

# Performance in 2018

The Comet Group successfully manages a challenging year for all divisions.

## Comet demonstrates resilience

In a demanding environment, the Comet Group in 2018 was able to virtually hold the record-high sales result of the prior year. Net income was CHF 12.3 million, or CHF 24.3 million excluding one-time effects. The management swiftly took important measures for earnings improvement that will make themselves felt in 2019. The Comet Group closed 2018 with a strong balance sheet and low net debt.

With sales of CHF 436.4 million in 2018, the Comet Group, despite a strong contraction in the semiconductor market, nearly matched the record 2017 level of CHF 443.4 million.

At the first signs of a cycle shift in the middle of 2018, the Group took corrective measures in individual businesses to improve earnings performance, completing these initiatives by the end of 2018. It adjusted production capacity in line with the semiconductor market downturn, divested the ebeam systems manufacturer in Davenport, Iowa, USA, and executed a sweeping earnings improvement program in the x-ray systems business whose effects, as already announced, will unfold in 2019. At the same time, the Group continued to invest in future revenue drivers to ensure sustained business development. Excluding the one-off costs of CHF 10.5 million associated with the corrective measures, the

Comet Group realized EBITDA operating earnings of CHF 48.3 million and an EBITDA margin of 11.1%. Net income excluding one-time effects was CHF 24.3 million (2017: CHF 35.3 million).

The consolidated equity ratio increased from 51.7% to 54.4%. Despite high investment in the facility expansion in Flamatt, the management was able to keep the leverage ratio (net debt to EBITDA) at a low level of 0.7 (2017: 0.1). The Comet Group thus remains on a very sound financial footing.

### **Solid sales performance in a difficult environment**

The weakness in the market for memory chips and the decisions by some manufacturers to postpone investments in equipping fabrication plants led to a slump in the market for semiconductor equipment from the second half of the year. Despite this sharp downswing, the Plasma Control Technologies (PCT) division – which is one of the world's leading vendors of RF power products and achieved record growth in the first half of 2018 – closed the year with sales of CHF 212.2 million, in line with the prior year (2017: CHF 213.0 million). In the X-Ray Systems (IXS) division, after a subdued first six months, successes began to be seen with new products, especially in the electronics market. Declines in individual markets resulted in an overall sales figure of CHF 135.7 million (2017: CHF 139.8 million). The X-Ray Modules (IXM) division, led since January 2018 by Stephan Haferl, continued to expand its position in the core market of non-destructive testing and posted

**“Despite the slump in the world market for semiconductors and declining trends in submarkets, the Comet Group delivered more-than-respectable results for the year.”**

Hans Hess, Chairman of the Board

sales of CHF 81.2 million (2017: CHF 78.8 million). The fiscal year for the ebeam Technologies (EBT) division was marked by its realignment and the divestiture of the manufacturer of customized large systems in the USA. Sales decreased by 32.2% to CHF 20.0 million (2017: CHF 29.5 million).

### **One-time effects weigh on EBITDA and net income**

The measures launched and systematically implemented to improve earnings in individual areas, as well as ongoing investments in major projects of strategic significance for the future, are reflected in the divisions' results. Thus, PCT swiftly adjusted production capacity in line with the semiconductor market downturn, while continuing to develop the RF power generator, which will open up a new and highly attractive market. In combination with shifts in the product mix, this resulted in an EBITDA operating



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

earnings figure of CHF 41.8 million (2017: CHF 55.7 million).

In the IXS and EBT divisions, after weak results in the first half of the year, Comet carried out a sweeping earnings improvement program under new divisional management. As previously announced, these changes will make themselves felt in 2019. At IXS, high investments in product portfolio development and one-off costs for the profitability improvement program resulted in a 2018 EBITDA operating loss of CHF 1.5 million (2017: profit of CHF 8.2 million). In the EBT division the one-time expenses for divesting the systems manufacturer in the USA led to a loss of CHF 20.2 million

at EBITDA level (2017: loss of CHF 16.2 million). Of this total, CHF 14.5 million was due to the now divested ebeam systems activities.

Thanks to its realignment to focus on the attractive module business, EBT will be able to reduce its cost base substantially overall in 2019. IXM performed well. Even with one-off costs for the facility expansion in Flamatt, the division improved its EBITDA operating earnings by 11.6% to CHF 20.0 million. Excluding the total one-time effects of CHF 12.0 million, the Comet Group's net income was CHF 24.3 million (2017: CHF 35.3 million). The return on capital employed (ROCE) before one-off costs was 11.1%.

### **Strong technology platform with attractive growth drivers**

The Comet Group, a global technology leader based in Switzerland, has a strong technology platform focused on x-ray, radio frequency (RF) power and ebeam. Based on the shared core competencies of high vacuum, high voltage, materials science, and application and data-processing expertise, the Comet Group provides customers with innovative solutions for faster, more efficient processes and safer products in a wide range of applications and geographic markets. In line with its Strategy 2020, the Group intends to grow by building on its existing core competencies and technologies

## “The Comet Group is in a sound financial position and, after taking earnings improvement measures in 2018, enters fiscal year 2019 on a strengthened footing.”

René Lenggenhager, CEO, Comet Group

and on the pooling of its strengths to leverage new applications while intensifying the collaboration with key accounts. As a diversified group, Comet is able to balance out fluctuations in individual markets and harness strong growth drivers such as the progressive digitalization fueled by the advance of artificial intelligence, the Internet of Things and data analytics, doing so across technologies. The ability of the modules and systems on offer to function as sensors and data generators provides the Group's divisions with the unique opportunity to jointly optimize customers' production processes and thus exploit growth potential and create added value.

Following the corrective actions taken in 2018, the Group enters 2019 in a stronger position thanks to a strong balance sheet and low net debt, and continues to execute its strategy of scaling innovative solutions into new applications.

### Strengthened management team

Under CEO René Lenggenhager, the Comet Group not only laid the groundwork for improved profitability in the EBT and IXS segments. It also strengthened the management team in 2018 at the Executive Committee level by filling vacant positions: In January 2018, Stephan Haferl became President of the X-Ray Modules division and Prisca Hafner assumed the role of the Group's Chief Human Resources Officer, and in November 2018, Thomas Wenzel took over as President of the X-Ray Systems division from interim manager Matthias Barz. As well, the responsibility for business-specific tasks in the operations sphere was delegated to the divisions and the role of Chief Operations Officer was thus eliminated. This new structure creates direct, faster decision paths and enables more agile action attuned to customer needs.

### Outlook for 2019

The Comet Group is in a sound position and, after implementing earnings improvement measures in 2018, enters fiscal year 2019 with a strong balance sheet and low net debt. As well, results in 2019 will benefit from the absence of last year's non-recurring expenses of about CHF 10.5 million. The long-term underlying drivers of business remain intact.

Currently the visibility in the semiconductor market – especially regarding the demand trend for 3D NAND memory chips, a major market for the Comet Group – continues to be very limited for all market participants and at present does not allow a Group-level forecast to be issued for 2019. For the Plasma

Control Technologies division, amid the continuing weak demand for 3D NAND chips coupled with high inventories, the Comet Group expects sales in the first six months of 2019 to be about 10–20% lower than in the second half of 2018; a prediction for the second half of 2019 cannot yet be made. Helped by strong new orders for new products such as the FF 20 CT and FF 35 CT, the X-Ray Systems division anticipates a slight year-over-year increase in sales for the full year 2019 and an EBITDA margin of approximately 6%. In the X-Ray Modules division, the Group expects slight sales growth for 2019 in line with that of 2018. As a result of existing contracts with key accounts and further investment in new applications, the ebeam Technologies division is projected to post 2019 sales of about CHF 15 million with an EBITDA loss of not more than CHF 5 million.

### Dividend proposal of CHF 1.20 per share

At the Annual Shareholder Meeting on April 25, 2019, the Board of Directors will propose a dividend of CHF 1.20 per share (2018: CHF 1.50). Of this total, CHF 1.00 per share is to be paid from the remaining distributable paid-in capital, exempt from Swiss anticipatory tax, and CHF 0.20 per share is to be distributed as a regular dividend. Based on the underlying net income of CHF 24.3 million, the total proposed dividend represents a payout ratio of 38% (2018: 33%).

### Charting of future direction is underway

As the current strategy period to 2020 is approaching its end, the

## Sales

2018  
CHF million

436.4

(Prior year: CHF 443.4 million)

Net income excluding  
one-time effects2018  
CHF million

24.3

(Prior year: CHF 35.3 million)

Return on capital employed  
(ROCE)

2018

11.1%

(Prior year: 16.2%)

Board of Directors instructed management in 2018 to further develop the strategy with a view to the next period. In 2019 the Board will carefully consider the resulting proposals. Key themes will include the development of further geographic markets, applications and products; a strongly customer-focused marketing; enhancing speed and agility in management and processes; and, crucially, the digitalization of products, processes and services, and building-up of the data analytics expertise in the Group.

#### Nominations for election to the Board of Directors

After 14 years as a Board member and 12 years as Chairman of Comet Holding AG, Hans Hess will not be standing for re-election, as already announced in February 2018. During his tenure, he has played a key role in directing the company's impressive development and growth and been instrumental in strong value generation. The Board of Directors thanks Hans Hess for his large contribution. Following a comprehensive search process for the succession, the Board of Directors is proposing Chris-

toph Kutter, Director of the Fraunhofer Institute for Microsystems and Solid State Technologies (EMFT), Munich, to shareholders as non-executive and independent Chairman of the Board. The Board of Directors is very confident that Christoph Kutter, with his 17 years of international strategic and operational experience in the semiconductor industry, his wide-ranging understanding of technology and his expertise in components, systems and software, is exceedingly well qualified to lead the Comet Group into the future as its Chairman and add value to the company.

Having served on the Board for twelve years, Lucas Grolimund, chairman of the Audit Committee, is also not standing for re-election. As the successor to Lucas Grolimund, the Board is proposing that shareholders elect Patrick Jany, Chief Financial Officer of Clariant, as an independent member of the Board of Directors. If elected he will assume the chairmanship of the Audit Committee from Lucas Grolimund.

#### Thank you

The Board and management would like to thank the Group's partners and customers for the close collaboration, trust and confidence with which we have been privileged. A special thank you goes to all our employees, who with their strong commitment successfully mastered the year's challenges, and to our shareholders for their confidence in our company.



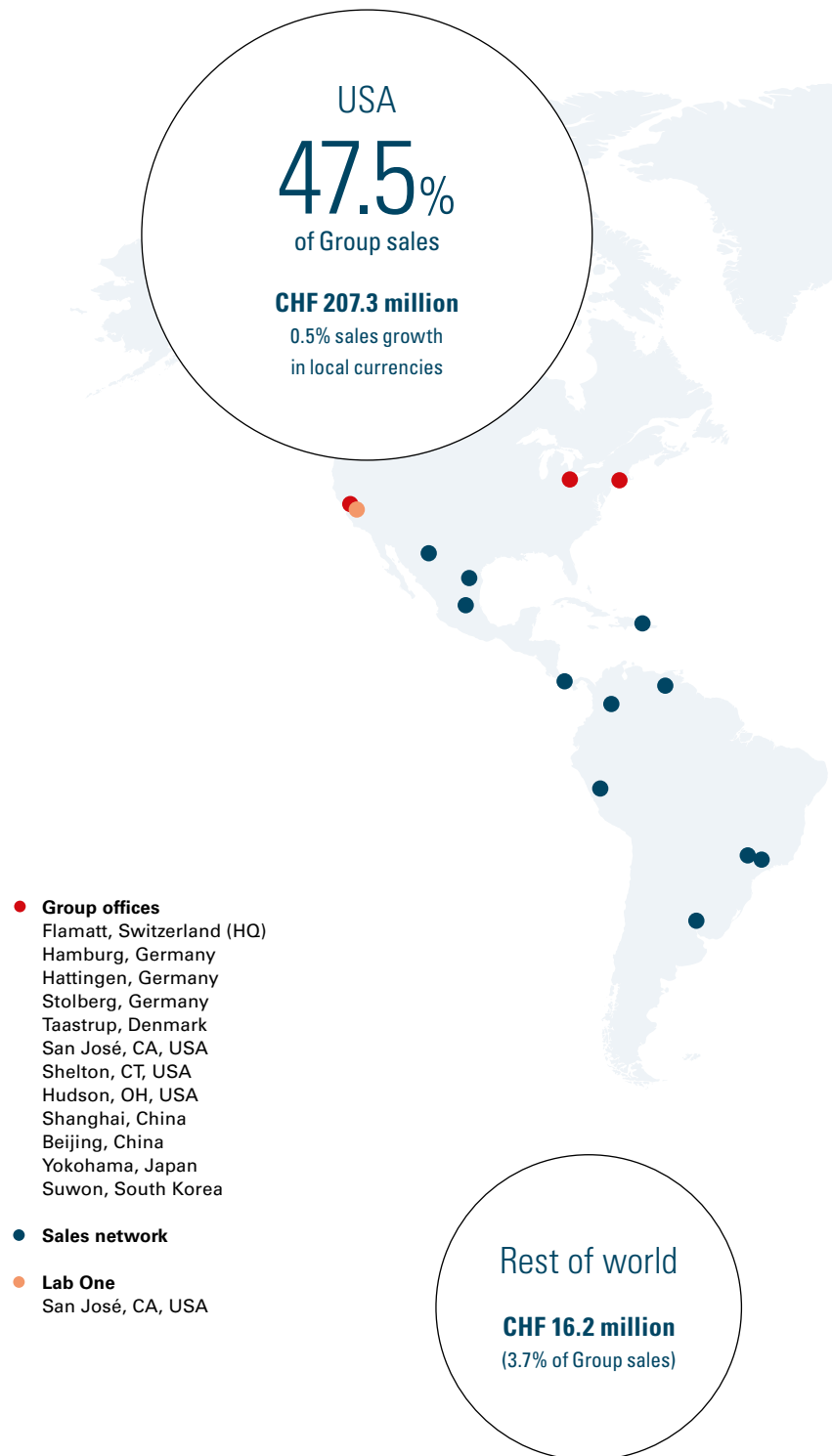
Hans Hess  
Chairman of the Board

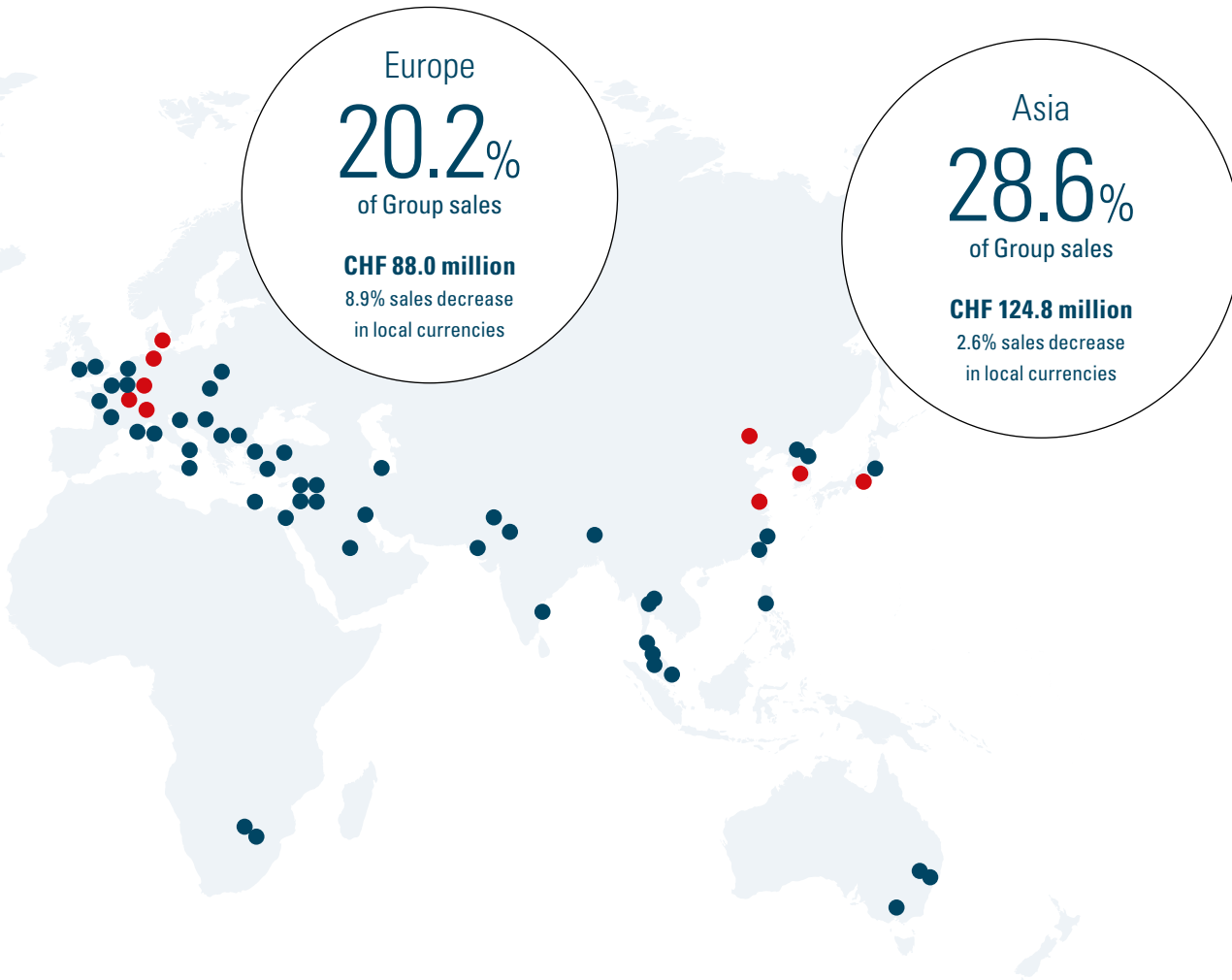


René Lenggenhager  
Chief Executive Officer

## Strong global presence

The Comet Group has a strong global sales network and 13 of its own locations around the world. In its largest market, the USA, it achieved slight growth in 2018, while sales in the European market showed a significant decrease.





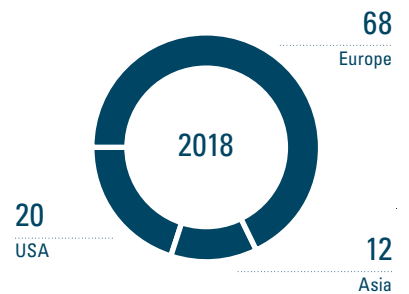
Number of employees

2018

1,346

Including 20% in R & D

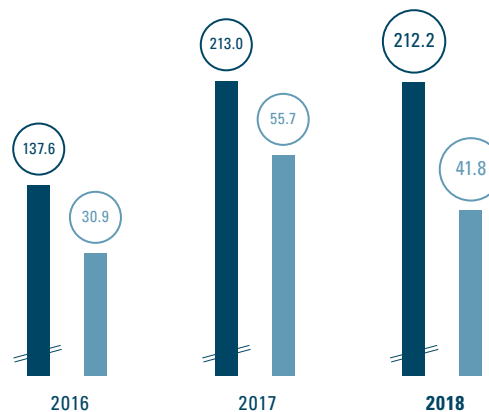
Employee distribution by region, in %



## Business in the divisions

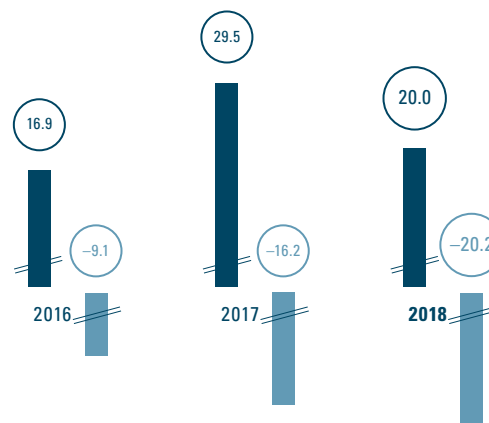
Despite a sharp downturn in the semiconductor market, the Comet Group's sales of CHF 436.4 million in 2018 very nearly matched the 2017 record. The Group took rapid and significant steps to enhance earnings performance in individual areas and maintained important investments in strategically valuable projects to ensure the sustained development of its businesses.

### PCT PLASMA CONTROL TECHNOLOGIES



PCT achieved sales virtually at the prior-year level despite a pronounced slow-down of the semiconductor market in the second half of the year. The division swiftly aligned its capacity with demand. However, shifts in the product mix and intensive investment in development projects for the future reduced EBITDA operating earnings.

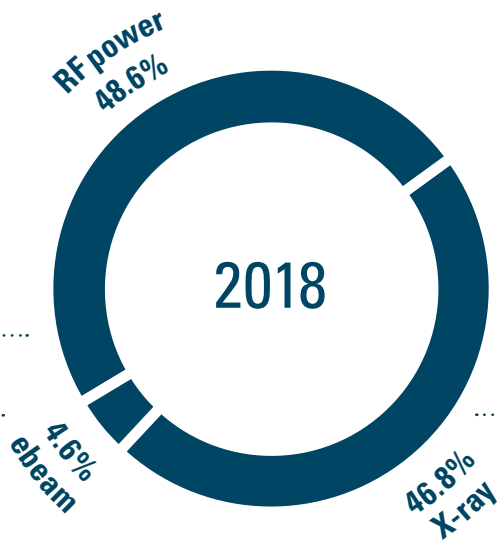
### EBT EBEAM TECHNOLOGIES



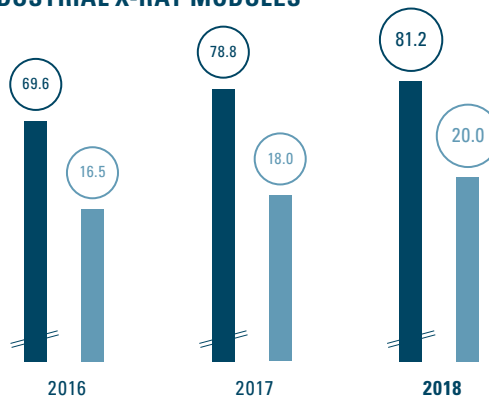
For EBT the year's defining developments were the disposal of the loss-making ebeam systems business in the USA and the refocusing on the OEM business. The division registered a loss of CHF 20.2 million, of which CHF 14.5 million was due to the now divested ebeam systems activities.

■ Sales in CHF million  
■ EBITDA in CHF million



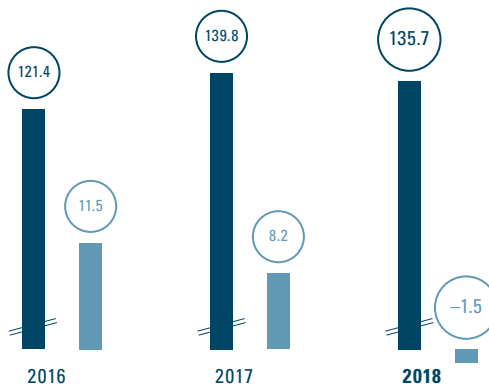


## IXM INDUSTRIAL X-RAY MODULES



IXM further expanded its position in the core business of non-destructive testing, driving slight sales growth for the year. Even with one-off costs for the facility expansion in Flamatt, the division further improved its EBITDA operating earnings.

## IXS X-RAY SYSTEMS



For IXS, successes with new products, above all in the electronics market, coincided with decreases in other submarkets where portfolios were not yet renewed, leading to overall sales slightly below the prior-year level. After a weak first six months the division, under new leadership, executed an earnings improvement program by the year-end whose results will be felt in 2019. One-time costs for this, together with high investments in product renewal, led to an EBITDA loss.

# PCT

## PLASMA CONTROL TECHNOLOGIES

### Core business

Comet's Plasma Control Technologies division (PCT) specializes in the production of high-performance components and modules for thin-film deposition and etching of surfaces under plasma conditions.

### Products

- Development and marketing of integrated RF (radio frequency) modules
- High-quality vacuum capacitors
- High-performance RF generators
- Impedance matching networks

### Applications

Ultra-precise control of plasma processes, such as in the production of memory chips, flat panel displays and OLED applications.

### Customers

OEMs in the semiconductor, flat panel and OLED sectors as well as in the electronics industry, including microelectronics.

In an environment involving a major downswing in the semiconductor market, PCT was able to achieve 2018 sales of CHF 212.2 million, in line with the year before (CHF 213.0 million). Shifts in the product mix and high investment in forward-looking development projects led to EBITDA operating earnings of CHF 41.8 million (prior year: CHF 55.7 million). The EBITDA margin was 19.7% (prior year: 26.1%).

The Plasma Control Technologies division (PCT) is one of the world's leading vendors of RF power products. Its strongest pillar is the business with high-end RF solutions for the fabrication of memory chips.

### Slump in semiconductor market affected second half of year

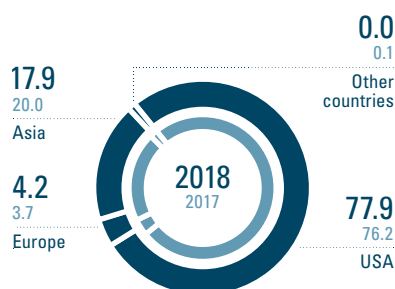
In 2018, PCT witnessed a very dynamic, volatile trajectory in the semiconductor

market. In the first six months, after several years of strong growth, the division recorded the highest sales in its history, yet from the middle of the year the weak demand for memory chips and short-term postponements of customer projects to equip fabrication plants led to an unexpectedly sharp slowdown in the market and a sales decrease of 28% in the second half of the year compared to the first half. On balance for the full year 2018, PCT's sales therefore remained steady at the prior-year level. The downturn in the semiconductor market in Japan pushed sales in Asia 11% lower year-over-year. PCT did well with vacuum capacitors for the production of flat panel displays, increasing its sales by one-third from the year-ago period.

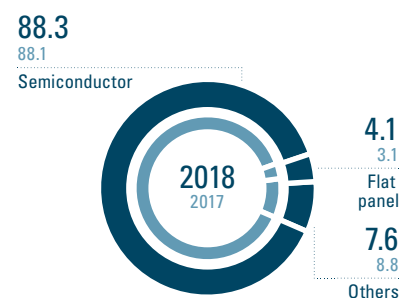
### Anticipation, high flexibility, and invigorated power to innovate

Shifts in the product mix and important investments in projects of strategic significance for the future sharply reduced the EBITDA margin compared to last year. The negative effects of the cycle change in the semiconductor market in the second half of 2018 were cushioned through anticipation

Sales split by region  
In percent



Sales split by market  
In percent



and PCT's flexibility: The division rapidly adjusted its capacity and continued to drive lean initiatives forward.

PCT is the only manufacturer worldwide to develop and produce all core components of the RF power delivery system in-house. The modular, flexible and highly precise generators now under development are the cornerstone of the planned new RF system solution with which PCT intends to address a significant market from 2020. PCT's work on the new platform in 2018 progressed on schedule. The Smart Lab, which is essential for automated test runs of the new generators, was also put into operation on plan and was presented to the first customers. PCT set the stage for future growth in the market for flat panels with the successful market launch of new vacuum capacitors, which have already been very well received by customers.

## IXS

### X-RAY SYSTEMS

#### Core business

The IXS division is one of the world's leading manufacturers of integrated solutions for non-destructive testing. It operates under the Yxlon brand name.

#### Products

- Industrial customized or standard in-line and at-line inspection systems in the product areas of x-ray, microfocus and computed tomography (CT)
- Service and support

#### Applications

- Non-destructive testing of: tiny to very large components, castings, welds and materials
- CT metrology

#### Customers

End customers in the electronics, automotive and aerospace industries and research institutions.

IXS had success with new products, while volume decreased in individual markets. The division's sales for the year were CHF 135.7 million (prior year: CHF 139.8 million). Strong investment in product renewal and one-time costs for earnings improvement measures led to an EBITDA loss of CHF 1.5 million (prior year: profit of CHF 8.2 million).

IXS saw very divergent trends in its different markets in 2018.

Growth was achieved in systems for the electronics industry: Sales in this segment, which accounts for about 30% of the division's total, expanded by 7%. Despite the market slowdown which began in the latter half of the year, the product innovations were very well received by customers. IXS also grew in the area of inspection systems for research on new materials, which after a weak first half gained ground thanks to enhanced and new products.

In the markets for the inspection of wheels and castings, on the other hand, for which IXS is currently developing a new portfolio, the division's sales were down. In an increasingly price-sensitive tire inspection market that moved sideways, IXS benefited both from the billing of sales for orders booked in the prior year and from a high service share.

In inspection systems for the aerospace industry, a classic key account business, IXS won another large customer for future growth.

## 535

Employees

## 6

Locations



**Heightened agility and reduced costs**

After a weak first six months at IXS, the Comet Group launched a sweeping earnings improvement program in this division that will already gain traction in 2019. Interim management responsibility for the division was transferred to Matthias Barz. With effect from December 1, 2018, Thomas Wenzel, who had been its Vice President of Technology since 2015, was appointed as the new President of the IXS division.

The weakness of business, the high investment in the advancement of the product portfolio, and one-off costs for the program to improve future earnings completed at the end of 2018, resulted in an EBITDA margin of -1.1% (prior year: 5.9%). The Comet Group is confident that IXS, with its organization tuned for higher efficiency, will be able to deliver profitable growth again from 2019. The target for 2019 is an EBITDA margin of about 6%.

An important success factor for Yxlon is the steady further development of the product range. With the FF20 and FF35 systems as well as the new Cougar and Cheetah EVO systems for electronics component in-

**420**  
Employees

**7**  
Locations



spection available since the beginning of 2018, IXS already realized substantial sales in the same fiscal year. Innovation awards for the FF35 CT Metrology and the Cheetah EVO Plus x-ray inspection system validate the direction taken. As well, the successful launch of the FF85 CT marked another milestone in the implementation of the division's portfolio renewal.

**IXM**  
INDUSTRIAL X-RAY MODULES

**Core business**

The Industrial X-Ray Modules division (IXM) develops, manufactures and markets innovative, x-ray-based components and modules for non-destructive testing and security inspection.

**Products**

- Industrial x-ray components and sources
- Portable x-ray modules

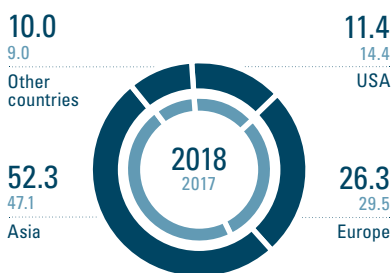
**Applications**

Non-destructive testing, safety inspection, thickness measurement of steel and other applications.

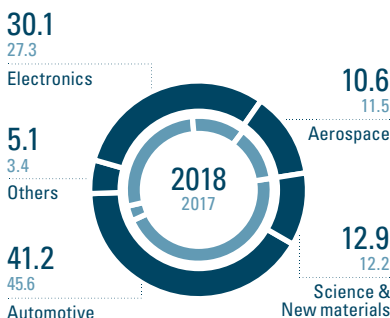
**Customers**

Suppliers to the automotive, aerospace, pipeline and steel industries; end customers in the oil and gas business and in security inspection.

**Sales split by region**  
In percent



**Sales split by market**  
In percent



IXM further expanded its position in the NDT market, while the security inspection business showed a strong contraction for market reasons. On balance, IXM's sales grew by 3.0% to CHF 81.2 million and EBITDA operating earnings further improved by 11.6% to CHF 20.0 million. The EBITDA margin was 24.7%.

The Industrial X-Ray Modules division (IXM), led since January 2018 by Stephan Haferl, successfully continued to grow its position in the core business of non-destructive testing (NDT). The business volume in the NDT segment, which accounts for more than two-thirds of IXM's sales, grew by 11.0%. While sales with the sister division IXS were down, sales gains were made with other customers. Especially in the USA, the division was able to win business with its robust, portable Smart EVO x-ray solutions for pipeline inspection in the oil and gas sector. This was reflected in compel-

ling growth of IXM's sales in the USA. The previous years' investments in the innovative iVario™ generator also paid off: Large numbers of customers integrated the new product within a few months of its introduction. This clear signal of wide acceptance of the new concept is all the more significant as IXM possesses a large installed base in the generator market.

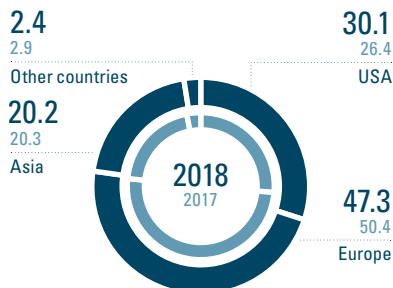
In the security inspection business the division, which had expected 2018 to be in line with the previous year, was faced with a surprisingly steep market correction that entailed a decline of 25.6% in sales. The reasons were postponed major projects in the sector, subdued investment in expansion and upgrading, and delays in the introduction of new, innovative solutions in this market, which is dependent on government investment.

Across all market segments in 2018, IXM noted an encouragingly strong increase in sales to small and medium-sized customers – a definite endorsement of the excellent price-performance ratio of the division's high-end products.

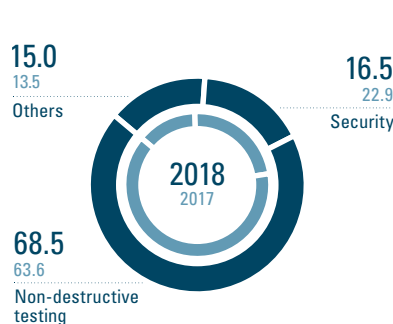
**Improved margins thanks to profitable growth in portable x-ray units**

The strong results in portable x-ray inspection devices for oil and gas companies drove a pronounced margin improvement in the core business segment of non-destructive testing. This more than made up for the decrease in security inspection sales, one-time effects of the production relocation in Flamatt, and (due to the slowing of business at some customers) productivity reductions in the pre-manufacturing of intermediate products for use by the Group. Operating earnings at EBITDA level improved in 2018 from the year before. In a demanding year this translated into an increase in EBITDA margin to 24.7% (prior year: 22.8%).

**Sales split by region**  
In percent



**Sales split by market**  
In percent



**314**  
Employees

**5**  
Locations



# EBT

## EBEAM TECHNOLOGIES

### Core business

Development and production of compact ebeam components and modules for the resource-efficient, chemical-free treatment of surfaces and materials.

### Products

- Compact, sealed ebeam components and modules with a long service life
- EBLabs (flexible lab equipment for testing of ebeam applications at universities and research institutions)

### Applications

Innovative, efficient and eco-friendly technology for sterilizing food packaging and pharmaceutical packaging and for bacterial inactivation on food and on hatching eggs.

### Customers

Systems manufacturers in the packaging, food and pharmaceutical industries, producers of hatching eggs, and universities and research institutions.

Strategic refocusing and the divestiture of the systems business marked EBT's fiscal year. Sales fell by 32.2% to CHF 20.0 million (prior year: CHF 29.5 million). The EBITDA loss rose to CHF 20.2 million (prior year: loss of CHF 16.2 million) on one-time costs.

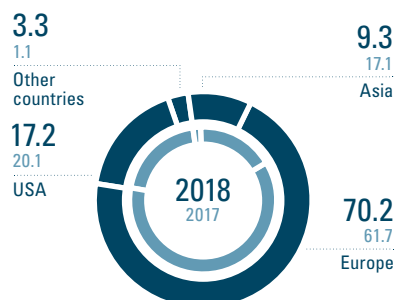
The results of the previous years' investments in the renewal of the product portfolio of the large-systems business in Davenport, Iowa, USA, as well as restructuring measures, did not meet expectations. The Comet Group therefore decided to realign the ebeam business and divest the loss-making manufacturer of customized systems in Davenport. The divestiture was completed more rapidly and with a slightly lower impact on net income than expected, thanks to the transfer to a local technology group that took over the operational business, the great majority of the employees, and the obligations to customers.

Going forward, the division will focus on the OEM components and modules business, which promises long-term success and allows industrial processes to be made more eco-friendly and productive. EBT is placing these activities on a new and attractive footing. It will eliminate current losses in the near future, is raising operational excellence and lowering costs in the continuing business.

The Group sees attractive medium-term opportunities for the continuing business to grow and generate value by scaling existing capabilities in related and new applications. Comet is working on innovative solutions with partners such as Tetra Pak, Bühler and Skan, and made significant progress in this area in 2018. Thus, Bühler presented its first system for the inactivation of bacteria on granular foods. Field tests of the corresponding application for hatching eggs yielded positive results. For 2019 the ebeam business is projected to post sales of approximately CHF 15 million with an EBITDA loss of not more than CHF 5 million.

### Sales split by region

In percent



# 77

Employees

# 5

Locations

