,290
Cost of purchased services and repairs	68,619	58,899
Rent and lease expenses	23,308	22,138
Other expenses	21,244	14,093
<b>TOTAL</b>	<b>209,776</b>	<b>179,420</b>

## (7) Other operating income

In addition to cost reimbursements, other operating income includes income from subsidies and other sales.

## (8) Currency results

in EUR k	2015	2014
Exchange gains	34,569	17,082
Exchange losses	39,810	20,925
<b>TOTAL</b>	<b>-5,241</b>	<b>-3,843</b>

## (9) Net investment income / expense

in EUR k	2015	2014
Expense from investments accounted for using the equity method	-748	-473
Income from other equity investments	45	31
<b>TOTAL</b>	<b>-703</b>	<b>-442</b>

### (10) Interest expense

This item includes interest and similar expenses. For details on the interest effects in relation to pension provisions, reference is made to F. (28) "Provisions and other liabilities."

In the reporting period, borrowing costs of EUR 330 k (prior year: EUR 305 k) were capitalized in non-current assets. The interest rates used range from 1.9 to 2.2 percent (prior year: from 2.2 to 3.5 percent).

### (11) Interest income

This item contains other interest and similar income of EUR 394 k (prior year: EUR 340 k).

### (12) Income tax

in EUR k	2015	2014
<b>Current income taxes</b>		
current tax expense/ income (-) for the reporting period	41,857	34,093
tax expense/ income (-) relating to other periods	-1,343	1,048
<b>Deferred tax expense/ income (-)</b>		
from temporary measurement differences	-5,685	-6,382
from unused tax losses	-577	-160
<b>TOTAL</b>	<b>34,252</b>	<b>28,599</b>

The current tax expense is reduced by EUR 69 k (prior year: EUR 58 k) through the use of previously unrecognized tax losses.

Current income tax expense includes corporate income tax (including solidarity surcharge) and trade tax of German entities and comparable income taxes of foreign entities. Withholding taxes are also disclosed here.

As of the end of the reporting period, the German entities have a corporate income tax credit of EUR 648 k (prior year: EUR 973 k), of which EUR 631 k relates to SICK AG (prior year: EUR 947 k). After discounting, the existing corporate income tax credit was recognized as a tax asset with a present value of EUR 645 k as of December 31, 2015 (prior year: EUR 969 k). Of this, EUR 628 k relates to SICK AG (prior year: EUR 943 k).

As in the prior year, no deferred taxes were recognized as of the end of the reporting period on retained earnings by subsidiaries for the foreseeable future. Timing differences in connection with investments in subsidiaries on which no deferred tax liabilities have been recognized amount to around EUR 7,876 k (prior year: EUR 6,346 k).

Of the deferred taxes recognized in the statement of financial position, an amount of EUR 6,119 k (prior year: EUR 5,690 k) relates to transactions that directly increase equity as of the reporting date.



The income tax expense reported as of the end of the reporting period amounting to EUR 34,252 k (prior year: EUR 28,599 k) is EUR 2,297 k lower (prior year: EUR 147 k lower) than the estimated tax expense of EUR 36,549 k (prior year: EUR 28,746 k). The table below reconciles the estimated tax expense to the income taxes reported:

in EUR k	2015	2014
Earnings before tax	126,031	99,123
Theoretical tax rate (%)	29.0	29.0
<b>ESTIMATED TAX EXPENSE</b>	<b>36,549</b>	<b>28,746</b>
Reasons for the change in theoretical tax expense:		
Deviating foreign tax rates	-3,822	-2,090
Tax rate change	-260	-182
Taxes from other periods	-1,343	1,048
Tax-free income	-4	-20
Non-deductible expenses	2,822	1,706
Recognition of corporate income tax credits, other tax assets	-211	-32
Use of unused tax losses that have not yet been recognized	-69	-58
Capitalized deferred taxes on unused tax losses in prior years	0	-160
Other	590	-359
<b>INCOME TAXES REPORTED</b>	<b>34,252</b>	<b>28,599</b>
Effective tax rate (%)	27.2	28.9

As in the prior year, the calculation of the estimated tax expense for the fiscal year 2015 is based on a theoretical tax rate of 29 percent. This rate is derived from the corporate income tax rate applicable in Germany of 15 percent plus the solidarity surcharge of 5.5 percent of that figure and an average trade tax burden in Germany of 13.2 percent.

Deferred tax assets and liabilities relate to the following:

in EUR k	Deferred tax assets		Deferred tax liabilities	
	2015	2014	2015	2014
Intangible assets	51	287	8,070	8,040
Property, plant and equipment/ financial assets	276	257	4,276	4,434
Inventories	16,548	13,125	1,477	1,299
Other current assets	1,575	2,443	2,694	3,606
Liabilities	25,327	27,236	727	5,558
Unused tax losses	1,119	785	0	0
<b>GROSS VALUE</b>	<b>44,896</b>	<b>44,133</b>	<b>17,244</b>	<b>22,937</b>
Write-downs of deferred tax assets	-77	-69	0	0
Offsetting	-15,328	-21,255	-15,328	-21,255
<b>CARRYING AMOUNT</b>	<b>29,491</b>	<b>22,809</b>	<b>1,916</b>	<b>1,682</b>

The recognition of deferred tax assets is based on management's estimate that sufficient taxable profits will be available in future and that these will lead to realization of the capitalized deferred taxes. This estimate is based on the findings of the past fiscal years as well as on the estimated taxable income.

Valuation allowances of EUR 77 k (prior year: EUR 69 k) were recognized on deferred tax assets for timing differences of EUR 261 k (prior year: around EUR 248 k).

Unused tax losses developed as follows:

in EUR k	2015	2014
<b>Unused tax losses</b>		
on which no deferred tax assets were recognized	0	267
of which available for offset for more than 10 years	(0)	(177)
on which deferred tax assets were recognized	3,741	2,918
<b>TOTAL</b>	<b>3,741</b>	<b>3,185</b>

### (13) Earnings per share

in EUR k	2015	2014
Consolidated net income	91,779	70,524
of which attributable to non-controlling interests	-975	-697
<b>OF WHICH ATTRIBUTABLE TO SHAREHOLDERS OF SICK AG</b>	<b>90,804</b>	<b>69,827</b>
Number of shares (weighted average) in thousands	26,205	26,205
Earnings per share (basic and diluted) in EUR/ share	3.47	2.66

In accordance with IAS 33, basic earnings per share are calculated by dividing consolidated net income for the year attributable to the shareholders of SICK AG by the weighted average number of shares outstanding during the year. As SICK AG has only issued no-par value bearer shares, there are no dilutive effects.

## F. NOTES TO THE CONSOLIDATED STATEMENT OF FINANCIAL POSITION

For F. (14) "Intangible assets," reference is also made to the consolidated statement of changes in non-current assets presented on pages 120 and 121 of this Annual Report.

### (14) Intangible assets

The goodwill acquired from business combinations was allocated to the factory automation, logistics automation, and process automation cash-generating units for impairment testing. These correspond to the business fields. The carrying amounts of the goodwill allocated to the cash-generating units factory automation, logistics automation, and process automation amount to EUR 9,131 k (prior year: EUR 9,589 k), EUR 6,629 k (prior year: EUR 6,310 k), and EUR 2,289 k (prior year: EUR 2,282 k) respectively.

The recoverable amount of the factory automation, logistics automation, and process automation, cash-generating units is determined based on a value in use calculation. To calculate this, cash flow projections are based on medium-term planning approved by the management for a three-year period. The financial planning is adjusted to reflect the current information available. Beyond the three-year period, an appropriate growth factor customary for the industry is assumed for the following two years. For the following years, a terminal growth rate of 1.0 percent was used.

This planning is based on appropriate assumptions on macroeconomic trends, expected growth rates on the relevant markets, and market shares as well as historical developments. The figures allocated to the key assumptions are based on external sources of information. A discount rate of 11.9 percent (prior year: 12.0 percent) before taxes has been used for the cash flow forecast. If the discount rate were raised by one percentage point to 12.9 percent, there would also be no need for a write-down.

The carrying amounts of the capitalized development costs and of the other internally generated intangible assets amount to EUR 26,560 k (prior year: EUR 26,531 k).

The following amounts were recognized in profit or loss for R&D activities in relation to product innovations:

in EUR k	2015	2014
Research costs and non-capitalizable development costs	121,065	109,132
Amortization of development costs	7,929	7,026
<b>TOTAL</b>	<b>128,994</b>	<b>116,158</b>

Expenses for other self-constructed intangible assets are not included in the amounts listed.

#### (15) Investments accounted for using the equity method

The table below provides a summary of financial information for four joint ventures that are individually immaterial. These entities are presented in the list of group entities on pages 126 and 127 of this Annual Report.

in EUR k	2015	2014
Carrying amounts of the shares:	2,122	2,042
Share in:		
Income from continuing operations	-801	-372
Other comprehensive income	0	0
<b>COMPREHENSIVE INCOME</b>	<b>-801</b>	<b>-372</b>

#### (16) Other financial assets

in EUR k	2015	2014
Other equity investments	480	194
Sundry other financial assets	14	19
<b>TOTAL</b>	<b>494</b>	<b>213</b>

## (17) Inventories

in EUR k	2015	2014
Materials and supplies	90,109	79,568
Work in process	61,698	55,010
Finished goods and goods for resale	75,159	75,214
Payments on account	505	1,115
<b>TOTAL</b>	<b>227,471</b>	<b>210,907</b>

Based on the gross value, the value of the inventories was impaired by EUR 31,264 k (prior year: EUR 28,912 k).

## (18) Trade receivables

in EUR k	2015	2014
Trade receivables due from		
third parties	233,801	201,049
entities accounted for using the equity method	726	355
<b>TOTAL</b>	<b>234,527</b>	<b>201,404</b>

Appropriate allowance is made for any risk of receivables being uncollectible. As in the prior year, the receivables are generally due in up to one year.

Write-downs on trade receivables break down as follows:

in EUR k	2015	2014
<b>AS OF JANUARY 1</b>	<b>7,823</b>	<b>6,289</b>
Exchange rate differences	467	327
Utilization / reversals	2,159	1,266
Additions	3,308	2,473
<b>AS OF DECEMBER 31</b>	<b>9,439</b>	<b>7,823</b>

## (19) Tax receivables

This item records income tax receivables.

## (20) Other assets

in EUR k	2015	2014
Other tax assets	6,464	6,553
Prepaid expenses	4,939	6,181
Derivative financial instruments (held for trading)	1,520	825
Other	25,071	22,674
<b>TOTAL</b>	<b>37,994</b>	<b>36,233</b>

**(21) Cash and cash equivalents**

Bank deposits payable on demand are reported in this item as well as checks and cash. Changes in cash and cash equivalents are shown in the statement of cash flows.

**(22) Issued capital**

As in the prior year, capital stock totals EUR 26,405,400 and is divided into a total of 26,405,400 no-par value bearer shares. The imputed nominal value amounts to EUR 1.00 per share.

On the basis of the resolution of the Annual General Shareholders' Meeting of May 12, 2015, the Executive Board was authorized, subject to the approval of the Supervisory Board, to acquire – once or several times – up to 2,640,540 treasury shares for the purpose of redemption or resale in the period up to May 11, 2020. The authorization to purchase treasury shares that was previously in place and had been issued by the Annual General Shareholders' Meeting of SICK AG on June 17, 2010 ended when the new authorization took effect.

**(23) Capital reserves**

The capital reserves relate exclusively to share premiums in connection with the capital increases implemented at SICK AG and treasury shares transferred. Owing to the provisions of the German Stock Corporation Act, dividends may not be distributed from the capital reserves.

**(24) Treasury shares**

On December 31, 2015, SICK AG had 199,225 (prior year: 201,375) treasury shares with a nominal value of EUR 199 k (prior year: EUR 201 k); this is equivalent to 0.8 percent of the capital stock (prior year: 0.8 percent).

Reconciliation of the number of outstanding shares:

in EUR k	2015	2014
OPENING BALANCE	26,204,025	26,204,010
Acquisition of treasury shares	-50	-4,985
Disposal of treasury shares	+2,200	+5,000
CLOSING BALANCE	26,206,175	26,204,025

**(25) Revenue reserves**

Revenue reserves include the profits of SICK AG and consolidated subsidiaries earned in prior years and not yet distributed as well as additions due to equity-settled share-based payment transactions. In addition, currency translation differences of EUR 7,339 k (prior year: EUR 866 k) are also disclosed here as well as losses from the remeasurement of pension obligations of EUR 22,602 k (prior year: EUR 19,575 k) less deferred taxes of EUR 6,119 k (prior year: EUR 5,690 k).



## (26) Proposed dividend

Pursuant to Sec. 58 (2) AktG ("Aktiengesetz": German Stock Corporation Act), the proposed SICK AG dividend is based on the retained earnings reported in the commercial financial statements of SICK AG.

Pursuant to the resolution of the Annual General Shareholders' Meeting of SICK AG of May 12, 2015, a dividend of EUR 0.70 per share was distributed from the retained earnings of SICK AG as of December 31, 2014 for the fiscal year 2014, i.e., taking into account treasury shares totaling EUR 18,343 k that are not entitled to dividends.

For the past fiscal year 2015, the company plans to distribute a dividend of EUR 0.70 and a bonus of EUR 0.70 per share, i.e., taking into account treasury shares totaling EUR 36,689 k that are not entitled to dividends.

The individual components of equity and their development in 2015 and 2014 are shown in the consolidated statement of changes in equity.

## (27) Non-current and current financial liabilities

in EUR k	2015 of which due in			2014 of which due in		
	Total	≤ 1 year	> 1 year	Total	≤ 1 year	> 1 year
Liabilities to banks	98,679	11,081	87,598	103,955	27,612	76,343
Finance lease liabilities	613	243	370	1,650	1,537	113
Other financial liabilities	0	0	0	475	0	475
<b>TOTAL</b>	<b>99,292</b>	<b>11,324</b>	<b>87,968</b>	<b>106,080</b>	<b>29,149</b>	<b>76,931</b>

The item for other financial liabilities contains the non-current portion of derivatives of EUR 0 k (prior year: EUR 475 k).

Financial liabilities due in more than five years come to a total of EUR 29,200 k (prior year: EUR 41,897 k).

Non-current liabilities owed to banks are predominantly fixed-interest loans. The interest rates range from 0.83 percent to 4.25 percent.

Non-current liabilities from leases are subject to customary market interest rates.

For additional information about the interest risks, reference is made to G. (35) "Financial risk management."

Financial liabilities contain secured liabilities of EUR 708 k (prior year: EUR 2,693 k). The collateral has been provided in the form of land charges.

**(28) Provisions and other liabilities**

Non-current provisions and liabilities break down as follows:

in EUR k	2015	2014
Provisions for pensions and similar obligations	65,747	61,089
Other non-current provisions	11,760	10,212
Other non-current liabilities	0	598
<b>TOTAL</b>	<b>77,507</b>	<b>71,899</b>

In the prior year, the other non-current liabilities relate to an obligation from a business combination.

**PROVISIONS FOR PENSIONS AND SIMILAR OBLIGATIONS**

Pension provisions are recorded as a result of benefit plans for old age, disability, and surviving dependents' pension obligations. The benefits vary according to local legal, tax, and economic conditions and are usually based on the length of service and salary.

The Group's post-employment benefits include both defined contribution plans and defined benefit plans.

In the case of defined contribution plans, the company makes voluntary contributions to state or private pension funds based on legal or contractual provisions. No further payment obligations arise for the company from the payment of contributions. The current contribution payments are disclosed as a personnel expense for the respective year. Not including contributions to the statutory pension insurance, these amounted to EUR 7,426 k in total in the fiscal year 2015 (prior year: EUR 5,998 k).

In addition, some of the company pension schemes are based on defined benefit plans which guarantee the beneficiaries lifelong monthly old-age pensions when they reach retirement age. These are co-funded by the company and by the employees.

If pension obligations are reinsured with insurance firms, these employer's liability insurance claims are netted with the provisions and disclosed as plan assets if the criteria of IAS 19 are satisfied.

The amounts recognized in the income statement are as follows:

in EUR k	2015	2014
Current service cost	4,015	3,540
Interest expense/interest income	906	1,371
Other	0	50
<b>TOTAL</b>	<b>4,921</b>	<b>4,961</b>

The amounts cited are generally recorded in the personnel expense of the period; the interest components from the obligations are reported as interest expense.

The defined benefit obligations developed as follows:

in EUR k	2015	2014
AS OF JANUARY 1	82,928	70,491
Expenses recognized in income		
Current service cost	4,015	3,540
Interest cost	1,585	2,139
Benefits paid	-2,588	-2,640
Amounts recognized in other comprehensive income		
Change in financial assumptions	954	9,121
Experience adjustments, gains/losses	1,968	-28
Employee contributions	349	299
Exchange rate differences/ other changes	611	6
<b>AS OF DECEMBER 31</b>	<b>89,822</b>	<b>82,928</b>

The average term of the defined benefit obligations in Germany is between 13.7 and 17.4 years (prior year: 17.4 and 20.5 years).

Changes in the fair value of plan assets are as follows:

in EUR k	2015	2014
AS OF JANUARY 1	21,839	19,973
Expenses/ income recognized in income		
Interest income	424	562
Amounts recognized in other comprehensive income		
Return on plan assets	-11	131
Employer contributions	2,214	1,590
Benefits paid	-603	-524
Exchange rate differences/ other changes	212	107
<b>AS OF DECEMBER 31</b>	<b>24,075</b>	<b>21,839</b>

The plan assets chiefly concern employer's liability insurance claims against insurance companies. The Group expects to contribute a similar amount to its defined benefit pension plans in the fiscal year 2015 as in the past fiscal year.

The amounts recognized in the statement of financial position for defined benefit obligations are as follows:

in EUR k	2015	2014
Defined benefit obligations	89,822	82,928
Fair value of plan assets	24,075	21,839
<b>PROVISIONS FOR PENSIONS AND SIMILAR OBLIGATIONS</b>	<b>65,747</b>	<b>61,089</b>

Reimbursement rights developed as follows:

in EUR k	2015	2014
AS OF JANUARY 1	7,981	6,510
Expenses/income recognized in income		
Interest income	255	206
Amounts recognized in other comprehensive income		
Experience adjustments, gains/ losses	-108	-150
Employer contributions	1,427	1,409
Benefits paid	-84	-4
Other changes	0	10
<b>AS OF DECEMBER 31</b>	<b>9,471</b>	<b>7,981</b>

Amounts recognized in other comprehensive income from the remeasurement of the pension obligations are as follows:

in EUR k	2015	2014
Change in financial assumptions	954	9,121
Experience adjustments, gains/ losses	2,076	122
Return on plan assets	11	-131
<b>TOTAL</b>	<b>3,041</b>	<b>9,112</b>

#### SENSITIVITY

The quantitative sensitivity analysis leads to the following effect on the defined benefit obligations of the German entities subject to these changes in important assumptions:

in EUR k	2015	2014
Discount rate (+1%)	-6,939	-7,096
Discount rate (-1%)	8,335	8,636
Future salary increases (-0.5%)	-435	-445
Future salary increases (+0.5%)	803	496
Future pension increases (-0.25%)	-1,583	-1,549
Future pension increases (+0.25%)	1,654	1,620
Life expectancy (+1 year)	4,114	3,936

The method used to calculate the sensitivity of the obligations to the authoritative actuarial assumptions was the same as that used to calculate the obligation. The effects of the changes in assumptions were determined separately in each case. As a result, possible interdependencies were not analyzed. If a number of assumptions are simultaneously changed, the total impact does not necessarily equate to the sum of the individual effects.

The following amounts are expected to be paid out next year as part of the defined benefit obligations:

in EUR k	2016
Contributions by employer	1,725
Benefits paid by employer	4,715
Benefits paid from plan assets	513

Assumed developments on the capital markets over the period in which the obligation is fulfilled are reflected both in the discount rate and in the estimated return on plan assets.

The calculation of the pension provisions in Germany is based on the following assumptions:

in %	2015	2014
Discount rate as of December 31	2.00	2.00
Expected return on plan assets	2.00	2.00
Future salary increases	3.00	3.00
Future pension increases	2.00	2.00

#### OTHER PROVISIONS

Other non-current and current provisions developed as follows:

in EUR k	Jan. 1, 2015	Exchange rate differences/ changes in basis of consolidation	Utilization	Reversal	Additions	Discount rate adjustment	Dec. 31, 2015
Personnel and welfare expense	9,365	-12	2,672	204	3,824	243	10,544
Warranties and onerous contracts	11,856	341	7,313	811	9,037	0	13,110
Sundry other provisions	8,289	474	3,295	787	4,518	0	9,199
<b>TOTAL</b>	<b>29,510</b>	<b>803</b>	<b>13,280</b>	<b>1,802</b>	<b>17,379</b>	<b>243</b>	<b>32,853</b>

The provisions for personnel and welfare expense essentially comprise special German phased retirement obligations ("Altersteilzeit"), long-service bonus obligations, severance payments, and similar obligations.

The provisions for warranties and onerous contracts mainly contain obligations from statutory warranty and non-contractual warranty agreements.

Sundry other provisions account for various discernible individual risks and contingent liabilities based on their probable occurrence.



Other provisions are classified based on their expected utilization as follows:

in EUR k	2015 of which due in			2014 of which due in		
	Total	≤ 1 year	> 1 year	Total	≤ 1 year	> 1 year
Personnel and welfare expense	10,544	791	9,753	9,365	1,068	8,297
Warranties and onerous contracts	13,110	13,110	0	11,856	11,856	0
Sundry other provisions	9,199	7,192	2,007	8,289	6,374	1,915
<b>TOTAL</b>	<b>32,853</b>	<b>21,093</b>	<b>11,760</b>	<b>29,510</b>	<b>19,298</b>	<b>10,212</b>

### (29) Tax liabilities

This item records income tax liabilities.

### (30) Trade payables

in EUR k	2015	2014
<b>Trade payables due to</b>		
third parties	96,569	88,686
entities accounted for using the equity method	734	365
other	238	140
<b>TOTAL</b>	<b>97,541</b>	<b>89,191</b>

As in the prior year, the liabilities are generally due in less than one year.

### (31) Other liabilities

in EUR k	2015	2014
Liabilities to employees	71,540	56,106
Other tax liabilities	13,551	12,187
Social security liabilities	3,379	2,966
Deferred income	1,401	796
Derivative financial instruments held for trading	596	3,902
Sundry other liabilities	6,324	5,121
<b>TOTAL</b>	<b>96,791</b>	<b>81,078</b>

As in the prior year, other liabilities are generally due in less than one year.

## G. OTHER NOTES

### (32) Contingent liabilities

As an internationally active company with various areas of business, the Group is exposed to many legal risks. This is especially true of risks relating to warranties, tax litigation, and other legal disputes. The outcome of currently pending and / or future litigation cannot be predicted with certainty. Decisions may therefore result in expenses that are not fully covered by insurance and that may have significant effects on the business and its results. Group management does not expect pending litigation to result in judgments that will significantly and negatively influence the financial position and performance of the Group.

### (33) Contingent liabilities and other financial obligations

#### CONTINGENT LIABILITIES

This item contains guarantees and warranties of EUR 0 k (prior year: EUR 400 k). If claims arise, there is a risk of immediate cash outflows in these amounts.

#### OTHER FINANCIAL OBLIGATIONS

in EUR k	2015	2014
<b>Obligations from operating leases</b>		
due within 12 months	18,123	16,731
due in 13 to 60 months	32,816	35,523
due in more than 60 months	3,733	1,041
<b>TOTAL</b>	<b>54,672</b>	<b>53,295</b>

The obligations from operating leases mainly relate to rent for office space, vehicles, and furniture and fixtures. There are prolongation options for individual agreements. There are no significant restrictions imposed on the Group by entering into these lease agreements.

In addition, the Group has purchase obligations (mainly for property, plant and equipment) and the like amounting to EUR 8,989 k (prior year: EUR 31,255 k) which are due in the next 12 months as well as several maintenance agreements which will lead indefinitely to other financial obligations of EUR 23,347 k per year (prior year: EUR 20,870 k).

## (34) Leases

### LESSEE

The net carrying amount of assets covered by finance leases breaks down as follows:

in EUR k	2015	2014
Industrial rights and licenses	548	1,964
Other equipment, furniture and fixtures	171	208
<b>TOTAL</b>	<b>719</b>	<b>2,172</b>

The finance leases are generally designed to include a purchase option and the automatic transfer of ownership. There are no significant restrictions imposed by lease agreements.

Minimum lease installments over the remaining terms of the finance lease agreements and their present value are as follows:

in EUR k	2015	2014
due within 12 months	243	1,537
due in 13 to 60 months	343	85
due in more than 60 months	29	30
Minimum lease payments from finance leases	615	1,652
less expected future interest payments	-2	-2
<b>PRESENT VALUE OF MINIMUM LEASE PAYMENTS</b>	<b>613</b>	<b>1,650</b>
<b>Residual term of liabilities</b>		
due within 12 months	243	1,537
due in 13 to 60 months	341	84
due in more than 60 months	29	29
<b>TOTAL</b>	<b>613</b>	<b>1,650</b>

## (35) Financial risk management

Through its financial activities, the Group is subject to various risks that are assessed, managed, and monitored by a systematic and documented risk management system which aims to avoid concentrations of risk.

The Group is exposed to market price risks due to changes in exchange rates or interest rates. On the procurement side, the Group faces commodity price risks. Furthermore, the Group is subject to credit risks resulting primarily from trade receivables. There are also liquidity risks in connection with the credit and market price risks or a deterioration in operations or disruptions on the financial markets. These financial risks could impact negatively on the financial position and performance of the Group.

Details of the Group's management of market risks (exchange rates, interest rates, commodity prices), credit risks, and liquidity risks are presented below.

#### (A) EXCHANGE RATE RISKS

The Group performs foreign currency transactions worldwide and is therefore subject to exchange rate fluctuations which have an effect on the assets and earnings of the Group denominated in euro. Foreign currency risks in financing stem from financial receivables and liabilities in foreign currency and loans in foreign currency granted to finance group entities. As far as operations are concerned, the individual group entities mainly carry out their activities in their functional currency. There is also an intensive exchange of goods and services between the group entities.

Furthermore, there are transaction-related exposures due to financial assets and liabilities listed in foreign currencies. Exchange rate risks are managed by forward exchange contracts and options. Derivative financial instruments are used to hedge future sales revenue against exchange rate risks. Portions of the exposure expected for the next fiscal year in the most important currencies for the Group are hedged.

Risks from the use of derivative financial instruments include, on the one hand, counterparty risks which can be avoided in the selection process. On the other, they lie in the change in the fair value of derivatives; this is, however, generally counterbalanced by the opposing development of the fair value of the underlying.

The hedged sales revenue amount is calculated on the basis of the estimate for the coming fiscal year. This is derived mostly from past figures based on sales revenue which are highly probable. The figures are monitored constantly.

IFRS 7 requires that sensitivity analyses be carried out to present market risks, showing how profit or loss and equity would have been affected by changes in the relevant risk variables. Apart from exchange rate risks, the Group is exposed to interest rate risks. The periodic expenses are determined by relating the hypothetical changes of the risk variables to the financial instruments as of the end of the reporting period. It is assumed that the financial instruments as of the end of the reporting period are representative for the entire year.

Exchange rate risks or currency risks as defined by IFRS 7 arise on financial instruments that are denominated in a currency other than the functional currency and that have a monetary nature; differences from the translation of financial statements to the group currency caused by exchange rates are not taken into account. The relevant risk variables are all currencies (other than the functional currency) in which the Group uses financial instruments.

The currency sensitivity analyses are based on the following assumptions:

- Significant non-derivative monetary financial instruments are either denominated in functional currency or transferred to the functional currency using derivatives.
- Interest income and expenses from financial instruments are also either reported directly in functional currency or transferred to the functional currency using derivatives. As a result, there cannot be any material effects on the volumes under consideration.

If the euro had been ten percent stronger or weaker against the USD, GBP, AUD, and CNY as of December 31, 2015, earnings before tax would have been EUR 7,949 k (prior year: EUR 8,852 k) higher and EUR 6,627 k (prior year: EUR 7,264 k) lower respectively.

If the euro had been ten percent stronger, the change in earnings would have been as follows for the individual currency pairs: EUR / USD: EUR 5,168 k higher (prior year: EUR 4,535 k higher); EUR / GBP: EUR 759 k higher (prior year: EUR 1,320 k higher); EUR / AUD: EUR 516 k higher (prior year: EUR 916 k higher) and EUR / CNY: EUR 1,506 k higher (prior year: EUR 2,081 k higher).

If the euro had been ten percent weaker, the change in earnings would have been as follows for the individual currency pairs: EUR / USD: EUR 4,282 k lower (prior year: EUR 3,894 k lower); EUR / GBP: EUR 759 k lower (prior year: EUR 1,320 k lower); EUR / AUD: EUR 516 k lower (prior year: EUR 916 k lower) and EUR / CNY: EUR 1,070 k lower (prior year: EUR 1,134 k lower).

#### **(B) INTEREST RATE RISKS**

By interest rate risks, the Group means the negative effects on the financial position and performance resulting from changes in interest rates. The external financing consists primarily of fixed-interest rate loans. This is one of the methods used to manage these risks. In addition, derivative financial instruments including interest swaps are used in risk management. Due to the structure of assets and liabilities, interest rate risks are mostly linked to liabilities to banks. Fixed-interest agreements amounting to EUR 96,735 k (prior year: EUR 83,122 k) have been entered into for these. In addition, floating-interest liabilities to banks of EUR 10,000 k (prior year: EUR 10,000 k) were effectively rendered fixed-interest liabilities by using interest rate swaps.

The interest rate hedges exceed the floating-interest loans by EUR 8,056 k as of the end of the year. In the prior year, there were floating-rate liabilities to banks of EUR 10,833 k that were not hedged by swaps.

Of the liabilities to banks, an amount of EUR 11,081 k (prior year: EUR 27,612 k) is due for repricing within a year, while EUR 87,598 k (prior year: EUR 76,343 k) of these liabilities are due for repricing at a later date.

Under IFRS 7, interest rate risks are presented using sensitivity analyses. These present the effects of changes in market interest rates on interest payments, interest income and expenses, other comprehensive income and, if applicable, on equity. The interest rate sensitivity analyses are based on the following assumptions:

- Market interest rate fluctuations of non-derivative financial instruments with fixed interest only affect profit or loss if they are measured at fair value. Therefore, the financial instruments with fixed interest that are measured at amortized cost do not constitute interest rate risks as defined by IFRS 7.
- Market interest rate fluctuations affect the interest result of non-derivative financial instruments with floating interest for which the interest payments are not designed as underlyings using cash flow hedges against interest rate risks, and are thus included when calculating the earnings-related sensitivities.
- Market interest rate fluctuations of interest derivatives (interest rate swaps, interest / currency swaps) that are not part of a hedge relationship pursuant to IAS 39 affect the other financial result (measurement result from adjusting the financial assets to the fair value) and are therefore taken into account when calculating the earnings-related sensitivities.
- Currency derivatives are not subject to any interest rate risks and therefore do not affect interest rate sensitivities.



If the market interest level had been 100 basis points higher as of December 31, 2015, earnings before tax would have been EUR 168 k higher (prior year: EUR 186 k higher). The hypothetical effect on earnings results from the potential positive effects from interest derivatives of EUR 124 k (prior year: EUR 240 k) and potential positive effects from non-derivative floating-rate financial liabilities and assets of EUR 44 k (prior year: negative effects of EUR 54 k).

If the market interest level had been 100 basis points lower as of December 31, 2015, earnings before tax would have been EUR 170 k lower (prior year: EUR 203 k lower). The hypothetical effect on earnings results from the potential negative effects from interest derivatives of EUR 126 k (prior year: negative effects of EUR 257 k) and potential negative effects from non-derivative floating-rate financial liabilities and assets of EUR 44 k (prior year: positive effects of EUR 54 k).

#### (C) COMMODITY PRICE RISKS

The Group is exposed to risks from changes in commodity prices that stem from the procurement of the goods used in production. The Group generally does not use derivative financial instruments to hedge against this risk. Instead, the Group minimizes the risk in relation to quality and procurement assurance aspects using a procurement strategy adjusted to reflect current circumstances and changes. This involves continuously assessing potential procurement sources according to regional, technological, qualitative, and price aspects, approving the sources and embedding these in development and production processes accordingly. Sudden price fluctuations due to the cost of materials or supply bottlenecks for certain product groups are countered using a planning basis that is constantly updated and also includes strategic buffer stocks.

#### (D) CREDIT RISKS

Credit risk describes the risk of financial loss resulting from counterparties failing to discharge their contractual payment obligations. Credit risk involves both the direct risk of default and the risk of a deterioration in creditworthiness, linked to the risk of a concentration of individual risks.

Credit risk is countered by only maintaining business relationships with first-class banks. Default risks from receivables are minimized by ongoing monitoring of the creditworthiness of the counterparty and by limiting the aggregated risks from the individual counterparty.

Business with major customers is subject to special credit monitoring. However, measured in terms of the overall risk potential from the default risk, the receivables from these customers are not significant enough to constitute an extraordinary concentration of risk.

The following table provides information on the extent of the credit risk included in trade receivables (without specific bad debt allowances):

in EUR k	2015	2014
Neither impaired nor past due as of the end of the reporting period	184,190	155,465
Not impaired as of the end of the reporting period but past due by the following time periods:		
less than 30 days	31,639	21,884
31 to 90 days	10,693	8,095
91 to 360 days	5,448	3,855
more than 361 days	2,031	1,115

There was no indication as of the end of the reporting period that any impairment losses needed to be recognized on the trade receivables recorded as not impaired.

#### (E) LIQUIDITY RISKS

Liquidity risk describes the risk that an entity will encounter difficulty in meeting obligations associated with financial liabilities. The Group generates liquidity primarily from operations and external financing. The funds are chiefly used to finance working capital and capital expenditures. The Group controls its liquidity by maintaining sufficient cash and cash equivalents and lines of credit at banks in addition to cash inflows from operating activities. Cash and cash equivalents comprise cash and other assets.

At the end of 2015, short- and long-term lines of credit and loans totaled EUR 207,339 k (prior year: EUR 185,624 k), of which EUR 98,679 k (prior year: EUR 103,955 k) was utilized.

Operative liquidity management comprises a cash concentration process whereby cash and cash equivalents are pooled on a daily basis. This allows liquidity surpluses and shortages to be controlled in line with the requirements of the Group as a whole as well as of individual group entities. The maturities of financial assets and financial liabilities as well as estimates of cash flows from operating activities are included in short- and medium-term liquidity management. Detailed information is included in F. (27) "Non-current and current financial liabilities."

The following repayment schedule shows how the payments made for financial liabilities as of December 31, 2015 influence the Group's liquidity situation.

The schedule describes the procedure for undiscounted

- principal and interest payments for financial liabilities,
- net payments for derivative financial instruments as a total for the respective year,
- payments for trade payables and
- payments for other financial liabilities.

The undiscounted payments are subject to the following conditions:

- If the contractual party can demand a payment at different times, the liability is reported at the earliest possible repayment date.
- Derivative financial instruments include derivatives with negative fair values.
- The interest payments for floating-rate financial instruments are calculated on the basis of forward interest rates. This procedure corresponds to calculating the fair value of other financial instruments.

The financial liabilities of the Group have the following terms. The disclosures are based on contractual payments without discounting.

in EUR k	Total	2016	2017	2018	2019	2020	≥ 2021
Liabilities to banks	106,763	12,828	6,460	6,300	26,230	25,105	29,840
Liabilities from finance leases	615	243	214	46	23	60	29
Derivative financial instruments	596	596	0	0	0	0	0
Trade payables	97,541	97,541	0	0	0	0	0
Other financial liabilities	6,324	6,324	0	0	0	0	0
<b>TOTAL</b>	<b>211,839</b>	<b>117,532</b>	<b>6,674</b>	<b>6,346</b>	<b>26,253</b>	<b>25,165</b>	<b>29,869</b>

The cash flows from the derivative financial instruments are shown as net figures. These include foreign exchange contracts which break down into a cash outflow of EUR 18,652 k and a cash inflow of EUR 18,156 k.

There are also derivative financial instruments with a positive market value that break down into a cash outflow of EUR 100,286 k and a cash inflow of EUR 101,806 k.

As of December 31, 2014, the financial liabilities of the Group had the following terms. The disclosures are based on contractual payments without discounting.

in EUR k	Total	2015	2016	2017	2018	2019	≥ 2020
Liabilities to banks	112,772	29,344	8,932	3,823	3,689	23,644	43,340
Liabilities from finance leases	1,652	1,537	29	0	56	0	30
Derivative financial instruments	4,256	4,178	78	0	0	0	0
Trade payables	89,191	89,191	0	0	0	0	0
Other financial liabilities	6,265	5,643	622	0	0	0	0
<b>TOTAL</b>	<b>214,136</b>	<b>129,893</b>	<b>9,661</b>	<b>3,823</b>	<b>3,745</b>	<b>23,644</b>	<b>43,370</b>

The retained liquidity as well as short-term and long-term lines of credit give the Group adequate flexibility to cover the Group's refinancing needs. The Group is not subject to any concentration of liquidity risk on account of the diverse nature of its financing sources and its cash and cash equivalents.

**(F) CAPITAL MANAGEMENT**

The Group's primary capital management objective is to ensure that it maintains a healthy equity ratio with a low-risk and flexible financing structure in order to support its business activity.

The Group manages the way its capital base is structured in light of changes in economic conditions and adjusts it accordingly. To adjust the way its capital base is structured, the Group may adjust the dividend payment to shareholders, return capital to shareholders, or issue new shares. No changes were made to the objectives and guidelines as of December 31, 2015 or December 31, 2014.

The Group monitors its capital taking into account the underlying parameters, e.g., consolidated net income, mainly using the equity ratio. The equity ratio is the ratio of equity in the statement of financial position to total assets. As of December 31, 2015, the equity ratio amounted to 52.4 percent (prior year: 49.1 percent).

**(36) Financial instruments****(A) FAIR VALUE OF FINANCIAL INSTRUMENTS**

Financial assets and financial liabilities regularly measured at fair value:

in EUR k	Level 1		Level 2		Level 3		Total	
	2015	2014	2015	2014	2015	2014	2015	2014
<b>Assets</b>								
Other financial assets	0	0	1,520	825	0	0	1,520	825
thereof derivatives not used for hedging	0	0	1,520	825	0	0	1,520	825
<b>Equity and liabilities</b>								
Other financial liabilities	0	0	596	4,377	0	0	596	4,377
thereof derivatives not used for hedging	0	0	596	4,377	0	0	596	4,377

The fair value of forward exchange contracts is measured using the closing rates on the forward exchange markets. The fair values are calculated on the basis of the mean exchange rate. The calculation method and the variables used are in line with the provisions of IAS 39. In the case of interest swaps, the fair value is calculated as the present value of the estimated future cash flows including accrued interest based on the market value.

The fair value of options is determined using the Black-Scholes model modified by Garman and Kohlhagen. An option is measured primarily by reference to exchange rates, the respective interest rates of the currency pair, and volatility as of the reporting date as well as its remaining term. Since the option premium has already been recognized as an asset, measurement is at fair value only.

During the reporting periods ending December 31, 2015 and December 31, 2014, there were no transfers between Level 1 and Level 2 fair value measurements, and no transfers into and out of Level 3 fair value measurements.

Financial assets and financial liabilities not regularly measured at fair value:

in EUR k	Level 1		Level 2		Level 3		Total	
	2015	2014	2015	2014	2015	2014	2015	2014
<b>Assets</b>								
Other financial assets	0	0	494	213	0	0	494	213
Trade receivables	0	0	234,527	201,404	0	0	234,527	201,404
Other assets	0	0	9,710	9,302	0	0	9,710	9,302
Cash and cash equivalents	0	0	18,408	14,969	0	0	18,408	14,969
<b>Equity and liabilities</b>								
Liabilities to banks	0	0	100,569	98,031			100,569	98,031
Finance lease liabilities	0	0	613	1,650	0	0	613	1,650
Trade payables	0	0	97,541	89,191	0	0	97,541	89,191
Other liabilities	0	0	5,694	4,577	630	1,142	6,324	5,719

The fair value of securities that are included in the portfolio of available-for-sale financial assets and held-for-trading financial assets is determined based on the market price at the end of the reporting period, if available.

The carrying amounts of trade receivables and payables, other assets, cash and cash equivalents, and other liabilities closely correspond to the fair values due to the short-term maturities.

For liabilities to banks and from finance leases, the present value of the future cash flows was calculated on the basis of matched market interest rates. Other liabilities also include obligations from contingent consideration from acquisitions calculated as the present value of estimated cash flows.

For the presentation of the carrying amounts, reference is made to pages 124 and 125 of this Annual Report.



Measurement of the financial instruments held as of December 31, 2015 at fair value gave rise to the following total gains and losses.

Total income and expenses from assets and liabilities measured at fair value:

in EUR k	Assets		Liabilities	
	2015	2014	2015	2014
<b>Recognized in the income statement:</b>				
Derivatives not used for hedging	755	-288	-596	-4,377
Other	0	0	0	0
<b>Recognized in equity:</b>				
Derivatives used for hedging	0	0	0	0

Income and expenses from measuring held-for-trading financial assets and liabilities at fair value are presented in the currency results or the interest expense and income.

For the presentation of the carrying amounts and fair values by class and category, reference is made to pages 124 and 125 of this Annual Report.

#### (B) NET RESULTS BY MEASUREMENT CATEGORY

The following table presents the net gains and losses from financial instruments taken into account in the income statement (excluding derivative financial instruments included in hedge accounting):

Categories pursuant to IAS 39:

in EUR k	2015	2014
Loans and receivables	-93	-618
Financial assets and financial liabilities at fair value through profit or loss (held for trading)	4,457	-6,575
Financial liabilities at amortized cost	-3,367	-3,476
<b>TOTAL</b>	<b>997</b>	<b>-10,669</b>

The net gains and losses from loans and receivables chiefly include the effects of interest, currencies, and impairments.

The net gains and losses from financial assets and financial liabilities at fair value through profit or loss include the results of changes in fair value and from interest income and expenses from these financial instruments.

The net gains and losses from financial liabilities at amortized cost relate first and foremost to results from interest expenses.

### (C) TOTAL INTEREST INCOME AND EXPENSES

The total interest income and expenses for financial assets and financial liabilities not measured at fair value through profit or loss are as follows:

in EUR k	2015	2014
Total interest income	394	284
Total interest expenses	-2,969	-3,605
<b>TOTAL</b>	<b>-2,575</b>	<b>-3,321</b>

### (D) DERIVATIVE FINANCIAL INSTRUMENTS

As of the end of the reporting period, the replacement values of the derivative financial instruments are as follows:

in EUR k	Contract value or nominal value		Positive replacement value		Negative replacement value	
	2015	2014	2015	2014	2015	2014
Currency instruments without hedging relationship						
Forward exchange contracts	93,735	130,203	1,022	468	496	3,902
Currency options (OTC) <sup>1</sup>	24,708	38,546	498	357	0	0
<b>TOTAL CURRENCY INSTRUMENTS</b>	<b>118,443</b>	<b>168,749</b>	<b>1,520</b>	<b>825</b>	<b>496</b>	<b>3,902</b>
Interest instruments with-out hedging relationship						
Interest rate swap	10,000	10,000	0	0	100	475
<b>TOTAL INTEREST INSTRUMENTS</b>	<b>10,000</b>	<b>10,000</b>	<b>0</b>	<b>0</b>	<b>100</b>	<b>475</b>

<sup>1</sup> OTC: over-the-counter

The foreign currency instruments are principally used to hedge exchange rate risks in USD, CNY, AUD, and GBP. Currency instruments of EUR 118,443 k (prior year: EUR 168,749 k) have maturities of less than 12 months.

The interest instruments primarily serve to hedge interest exposures relating to floating-rate liabilities to banks in euro. The maximum term is 12 months.

### (37) Government grants

The Group reports government grants of EUR 669 k in the fiscal year (prior year: EUR 2,517 k) which are earmarked. EUR 669 k (prior year: EUR 2,655 k) of the grants received were deducted from the acquisition costs of the related assets. This amount includes payments for grants from 2015 and 2014. Government grants mainly consist of subsidies provided for the capital expenditures at the locations in Dresden, Germany, and Hungary to support regional economic development. If earmarked subsidies are not used for the designated purpose, they may have to be repaid.

The Group also reported government grants for R&D projects of EUR 2,607 k (prior year: EUR 1,578 k); these are not dependent on the success of the projects. These were recognized as income in full in 2015 in accordance with the percentage of completion of the projects.

### (38) Related party disclosures

Related parties are members of the Executive Board, members of the Supervisory Board of the Group, members of the Sick family, joint ventures as well as Sick Holding GmbH, Freiburg, Germany. Sick Holding GmbH, Freiburg, is the ultimate parent company of SICK AG.

All transactions with joint ventures are made at normal market prices.

The table below provides the total amount of transactions with related parties for the fiscal year, which relate mostly to joint ventures:

in EUR k	2015	2014
Goods and services sold	1,530	651
Goods and services purchased	4,275	2,749
Receivables as of the end of the reporting period	2,280	3,081
Liabilities as of the end of the reporting period	734	365

The Group's goods and services sold mainly relate to deliveries of goods. The Group mainly received goods deliveries and development services as part of the goods and services purchased. No bad debt allowances were recognized on trade receivables.

As in the prior year, there were no transactions between the Group and Sick Holding GmbH, Freiburg, during the fiscal year other than dividends paid.

In the Group as of December 31, 2015, as in the prior year, there are no receivables and liabilities due from or to members of the Executive Board, apart from outstanding remuneration.

The members of the Executive Board of SICK AG are classified as key management personnel.

Remuneration of EUR 4,135 k (prior year: EUR 3,497 k) granted to these individuals includes short-term employee benefits of EUR 3,757 k (prior year: EUR 3,047 k) expensed in the reporting period, post-employment benefits of EUR 367 k (prior year: EUR 343 k) as well as other long-term benefits of EUR 11 k (prior year: EUR 107 k) of which EUR 6 k (prior year: EUR 53 k) can relate to share-based payments.

A long-term incentive arrangement ("LTI") was concluded with the members of the Executive Board of SICK AG in the fiscal years 2013, 2014, and 2015. One of the prerequisites for receiving the LTI is to belong to the Executive Board of SICK AG for a period of three years.

The assessment base for the LTI is a positive value added accumulated over three fiscal years (either 2013 to 2015, 2014 to 2016, or 2015 to 2017, depending on the contract, referred to as the "time frame"). The LTI is measured as a percentage of the average value added calculated in this period. It is limited to a certain percentage of the fixed remuneration of the last year in the time frame. At the end of the time frame, the LTI is paid out in shares in SICK AG (max. 50 percent) and in cash (min. 50 percent). In the fiscal year 2015, 2,200 shares were paid out at a price of EUR 35.83 at the end of the 2012 to 2014 time frame under the LTI. The obligations from the cash settlement amount to EUR 297 k as of December 31, 2015. The percentage of shares is determined by the company, taking treasury shares into account. The rate authoritative for translating the percentage to be paid out in shares is the current rate specified by the tax authorities or the respective market price on the date of maturity. If a member of the Executive Board leaves during this three-year period, any entitlement to an LTI for this period is forfeited.

The SICK shares transferred as part of the LTI must be kept in a custodian account with a blocking notice stating that the shares can only be issued subject to the approval of the company. These shares can only be accessed if the member steps down from the Executive Board or retires.

The 50 percent share of the LTI that can be paid in shares – at the discretion of SICK AG – is treated as an equity-settled transaction (IFRS 2.34) and is recognized in equity accordingly. Measurement as of December 31, 2015 was based on the consolidated financial statements as of December 31, 2013 to 2015 as well as the planning for the Group for future fiscal years, taking the contractually stipulated limit into account. Based on the share price of EUR 35.83 observed in the fiscal year 2015, this share of the LTI amounting to EUR 297 k corresponds to approximately 8,289 shares.

Compensation to former members of management and their surviving dependents totaled EUR 1,081 k in the fiscal year (prior year: EUR 1,045 k). Provisions totaling EUR 13,946 k (prior year: EUR 14,159 k) were recognized for pension obligations for this group of persons.

Remuneration of the Supervisory Board of SICK AG came to EUR 748 k (prior year: EUR 740 k) for supervisory board activities and to EUR 473 k (prior year: EUR 461 k) for activities for SICK AG. Additional compensation for advisory services was not paid.

As of December 31, 2015, as in the prior year, the Sick family has no receivables or liabilities due from or to the Group.

**(39) Stock option plans**

From 1999 to 2003, SICK AG had annual employee stock option plans. Around 1.3 million shares were issued as part of employee stock option plans, of which SICK AG has since repurchased 0.3 million shares at market price.

**(40) Fees and services provided by the auditors**

The following table shows, on aggregate, the fees incurred for the services provided by the auditor Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft, Stuttgart, Germany, in the fiscal year 2015:

in EUR k	2015	2014
Audits of the financial statements	319	329
Other attestation services	0	24
Tax advisory services	7	4
Other services	209	137
<b>TOTAL</b>	<b>535</b>	<b>494</b>

**(41) Accounting standards not early adopted**

The Group elected not to early adopt standards and IFRIC interpretations which have already been issued but have not entered into force yet. Generally speaking, the Group intends to adopt all standards when their adoption becomes mandatory for the first time.

The following list of standards and interpretations issued are those that the Group reasonably expects to have a material impact on disclosures, financial position or performance when applied at a future date. The Group intends to adopt these standards when they become effective.

IFRS 9	"Financial Instruments"
IFRS 15	"Revenue from Contracts with Customers"
IFRS 16	"Leases"
IAS 1	"Presentation of Financial Statements"



The EU has not yet adopted IFRS 9, which was issued in July 2014. It replaces the existing guidelines on IAS 39 “Financial Instruments: Recognition and Measurement.” Companies must apply IFRS 9 for the first time to reporting periods beginning on or after January 1, 2018, although early adoption is permitted. The Group is currently assessing the potential impact of the standard on its future financial position and performance.

IFRS 15 has not yet been adopted by the EU. The standard sets an extensive framework for determining whether, in what amount, and at what point in time revenue is recognized. It replaces existing guidelines on recognizing revenue, including IAS 18 “Revenue,” IAS 11 “Construction Contracts,” and IFRIC 13 “Customer Loyalty Programmes.” Companies must apply IFRS 15 for the first time to reporting periods beginning on or after January 1, 2018, although early adoption is permitted. The Group is currently assessing the potential impact of the standard on its future financial position and performance.

The EU has not yet adopted IFRS 16, which was issued in January 2016. At the heart of the new standard is the principle that the lessee should generally recognize all leases as well as the associated contractual rights and obligations in its statement of financial position. In future, lessees will no longer have to make the distinction previously required under IAS 17 between finance leases and operating leases. For lessors, however, the new standard sets forth similar rules to those previously contained in IAS 17. The lease agreements continue to be classified either as operating leases or finance leases. The new requirements are mandatory for fiscal years beginning on or after January 1, 2019. Earlier adoption is permitted, provided IFRS 15 is also applied. The Group is planning to perform an analysis of the potential impact of the standard on its future financial position and performance.

The EU has adopted the revised version of IAS 1 published in December 2015. The changes relate to clarifications of the presentation of the financial statements and must be applied for the first time to reporting periods beginning on or after January 1, 2016. The Group is currently assessing the potential impact of the standard on the future presentation of its consolidated financial statements.

#### (42) Subsequent events

There were no significant events after the end of the reporting period.

## (43) Executive Board and Supervisory Board disclosures

### EXECUTIVE BOARD

Dr. Robert Bauer, Emmendingen (Chairman)  
Products & Technology

Reinhard Bösl, Freiburg  
Systems & Industries

Dr. Mats Gökstorp, Freiburg  
Sales & Service

Dr. Martin Krämer, Waldkirch  
Human Resources, Procurement, Legal & Compliance

Markus Vatter, Vörsstetten  
Finance, Controlling & IT

### SUPERVISORY BOARD

In accordance with Sec. 95 AktG in conjunction with Art. 8 paragraph 1 of the articles of incorporation and bylaws, the Supervisory Board has 12 members. Six members are elected by the Annual General Shareholders' Meeting and six by the employees in accordance with the provisions of the 1976 MitbestG ("Mitbestimmungsgesetz": German Co-Determination Act). The members of the Supervisory Board are:

Gisela Sick, Waldkirch (Honorary Chairwoman)  
Retired

### SHAREHOLDER REPRESENTATIVES:

Klaus M. Bukenberger, Schenkenzell (Chairman)  
Corporate Governance Consulting, Stuttgart

Franz Bausch, Hinterzarten  
Tax consultant, chartered accountant

Prof. Dr. Mark K. Binz, Stuttgart  
Lawyer

Dr. Ronaldo H. Schmitz, Frankfurt  
Former member of the Executive Board of Deutsche Bank AG, Frankfurt

Renate Sick-Glaser, Freiburg  
Managing Director of Sick Holding GmbH, Freiburg

Prof. Dr. Dr. h. c. mult. Horst Wildemann, Munich  
Head of the Research Institute for Corporate Management, Logistics and Production at the Technical University of Munich

#### EMPLOYEE REPRESENTATIVES:

Roberto Hernandez, Waldkirch (Deputy Chairman)  
Chairman of the Works Council of SICK AG, Waldkirch  
Chairman of the Central Works Council of SICK AG, Waldkirch

Engelbert Herbstritt, Waldkirch  
Deputy Chairman of the Works Council of SICK AG, Waldkirch  
Chairman of the Group Works Council

Dr. Matthias Müller, Braunschweig  
Head of Finance in the Federal Presidium of the DGB ("Deutscher Gewerkschaftsbund":  
Confederation of German Trade Unions), Berlin

Gabriele Pontiggia, Winden  
Human Resources Consultant of SICK AG, Waldkirch

Roland Schiller, Hinterzarten  
Member of the Management Board of SICK AG, Waldkirch

Hermann Spieß, Breisach  
Director of IG Metall trade union, Freiburg and Lörrach

#### (44) Approval of the consolidated financial statements

The consolidated financial statements were approved by the Executive Board on February 22, 2016. The financial statements were then submitted to the Supervisory Board for review.

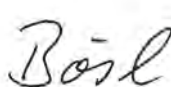
Waldkirch, March 17, 2016

SICK AG

The Executive Board



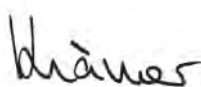
Dr. Robert Bauer  
(Chairman)



Reinhard Bösl



Dr. Mats Gökstorp



Dr. Martin Krämer



Markus Vatter

# CONSOLIDATED STATEMENT OF CHANGES IN NON-CURRENT ASSETS FOR THE PERIOD FROM JANUARY 1 TO DECEMBER 31, 2015

NON-CURRENT ASSETS	Acquisition or production costs					Balance as of Dec. 31, 2015
	Balance as of Jan. 1, 2015	Currency translation differences	Additions	Disposals	Reclassi- fications	
in EUR k						
<b>I. Intangible assets</b>						
1. Purchased industrial property rights and similar rights and assets as well as licenses to such rights and assets	66,806	306	8,032	3,362	140	71,922
2. Goodwill	19,205	-132	0	0	0	19,073
3. Capitalized development costs and other internally generated intangible assets	83,225	22	8,755	5,474	0	86,528
4. Payments on account	162	0	574	0	-140	596
	<b>169,398</b>	<b>196</b>	<b>17,361</b>	<b>8,836</b>	<b>0</b>	<b>178,119</b>
<b>II. Property, plant and equipment</b>						
1. Land and buildings including buildings on third-party land	172,942	788	6,191	3,732	1,311	177,500
2. Technical equipment and machinery	126,137	53	13,061	5,218	6,719	140,752
3. Other equipment, furniture and fixtures	115,230	2,422	13,803	9,177	1,213	123,491
4. Payments on account and assets under construction	18,778	54	33,372	0	-9,243	42,961
	<b>433,087</b>	<b>3,317</b>	<b>66,427</b>	<b>18,127</b>	<b>0</b>	<b>484,704</b>
<b>TOTAL</b>	<b>602,485</b>	<b>3,513</b>	<b>83,788</b>	<b>26,963</b>	<b>0</b>	<b>662,823</b>

Accumulated depreciation / amortization						Net carrying amounts		
Balance as of Jan. 1, 2015	Currency translation differences	Additions	Disposals	Reclassi- fications	Balance as of Dec. 31, 2015	Balance as of Dec. 31, 2015	Balance as of Dec. 31, 2014	
53,401	250	7,129	3,342	0	57,438	14,484	13,405	
1,024	0	0	0	0	1,024	18,049	18,181	
56,694	22	8,726	5,474	0	59,968	26,560	26,531	
0	0	0	0	0	0	596	162	
111,119	272	15,855	8,816	0	118,430	59,689	58,279	
51,879	305	5,574	3,111	-17	54,630	122,870	121,063	
83,802	134	13,550	5,239	177	92,424	48,328	42,335	
85,529	1,981	11,394	9,015	-160	89,729	33,762	29,701	
0	0	0	0	0	0	42,961	18,778	
221,210	2,420	30,518	17,365	0	236,783	247,921	211,877	
332,329	2,692	46,373	26,181	0	355,213	307,610	270,156	

# CONSOLIDATED STATEMENT OF CHANGES IN NON-CURRENT ASSETS FOR THE PERIOD FROM JANUARY 1 TO DECEMBER 31, 2014

NON-CURRENT ASSETS	Acquisition or production costs					Balance as of Dec. 31, 2014
	Balance as of Jan. 1, 2014	Currency translation differences	Additions	Disposals	Reclassi- fications	
in EUR k						
<b>I. Intangible assets</b>						
1. Purchased industrial property rights and similar rights and assets as well as licenses to such rights and assets	61,658	321	5,643	816	0	66,806
2. Goodwill	19,521	-316	0	0	0	19,205
3. Capitalized development costs and other internally generated intangible assets	74,727	0	8,498	0	0	83,225
4. Payments on account	102	14	46	0	0	162
	<b>156,008</b>	<b>19</b>	<b>14,187</b>	<b>816</b>	<b>0</b>	<b>169,398</b>
<b>II. Property, plant and equipment</b>						
1. Land and buildings including buildings on third-party land	133,459	578	31,327	1,290	8,868	172,942
2. Technical equipment and machinery	114,570	144	11,323	5,025	5,125	126,137
3. Other equipment, furniture and fixtures	105,944	2,228	10,974	4,225	309	115,230
4. Payments on account and assets under construction	18,451	8	14,621	0	-14,302	18,778
	<b>372,424</b>	<b>2,958</b>	<b>68,245</b>	<b>10,540</b>	<b>0</b>	<b>433,087</b>
<b>TOTAL</b>	<b>528,432</b>	<b>2,977</b>	<b>82,432</b>	<b>11,356</b>	<b>0</b>	<b>602,485</b>

Additions include the acquisition in Germany (industrial property rights and similar rights: EUR 2,321 k and property, plant and equipment: EUR 55 k).



Accumulated depreciation / amortization						Net carrying amounts		
Balance as of Jan. 1, 2014	Currency translation differences	Additions	Disposals	Reclassi- fications	Balance as of Dec. 31, 2014	Balance as of Dec. 31, 2014	Balance as of Dec. 31, 2013	
47,443	282	6,492	816	0	53,401	13,405	14,215	
1,024	0	0	0	0	1,024	18,181	18,497	
49,208	0	7,486	0	0	56,694	26,531	25,519	
0	0	0	0	0	0	162	102	
97,675	282	13,978	816	0	111,119	58,279	58,333	
47,871	289	4,742	1,259	236	51,879	121,063	85,588	
76,984	15	11,857	4,838	-216	83,802	42,335	37,586	
77,222	1,791	10,303	3,767	-20	85,529	29,701	28,722	
0	0	0	0	0	0	18,778	18,451	
202,077	2,095	26,902	9,864	0	221,210	211,877	170,347	
299,752	2,377	40,880	10,680	0	332,329	270,156	228,680	

## CARRYING AMOUNTS AND FAIR VALUES BY MEASUREMENT CATEGORY IN EUR K

		Carrying amount pursuant to IAS 39						
	Measurement category pursuant to IAS 39	Carrying amount 2015	(Amortized) cost	at fair value not through profit and loss	at fair value through profit and loss	Carrying amount pursuant to IAS 17	Other carrying amounts	Fair value 2015
ASSETS								
Other financial assets								
Other equity investments	FAAFS	480	480					480
Other financial assets	FAAFS	14	14					14
Trade receivables	LAR	234,527	234,527					234,527
Other assets								
Derivatives held for trading	FAHFT	1,520			1,520			1,520
Other	FAAFS / LAR / n.a.	25,071	9,710				15,361	25,071
Cash and cash equivalents	LAR	18,408	18,408					18,408
EQUITY AND LIABILITIES								
Financial liabilities								
Liabilities to banks	FLAC	98,679	98,679					100,569
Finance lease liabilities	n.a.	613				613		613
Other financial liabilities	FLHFT	-			-			-
Trade payables	FLAC	97,541	97,541					97,541
Other liabilities								
Derivatives held for trading	FLHFT	596			596			596
Other	FLAC	6,324	6,324					6,324
Of which aggregated by measurement category pursuant to IAS 39:								
Financial assets held for trading (FAHFT)		1,520			1,520			
Loans and receivables (LAR)		262,559	262,559					
Financial assets available for sale (FAAFS)		580	580					
Financial liabilities held for trading (FLHFT)		596			596			
Financial liabilities at amortized cost (FLAC)		202,544	202,544					

CARRYING AMOUNTS AND FAIR VALUES  
BY MEASUREMENT CATEGORY IN EUR K

		Carrying amount pursuant to IAS 39						
	Measurement category pursuant to IAS 39	Carrying amount 2014	(Amortized) cost	at fair value not through profit and loss	at fair value through profit and loss	Carrying amount pursuant to IAS 17	Other carrying amounts	Fair value 2014
ASSETS								
Other financial assets								
Other equity investments	FAAFS	194	194					194
Other financial assets	FAAFS	19	19					19
Trade receivables	LAR	201,404	201,404					201,404
Other assets								
Derivatives held for trading	FAHFT	825			825			825
Other	FAAFS/ LAR/n.a.	22,674	9,302				13,372	22,674
Cash and cash equivalents	LAR	14,969	14,969					14,969
EQUITY AND LIABILITIES								
Financial liabilities								
Liabilities to banks	FLAC	103,955	103,955					98,031
Finance lease liabilities	n.a.	1,650				1,650		1,650
Other financial liabilities	FLHFT	475			475			475
Trade payables	FLAC	89,191	89,191					89,191
Other liabilities								
Derivatives held for trading	FLHFT	3,902			3,902			3,902
Other	FLAC	5,719	5,719					5,719
Of which aggregated by measurement category pursuant to IAS 39:								
Financial assets held for trading (FAHFT)		825			825			
Loans and receivables (LAR)		225,618	225,618					
Financial assets available for sale (FAAFS)		270	270					
Financial liabilities held for trading (FLHFT)		4,377			4,377			
Financial liabilities at amortized cost (FLAC)		198,865	198,865					

## LIST OF MAIN SHAREHOLDINGS AS OF DECEMBER 31, 2015

Name and registered office of the entity	Investment in %	Indirect invest- ment via no.	Consolidation
<b>Parent company</b>			
SICK AG, Waldkirch / Germany			
<b>I. Shares in affiliates</b>			
1. SICK S.à.r.l., Émerainville / France	100.0		
2. SICK (UK) Ltd., St. Albans / United Kingdom	100.0		
3. SICK, Inc., Minneapolis, Minnesota / USA	100.0		
4. SICK B.V., Bilthoven / Netherlands	100.0		
5. SICK AG, Stans / Switzerland	100.0		
6. SICK Pty Ltd, Heidelberg West, VIC / Australia	100.0		
7. SICK A/S, Birkerød / Denmark	100.0		
8. SICK NV/SA, Zellik-Asse / Belgium	100.0		
9. SICK K.K., Tokyo / Japan	100.0		
10. SICK Optic-Electronic S.A., Sant Just Desvern / Spain	100.0		
11. SICK Engineering GmbH, Ottendorf-Okrilla / Germany <sup>1</sup>	100.0		
12. SICK Oy, Vantaa / Finland	100.0		
13. SICK Pte. Ltd., Singapore / Singapore	100.0		
14. SICK AS, Rud / Norway	100.0		
15. SICK AB, Vårby / Sweden	100.0		
16. SICK Sp. z o.o., Warsaw / Poland	100.0		
17. SICK Solução em Sensores Ltda., São Paulo / Brazil	100.0		
18. Sick Optic-Electronic Co., Ltd., Hong Kong / China	100.0		
19. SICK S.p.A., Vimodrone (MI) / Italy <sup>2</sup>	100.0		
20. SICK Kft., Kunsziget / Hungary	100.0		
21. SICK GmbH, Wiener Neudorf / Austria	100.0		
22. SICK spol. s r.o., Prague / Czech Republic	100.0		
23. SICK Management GmbH, Waldkirch / Germany <sup>1</sup>	100.0		
24. SICK Co., Ltd., Seoul / Korea	85.0		
25. SICK Automatisierung International GmbH, Waldkirch / Germany	100.0		
26. SICK China Co., Ltd., Guangzhou / China	100.0	18	
27. SICK STEGMANN GmbH, Donaueschingen / Germany <sup>1,3</sup>	100.0	23	
28. SICK MAIHAK (Beijing) Co. Ltd., Beijing / China	85.0		
29. SICK IVP AB, Linköping / Sweden	100.0		
30. Sensörler ve İleri Cihazlar Kontrol A.Ş., Istanbul / Turkey	100.0		
31. SICK LLC, Moscow / Russia <sup>4</sup>	100.0	25	
32. SICK Vertriebs-GmbH, Düsseldorf / Germany <sup>1</sup>	100.0		
33. SICK d.o.o., Ljubljana / Slovenia	100.0	21	
34. SICK INDIA Pvt. Ltd., Mumbai / India	100.0	25	N

Name and registered office of the entity	Investment in %	Indirect invest- ment via No.	Consolidation
35. SICK Sensors Ltd., Misgav/ Israel	100.0		
36. SICK S.R.L., Timisoara/ Romania <sup>5</sup>	100.0	25	N
37. SICK TAIWAN Co., Ltd., Taipei/ Taiwan	100.0		
38. SICK Automation Solutions S.A. de C.V., Tlalnepantla/ Mexico	100.0	25	N
39. SICK Ltd., Moncton, New Brunswick/ Canada	100.0	3	
40. SICK Automation Southern Africa (Pty) Ltd., Roodepoort, Johannesburg/ South Africa	71.0	25	
41. SICK Sdn. Bhd., Johor Bahru/ Malaysia	100.0	43	
42. SICK System Engineering AG, Buochs/ Switzerland	100.0		
43. SICK Product Center Asia Pte. Ltd., Singapore/ Singapore	100.0		
44. SICK Flow Solutions LLC i. L., Moscow/ Russia <sup>6</sup>	100.0	25	
45. SICK FZE, Dubai/ United Arab Emirates	100.0	25	
46. SICK Sensor (Malaysia) Sdn. Bhd., Kuala Lumpur/ Malaysia	100.0	25	N
47. SICK (THAILAND) Co., Ltd., Bangkok/ Thailand	100.0	25	N
48. SICK NZ Ltd., Auckland/ New Zealand	100.0	25	
49. SICK Értékesítő és Szolgáltató Kft., Budapest/ Hungary	100.0	25	N
<b>II. Investments and other interests</b>			
50. SICK OPTEX Co., Ltd., Kyoto/ Japan	50.0		A
51. SICK kluge GmbH, Königswartha/ Germany	50.0	11	A
52. Beijing BAIF-Maihak Analytical Instrument Co., Ltd., Beijing/ China	15.0		N
53. Puls Design A/S, Hvidovre/ Denmark	25.0	7	N
54. WABE gGmbH, Waldkirch/ Germany	16.7		N
55. SICK Metering Systems N.V., Kalmthout/ Belgium	50.0	11	A
56. Schädler SICK SpA, Santiago de Chile/ Chile	50.0	25	A

<sup>1</sup> The entities have exercised the exemption provision pursuant to Sec. 264 (3) HGB.

<sup>2</sup> 10 percent of the shares are held by SICK Engineering GmbH, Ottendorf-Okrilla/ Germany (no. 11).

<sup>3</sup> 6 percent of the shares are held by SICK AG, Waldkirch/ Germany.

<sup>4</sup> 15 percent of the shares are held by SICK AG, Waldkirch/ Germany.

<sup>5</sup> 0.5 percent of the shares are held by SICK AG, Waldkirch/ Germany.

<sup>6</sup> 1 percent of the shares are held by SICK Management GmbH, Waldkirch/ Germany (no. 23).

N The entities marked N are not included in the consolidated financial statements on grounds of immateriality.

A The entities marked A are included in the consolidated financial statements at equity.

# The Supervisory Board of SICK AG

**GISELA SICK**, Waldkirch (Honorary Chairwoman)  
Retired

**KLAUS M. BUKENBERGER**, Schenkenzell (Chairman)  
Corporate Governance Consulting, Stuttgart  
Member of the Supervisory Board since 2002

**Additional Supervisory Board memberships:**

- Carl Mahr GmbH & Co. KG, Göttingen,  
Chairman of the Advisory Board
- Deutsche Bank AG, Stuttgart, member of the Advisory Board
- ILLIG Maschinenbau GmbH & Co. KG, Heilbronn,  
member of the Advisory Board
- Investcorp Group, London (United Kingdom),  
Advisory Director
- 7-Industries B.V., Amsterdam (Netherlands),  
member of the Supervisory Board
- TRICOR AG, Bad Wörishofen,  
Deputy Chairman of the Supervisory Board

**FRANZ BAUSCH**, Hinterzarten  
Tax consultant, chartered accountant  
Member of the Supervisory Board since 1999

**Additional Supervisory Board membership:**

- Deutsche Steuerberater-Versicherung –  
Pensionskasse des steuerberatenden Berufs VVaG, Bonn,  
Chairman of the Supervisory Board

**PROF. DR. MARK K. BINZ**, Stuttgart  
Lawyer  
Member of the Supervisory Board since 2007

**Additional Supervisory Board memberships:**

- Faber-Castell AG, Stein,  
Deputy Chairman of the Supervisory Board
- Festo AG, Esslingen am Neckar,  
member of the Supervisory Board
- Festo Management AG, Vienna (Austria),  
member of the Supervisory Board
- Fielmann Aktiengesellschaft, Hamburg,  
Chairman of the Supervisory Board

**ENGELBERT HERBSTTRITT**, Waldkirch \*  
Deputy Chairman of the Works Council of SICK AG, Waldkirch  
Chairman of the Group Works Council  
Member of the Supervisory Board since 2012

**ROBERTO HERNANDEZ**, Waldkirch (Deputy Chairman) \*  
Chairman of the Works Council of SICK AG, Waldkirch  
Chairman of the Central Works Council of SICK AG, Waldkirch  
Member of the Supervisory Board since 2007



**DR. MATTHIAS MÜLLER**, Braunschweig \*

Head of Finance in the Federal Presidium of the DGB  
 ("Deutscher Gewerkschaftsbund": Confederation of German Trade  
 Unions), Berlin  
 Member of the Supervisory Board since 2002

**Additional Supervisory Board memberships:**

- Berufsbildungswerk Gemeinnützige Bildungseinrichtung des DGB GmbH (bfw), Düsseldorf, member of the Supervisory Board
- BGAG GmbH, Frankfurt, member of the Advisory Board
- RWE Power AG, Essen, member of the Supervisory Board

**GABRIELE PONTIGGIA**, Winden \*

Human Resources Consultant of SICK AG, Waldkirch  
 Member of the Supervisory Board since 2012

**ROLAND SCHILLER**, Hinterzarten \*

Member of the Management Board of SICK AG, Waldkirch  
 Member of the Supervisory Board since 2002

**DR. RONALDO H. SCHMITZ**, Frankfurt

Former member of the Executive Board of Deutsche Bank AG, Frankfurt  
 Member of the Supervisory Board since 2005

**Additional Supervisory Board membership:**

- Cabot Corporation, Boston (USA),  
 member of the Board of Directors

**RENATE SICK-GLASER**, Freiburg

Managing Director of Sick Holding GmbH, Freiburg  
 Member of the Supervisory Board since 2007

**HERMANN SPIESS**, Breisach \*

Director of IG Metall trade union, Freiburg and Lörrach  
 Member of the Supervisory Board since 2002

**Additional Supervisory Board membership:**

- Constellium Deutschland GmbH, Singen,  
 Deputy Chairman of the Supervisory Board

**PROF. DR. DR. H. C. MULT. HORST WILDEMANN**, Munich

Head of the Research Institute for Corporate Management, Logistics  
 and Production at the Technical University of Munich  
 Member of the Supervisory Board since 2007

**Additional Supervisory Board memberships:**

- Hamberger Industrierwerke GmbH, Stephanskirchen,  
 member of the Advisory Board
- Interroll Holding AG, S. Antonino (Switzerland),  
 member of the Supervisory Board
- Möhlenhoff GmbH, Salzgitter, Chairman of the Advisory Board
- Rudolf GmbH, Geretsried, Chairman of the Advisory Board
- ZEPPELIN GmbH, Garching, member of the Supervisory Board

\* Employee representative

# Audit opinion<sup>\*</sup>

We have audited the consolidated financial statements prepared by SICK AG, Waldkirch, comprising the income statement, the statement of comprehensive income, the statement of financial position, the statement of cash flows, the statement of changes in equity as well as the IFRS notes to the consolidated financial statements together with the group management report, which has been combined with the management report of SICK AG, for the fiscal year from January 1 to December 31, 2015. The preparation of the consolidated financial statements and the group management report in accordance with IFRS as adopted by the EU, the additional requirements of German commercial law pursuant to Sec. 315a (1) HGB ("Handelsgesetzbuch": German Commercial Code), and the supplementary provisions of the articles of incorporation and bylaws is the responsibility of the company's management. Our responsibility is to express an opinion on the consolidated financial statements and the group management report based on our audit.

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

Our audit has not led to any reservations.

In our opinion, based on the findings of our audit, the consolidated financial statements comply with IFRS as adopted by the EU, the additional requirements of German commercial law pursuant to Sec. 315a (1) HGB, and the supplementary provisions of the articles of incorporation and bylaws; they give a true and fair view of the net assets, financial position, and results of operations of the Group in accordance with these requirements. The group management report is consistent with the consolidated financial statements and as a whole provides a suitable view of the Group's position and suitably presents the opportunities and risks of future development.

Freiburg, March 18, 2016

Ernst & Young GmbH  
Wirtschaftsprüfungsgesellschaft

Nietzer  
German Public Auditor

Busser  
German Public Auditor

<sup>\*</sup> Translation of the German audit opinion concerning the audit of the financial statements and management report prepared in German.

# The Executive Board of SICK AG

## DR. ROBERT BAUER, CHAIRMAN

Products & Technology

Member of the Executive Board  
since January 1, 2000

Dr. Robert Bauer came to the company in 1994 as Division Manager of Research & Development in the area of automation technology; in 1998, he assumed overall responsibility on the Management Board for Research & Development. Born in Munich in 1960, Robert Bauer studied Electrical Engineering with special emphasis on Electrophysics / Optics at the Technical University of Munich and he received his doctorate in 1990.



## REINHARD BÖSL

Systems & Industries

Member of the Executive Board  
since July 1, 2007

Born in the East Bavarian Parkstein in 1958, Reinhard Bösl studied Computer Science in Munich. Afterward, he held a variety of positions at Witron Logistik + Informatik GmbH, Parkstein, and became the company's Managing Director in 1998. Since 2004, he had been active in management positions at Krones AG, Neutraubling, including as Managing Director of the subsidiary Syskron GmbH.



## DR. MATS GÖKSTORP

Sales & Service

Member of the Executive Board  
since May 1, 2013

Born in Stockholm in 1965, Dr. Mats Gökstorp studied Computer Engineering at Linköping University in Sweden and at Case Western Reserve University in the USA. Then he received his doctorate in 1995. Then he joined the small university spin-off company Integrated Vision Products AB, where he learned all aspects of entrepreneurship and became the company's Managing Director in 2001. Since 2003, he has held various positions within the SICK Group. In 2007, he was appointed to the Management Board, first as Division Manager and later with overall responsibility for Customer Fulfillment.



## DR. MARTIN KRÄMER

Human Resources,

Procurement, Legal & Compliance

Member of the Executive Board  
since July 1, 2012

Born in Rottweil in 1960, Dr. Martin Krämer studied law at the universities of Tübingen and Freiburg. He received his doctorate in 1998. From 1991 onward, he practiced initially as a lawyer and partner at the law firm of Dr. Müller und Kollegen in Künzelsau. Then he joined the Lidl & Schwarz Corporate Group, where he worked as Head of the Legal Division. Four years later, he assumed his position as Head of the Legal Department at SICK AG.



## MARKUS VATTER

Finance, Controlling & IT

Member of the Executive Board  
since July 1, 2006

Markus Vatter was born in Wiesbaden in 1966. After obtaining his degree at the Technical University in Darmstadt, the industrial engineer started his professional career at Robert Bosch GmbH, Stuttgart. Afterward, he worked for Müller Weingarten AG, before joining KaVo Dental GmbH, Biberach, in 2001. His most recent position there was that of a Commercial Managing Director.



# Financial calendar 2016

APRIL 20	.....	Publication of the 2015 balance sheet ratios
MAY 10, 5 P.M.	.....	Annual General Shareholders' Meeting SICK AG's company restaurant, Waldkirch
MAY 11	.....	Dividend payment
AUGUST	.....	Publication of the 2016 half-year figures

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# Imprint

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Elektronikindustrie e.V., Frankfurt am Main

SICK AG, Waldkirch

Getty Images

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Regina Elzenbeck, Dirk Heyden, Christoph Müller

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This Annual Report is also available in German.

