

# Performance in 2017

The Comet Group delivers further record results and gets ready for the future.



## To Our Shareholders

The growth strategy of the Comet Group led to another set of record results in 2017. Sales grew by 32% to CHF 438.4 million. Net income rose by 30% to CHF 35.5 million. The Group continued to add value and, under its new CEO René Lenggenhager, set the stage for sustained future success.

The Comet Group accelerated its growth in 2017. It expanded the business with key accounts, developed relationships with prospective customers, mastered the challenge of meeting the high demand, and also moved ahead in important projects to prepare for future growth. Consolidated net sales expanded to CHF 438.4 million, surpassing the prior year by CHF 106 million.

### Growth in all segments and regions

Comet grew strongly in 2017. All regions and business segments contributed to the sales growth. The largest contribution came from the Plasma Control Technologies (PCT) segment: Its sales soared 53% to CHF 210.5 million. Thanks to its strong position in the market for high-end RF solutions, PCT benefited disproportionately from the expansion of manufacturing capacity in the semiconductor market and increased its business with key accounts. A broad-based network of suppliers helped PCT meet the strong demand with on-quality, on-time deliveries. Thanks to customized, highly reliable solutions, sales of the X-Ray Modules (IXM) segment

increased by 13% to CHF 78.8 million. IXM was buoyed especially by strong growth in the security inspection market.

X-Ray Systems (IXS) further expanded its market position, notably in the key automotive and electronics markets. Its sales grew by 13% to CHF 137.3 million. The emerging and expanding ebeam Technologies segment (EBT) almost doubled its sales, to CHF 29.5 million. Besides the growth in sales of its modules, a high backlog of orders from the previous year in the systems business was filled in 2017.

### Economic profit again boosted from the prior year – Growth successfully managed operationally

The high sales volume enabled a significant increase in the Group's EBITDA operating earnings to CHF 63.4 million (2016: CHF 47.7 million). The largest contributor was the PCT segment, where earnings were up by 80% to CHF 55.7 million. IXM raised its EBITDA by 9% to CHF 18.0 million. In the IXS segment, elevated expenditures for investments in product portfolio renewal and in greater market development resulted in an EBITDA earnings decrease to CHF 8.3 million (2016: CHF 11.5 million). Within the EBT segment, heavier competition weighed on the ebeam systems business. EBT invested in the professionalization of its processes, in cost reduction and in the standardization of the product portfolio. Coupled with the budgeted high investment in the development of new applications, this led to a segment EBITDA deficit of CHF 16.2 million (2016: deficit of CHF 9.1 million).

The Comet Group's net income rose to CHF 35.5 million (2016:

## “René Lenggenhager and his team are tackling strategic work important for Comet's future.”

Hans Hess, Chairman of the Board

CHF 27.3 million). This was despite a negative effect of CHF 2.1 million on net income as a result of an adjustment to the pension plans in Switzerland, which in the previous year had had a positive impact of CHF 1.4 million. Economic profit, even with a shortage of contributions to it from two segments, improved significantly to CHF 16.2 million (2016: CHF 10.8 million). Return on capital employed (ROCE) increased from 14.7% to 16.2%. With an equity ratio of 53%, the Group is very soundly financed. Despite the demands of generating the pronounced sales growth, the ratio of net working capital to sales improved, easing to 23% (2016: 24%), an indicator of the Group's improved operating efficiency.

### Key foundations put in place for future growth

The Comet Group is profitable and in dynamic motion. It deepened its relationships with existing and prospective customers, widened its market access, invested in innovative solutions and worked to hone its operating efficiency. Innovative new products were successfully launched, such as the IoT-capable iVario™ x-ray generator, the highly stable cito Plus RF generator, and the FF CT metrology systems. In the digital print sector, in partnership with Uteco, it took only



Hans Hess, Chairman of the Board of Directors, and René Lenggenhager, Chief Executive Officer

**“With the additional levers of digitalization, diversification, agility & speed, go-to-market, and the corresponding projects, we will be best able to exploit further opportunities.”**

René Lenggenhager, CEO

ten months to develop and launch the new ebeam-based GAIA printing system. The field tests for the bacterial inactivation of dry foods using ebeam, a project by Bühler, were successful, underscoring the effectiveness of ebeam in the application. While the development of a new ebeam-based product generation at Tetra Pak means a delay in the current rollout with this partner, Tetra Pak’s commitment to ebeam is unbroken. Important forward-looking investments were made in the expansion of the software competencies and in test and development infrastructure, exemplified by the ultra-modern Smart Lab in Flamatt for testing the new RF generators.

Lab One, opened in October in Silicon Valley as a landmark step, is the Comet Group’s first test and application center to provide all its technologies under one roof.

In procurement, among other measures to raise operational excellence, product groups were combined in order to obtain better purchasing prices. The construction work for the expansion of manufacturing capacity in Flamatt is progressing to plan. The move-in date is expected for late summer 2018. The new construction not only creates urgently needed space for further growth but the new facilities there will also improve operating efficiency.

### Readying for the future

With the Group's preparations to fully utilize its potential – through digitalization, further diversification, increasing the agility of the organization, and improving go-to-market – important efforts are underway to ready Comet for the future.

To even better meet the demands which further strong growth in business places on the company, the management team was reinforced at the Executive Committee level. CEO René Lenggenhager has been leading the Group since May 2017. With the addition of Prisca Hafner as Chief Human Resources Officer in January 2018, the CHRO position (previously part of a dual role) is now staffed separately. Also with effect from January 2018, Stephan Haferl became president of the IXM segment.

Following the decision of Charles Flükiger to leave the Group, the search for a new president of EBT is underway. The Board of Directors thanks Charles Flükiger for his great commitment over the past 37 years.

### Outlook

The Board and management are confident that in the years ahead the Comet Group will steadily continue to generate value-added and that it will already reach its 2020 growth target in 2019: sales of CHF 500 million and an EBITDA margin of 16% to 18%. For 2018 we expect sales of CHF 460 million to CHF 490 million and a return on capital employed (ROCE) of between 17% and 20%. This implies an EBITDA margin of 14% to 16%.

### Higher distribution

At the Annual Shareholder Meeting on April 26, 2018, the Board of

Directors will propose a distribution of CHF 1.50 per share from distributable paid-in capital (2017: CHF 1.20), exempt from Swiss anticipatory tax. This represents a dividend of 33% of the Group's net income.

### Thank you!

Great achievements by a company are only possible through close cooperation and the efforts of many. The Board and management would like to thank the Group's partners and customers for their valuable contribution. A special thank-you goes to our suppliers, without whose great flexibility and high quality standards the compelling results could not have been achieved. As well, we extend our sincere thanks to the employees of the Comet Group, whose strong commitment and hard work made the year's record performance possible. We also thank our shareholders for their continuing confidence.



Hans Hess  
Chairman of the Board



René Lenggenhager  
Chief Executive Officer

## Sales

2017  
CHF million

438.4

Up 32% from prior year

## Net income

2017  
CHF million

35.5

Up 30% from prior year

Return on capital employed  
(ROCE)

2017

16.2%

Up from 14.7% in prior year

**The building work for the expansion of production capacity in Flamatt is progressing to plan. The new construction creates urgently needed space for further growth and advanced production processes.**



Facility expansion in Flamatt: ready for occupancy in late summer 2018

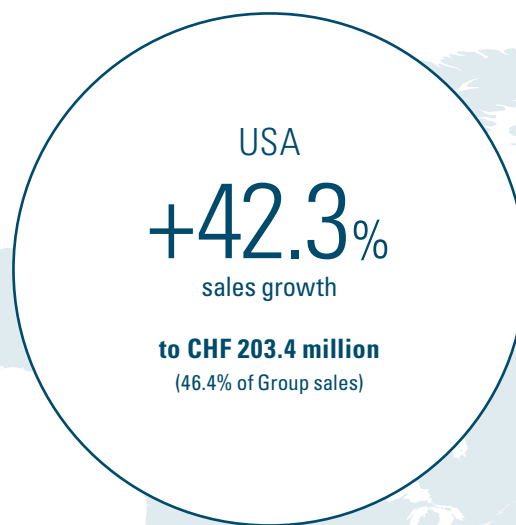


Eighteen percent of all staff are employed in R&D

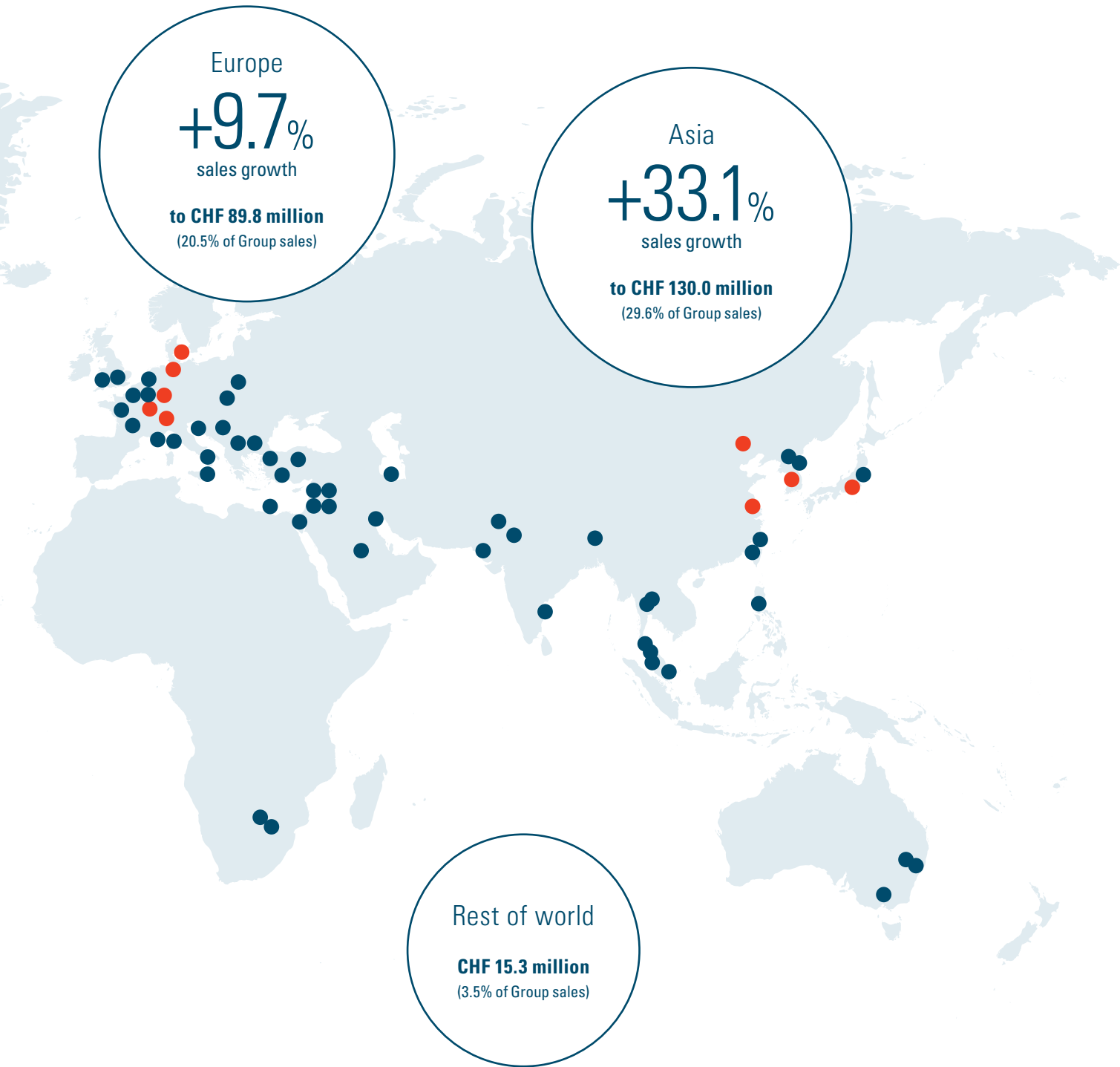
**1,435 employees from more than 40 nations work for the Comet Group: 66% in Europe, 24% in North America and 10% in Asia.**

## Strong global presence

In 2017 the Comet Group – with a strong global sales network and 14 Group sites around the world – boosted its sales in all regions. Riding the boom in the semiconductor market, it achieved its highest growth in the USA. To intensify the collaboration with customers and facilitate the development of new applications, Comet opened Lab One, its first multi-technology test and application center, in Silicon Valley.



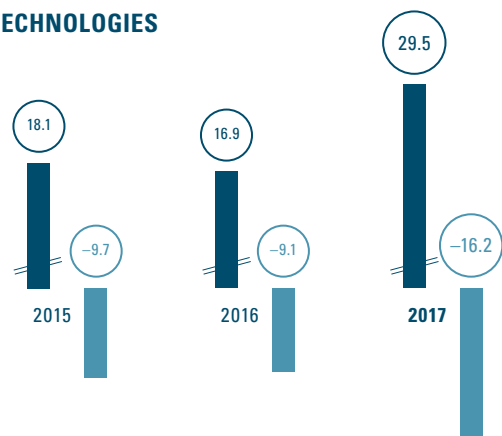
- **Group offices**
  - Flamatt, Switzerland (HQ)
  - Hamburg, Germany
  - Hattingen, Germany
  - Stolberg, Germany
  - Taastrup, Denmark
  - San José, CA, USA
  - Shelton, CT, USA
  - Hudson, OH, USA
  - Davenport, IA, USA
  - Shanghai, China
  - Beijing, China
  - Yokohama, Japan
  - Suwon, South Korea
- **Sales network**
- **Lab One**
  - San José, CA, USA



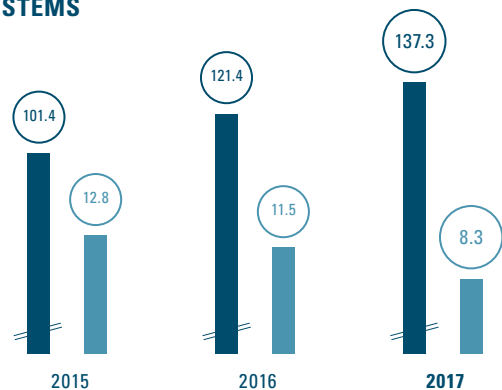
## Sales growth in all segments

All regions and business segments participated in the sales growth of 32%, led by PCT with an increase of 53%, followed by IXS and IXM with about 13% growth each. The largest contributions to earnings growth at EBITDA level came from the PCT segment, up 80% to CHF 55.7 million, and from IXM, up 9% to CHF 18.0 million. The EBT segment continued to invest strongly in developing the business through new applications, in professionalization, and in the realignment of the systems product portfolio.

### EBT EBEAM TECHNOLOGIES



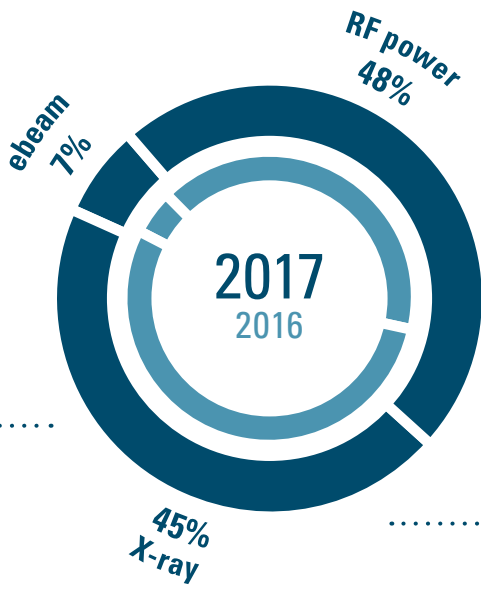
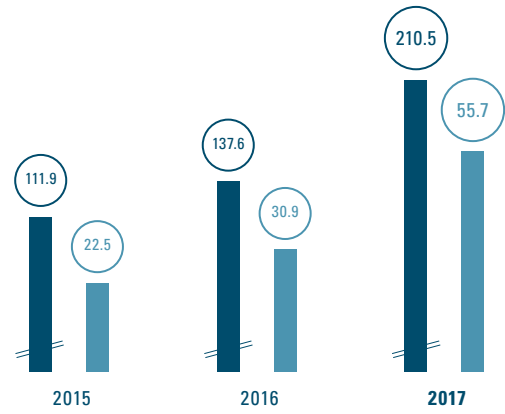
### IXS X-RAY SYSTEMS



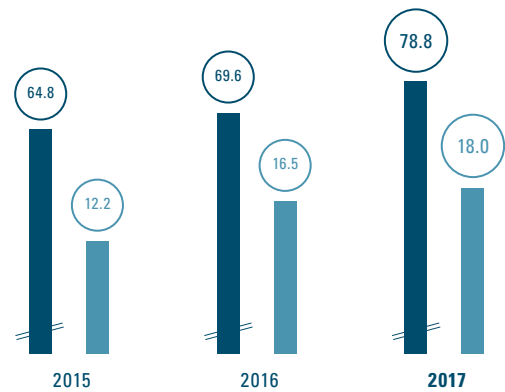
■ Sales in CHF million  
■ EBITDA in CHF million



## PCT PLASMA CONTROL TECHNOLOGIES



## IXM INDUSTRIAL X-RAY MODULES



# PCT

## PLASMA CONTROL TECHNOLOGIES

The lasting high demand in the semiconductor market brought another record year for Plasma Control Technologies (PCT). Superbly positioned in the market, the business segment benefited disproportionately strongly from customers' expansion of their manufacturing capacity, growing its sales by 53% to CHF 210.5 million. Operating earnings at EBITDA level rose from CHF 30.9 million to CHF 55.7 million and the EBITDA margin correspondingly increased significantly to 26.5% (prior year: 22.5%).

In 2017, Plasma Control Technologies marked its fifth consecutive year of record results. Applications such as big

data, Industry 4.0 and augmented reality helped fuel the demand for storage capacity in the semiconductor market. Against this backdrop, the past investments continued to pay dividends for PCT: With its high-end RF power solutions, the PCT segment was buoyed disproportionately by the expansion of the manufacturing capacity of its semiconductor customers and thus achieved sales growth of 62% in this area. The equipping of new chip fabrication plants drove a 66% jump in PCT's sales in the USA. In Asia, where the Chinese market is rapidly growing in prominence through the building of local production capacity, sales increased by 32%.

Sales of the "cito Plus" generator (newly in serial production), which assures maximum stability even under top dynamic loads, were also off to a good start. In vacuum capacitors for the display market, PCT was able to expand its high-end business with external customers in Asia.

### High volumes require expansion of production infrastructure

Compared to the year before, PCT widened its EBITDA profit margin by

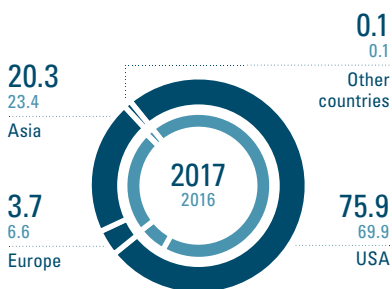
4 percentage points. The reason for this increase was the high sales volume, which PCT delivered through maximum utilization of its existing manufacturing capacity and space. This, coupled with cost savings in the supply chain, led to a strong improvement in profitability. As well, the high volume of sales made up for costs of investment in the expansion of production infrastructure – such as added capacity in Shanghai and San José – and in product innovation.

### Innovation for sophisticated plasma applications

To ensure further growth after 2020, PCT invested in the first expansion phase of the Smart Lab in Flamatt, a test laboratory that can perform automated analysis of large amounts of data in real time. The segment also invested in the development of a new modular RF power system platform. Going forward, this will enable the precise coordination of generator and matchbox during production and thus support manufacturers in the semiconductor market in making highly sensitive plasma applications even more reliable, repeatable and efficient.

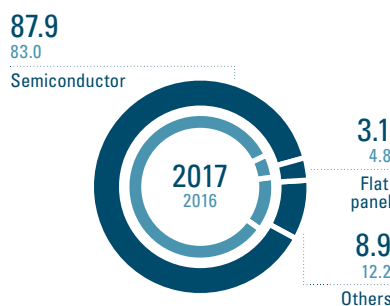
### Sales split by region

In percent



### Sales split by market

In percent



549  
Employees

6  
Locations



## IXS X-RAY SYSTEMS

IXS, positioned in high-growth markets and present in more than 50 countries, further expanded its market position in the two most important sectors, automotive and electronics, and grew its sales on a broad base, by 13% to CHF 137.3 million. Higher-than-average expenses for product portfolio renewal and for strengthening the presence in some countries led to an EBITDA margin of 6.1% (prior year: 9.4%).

X-Ray Systems recorded pronounced sales growth in its core market segments in 2017.

### Booming business in solutions for the automotive market

The highest growth for IXS was achieved in large computed tomography (CT) systems in two core markets: the automotive industry, and the re-focused "science & new materials" market segment (formerly "labs/R&D"). One of the key upside influences in the automotive business was the Asian tire market, which rallied after several weaker years and thus allowed IXS as the market leader to make further gains. Another driver was the foundries business (castings). Here the emphasis on electromobility – which entails less complex powertrains with fewer cast parts – in conjunction with greater competitive pressure led to higher

customer investment in productivity improvement.

In the market segment of science & new materials, IXS successfully focused more squarely on the needs of R&D departments and on applications in additive manufacturing, in medicine and in metrology. Thus the first pure metrology systems were delivered to customers, after being launched in May at Control, the international trade show for quality assurance. To address the growing customer demand for high-precision measurement, IXS also began to equip other systems with metrology capability. The number of such systems sold partly for metrology use more than doubled from the year before.

IXS had attained a leading market position in the electronics segment in the prior year. In 2017, the trend in sales of inspection systems for this market was slightly less dynamic. The continuing strong position testifies to the good performance and high professionalism of the sales network. The widespread international sales and service presence and the innovative solutions from IXS played a significant part in the segment's success and are increasingly proving important selling points.

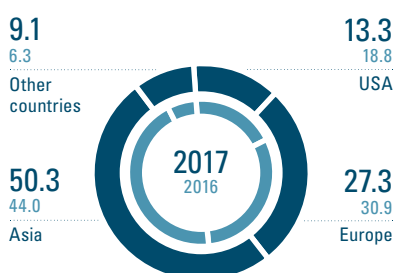
### Vigorous business in Asia

While the Europe business remained steady, IXS registered a volume reduction in the USA as a result of the aerospace sector's low investment. By contrast, with a sales increase of almost 30%, IXS did very well in its traditionally strong Asia business. Besides enlarging its market position in China, IXS successfully expanded both in the Japanese and Southeast Asian market.

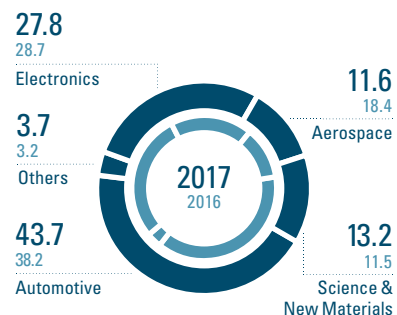
### Aiming for future profitable growth as a solution provider for smart factories

IXS focused its strategy in 2017. With a strengthened management team, the segment engaged in a sweeping program to renew its product portfolio, reduce complexity and thus create important conditions for future profitable growth.

Sales split by region  
In percent



Sales split by market  
In percent



Specifically, partnerships were formed to accelerate the pace of the development and introduction of new solutions for smart factories. At the same time, IXS implemented measures to improve operational excellence in management, production and sales. The segment adjusted its organization in the US business and, with the demonstration center at Lab One, reinforced its presence on the West Coast and its proximity to the electronics market. In Beijing, IXS set up a demonstration center for large systems. With both these centers, the segment already garnered significantly greater interest from new prospective customers. The disproportionate rise in development expenditures and investment meant that, despite the sales growth, EBITDA operating earnings eased to CHF 8.3 million (prior year: CHF 11.5 million).

## IXM INDUSTRIAL X-RAY MODULES

With growth in all markets and regions and a vigorous surge in its security inspection business, sales of the IXM segment rose by 13% to CHF 78.8 million. Operating earnings (EBITDA) advanced by 9% to CHF 18.0 million – even as IXM invested as planned in the expansion of the security inspection business and in the forward strategy with the launch of the new iVario™ generator platform.

market's rate of growth and allowed the business to further cement its position as technology leader and development partner. The strongest growth for IXM came in the security sector. With its highly reliable x-ray sources tailored to the various specific market needs, IXM delivered volume growth of almost 45% in this market segment. Development projects with customers also made strides. As a result of the higher volume and successful measures to raise productivity, IXM improved its profitability. As this gain was, however, more than offset by currency impacts and a negative effect from the change-over of the defined-benefit pension plans in Switzerland to a fully insured model, the EBITDA margin eased slightly to 22.8% (prior year: 23.7%).

### Growth in all regions – strong expansion in Asia

IXM generated growth in Europe (its core region) both in non-destructive testing and in security inspection. Meanwhile, business in the USA expanded faster than the market, primarily in the security space. In Asia the pronounced volume growth was

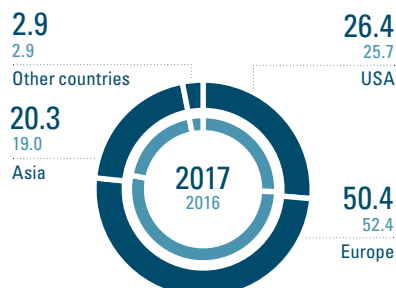
433  
Employees

7  
Locations

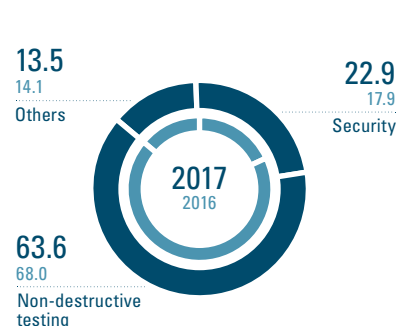


Helped by the recovery in the manufacturing and energy sector, the Industrial X-Ray Modules segment saw moderate sales growth of 5.8% in the core business of non-destructive testing. This still surpassed the

### Sales split by region In percent



### Sales split by market In percent





Markus Portmann  
CFO

Detlef Steck  
President, IXS

Thomas Polzer  
COO

René Lenggenhager  
CEO

Charles Flükiger  
President, EBT

Michael Kammerer  
President, PCT

Eric Dubuis  
CIO

achieved mainly with customers in the market for non-destructive testing, thanks to a general recovery in the market.

### Addressing new customers and markets

IXM passed an important milestone in its strategy with the launch of and first orders for the new IoT-capable iVario™ family of generators. As part of the digitalization of products and services, the segment also carried out a successful pilot project for predictive maintenance of portable x-ray systems.

As the market leader, the segment is continually working on the development of new products and applications, with the clear goal of further expanding its customer base. By adding more staff to its marketing and sales organization and dividing it into the three departments of business development, sales, and marketing, IXM towards the end of the fiscal year intensified its focus on new customers and the development of new markets.

**302**  
Employees

**5**  
Locations



# EBT

## EBEAM TECHNOLOGIES

EBT continued in 2017 to develop its business and was able to increase sales by 75% to CHF 29.5 million (prior year: CHF 16.9 million). The segment, as planned, stepped up investment in the development of promising new applications. However, as the expected earnings contribution from the systems business did not materialize, the EBITDA deficit rose to CHF 16.2 million (prior year: deficit of CHF 9.1 million).

The sales growth of the ebeam Technologies segment was attributable both to the modules business (ebeam “engines”) and especially to a high backlog of orders from the prior year in the systems business that were now filled. There was also a strong

rise in sales of EB-Labs – attesting to the market’s growing interest in the ebeam technology. In the systems business, competition grew more intense. High investments in the professionalization of processes and in the product portfolio also weighed on the year’s result in this area. By a combination of cost reduction measures, a consistent refocusing of the product portfolio on standardized systems, and concentration on the food and digital printing sectors, EBT did key groundwork for improving the profitability of the systems business.

### Success with ebeam engines and EB-Labs

Compelling progress was made in the EB-Labs business. Building on several years of groundwork in Asia and Europe, the sales teams were able to arouse customers’ interest in using ebeam as a tool for product development, and sales thus increased. Sales of ebeam engines also rose strongly. The rollout with Tetra Pak in the area of beverage packaging sterilization developed in line with expectations. However, Tetra Pak will adjust the further rollout to fit its updated strategy and

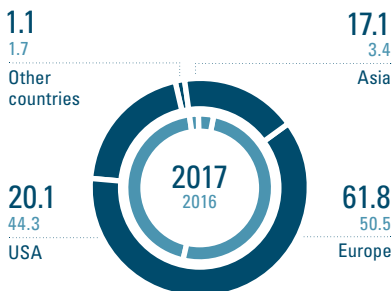
intends to integrate ebeam directly in the new product generation, based on a new technology platform. This will lead to a delay in sales revenue for EBT from 2018 on, and requires the development of an adapted ebeam solution. EBT began to attract positive attention by its regional expansion and the creation and enlarging of teams in China and Japan.

### Investments in infrastructure and in development projects

EBT systematically continued its strategy of developing the business through new applications. In 2017 the segment invested in its demonstration centers in the USA (San José), Japan, China and Switzerland, which make it easy for customers to familiarize themselves with the ebeam technology. Further investments were made in the joint development projects with Bühler, Uteco, Bell Food Group, and Tetra Pak. Together with these respective partners, the segment invested in the development of commercial equipment and in creating demonstrators to show the industrial scalability of the applications.

### Sales split by region

In percent



151

Employees

5

Locations

