selected Penang, Malaysia, as the location, evaluated a partner, determined the production facility design and, in early 2020, established the subsidiary as a legal entity.

## X-Ray Modules

The Industrial X-Ray Modules division once more proved its robustness in fiscal year 2019. Thanks to a taut cost regime, it raised its profitability at EBITDA level for the fourth consecutive year, despite a slowdown in the core market of non-destructive testing.

As was the case for the sister division X-Ray Systems, the market environment in the module business was defined by the decelerated global economic growth and weaker demand for investment goods. This was particularly noticeable in the automotive and aerospace markets. Sales in the security segment closed the full year in positive territory after a difficult first six months. For the Industrial X-Ray Modules division overall (also referred to in this report simply as "X-Ray Modules"), sales were CHF 78.1 million (prior year: CHF 81.2 million), representing a yearover-year decrease of 3.8%.

By lowering production costs and through rigorous cost management across all functions, the division was able to counteract the effects of the reduced sales. EBITDA operating earnings improved to CHF 21.7 million (prior year: CHF 20.7 million) and the EBITDA margin was high at 27.8% (prior year: 25.5%).

With the development of its sealed, high-precision and high-resolution Xplorer microfocus tube, the division reached an important milestone for the entry into the semiconductor and electronics market. As well, at the end of 2019, X-Ray Modules announced the introduction of two new product families: "ION" for the security segment, and "Meso-Focus" for the non-destructive testing market.

# X-Ray Systems

The X-Ray Systems division in 2019 fully met the expectations placed in it, rapidly putting remedial measures into action and strongly improving its profitability from the weak previous year. The division also strategically realigned its business and thus laid the foundation for a suc-

# Key financials of X-Ray Modules at a glance

CHFm	2019	2018
Net sales	78.1	81.2
EBITDA	21.7	20.7
EBITDA margin	27.8%	25.5%
Number of employees worldwide	279	314

# Sales by market in percent



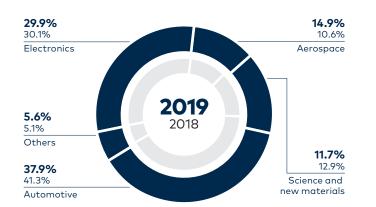
cessful transformation of the systems activities.

Although the slower global economic growth and reduced demand for manufacturing goods weighed on the market, X-Ray Systems increased its sales in the fiscal year by 2.9% to CHF 139.6 million (prior year: CHF 135.7 million). With its x-ray and computed tomography systems, the division grew sales in the aerospace and semiconductor/electronics sectors. An important contribution to success came from recent product innovations, such as the award-winning Geminy software platform. Used with CT systems, it

# Key financials of X-Ray Systems at a glance

CHFm	2019	2018
Net sales	139.6	135.7
EBITDA	12.0	1.0
EBITDA margin	8.6%	0.7%
Number of employees worldwide	439	420

#### Sales by market



enables synergies between the product groups while cutting complexity. The significant growth in the aerospace segment was due mainly to deliveries of several relatively large systems resulting from successful prior-year sales activities. In the automotive market, business for X-Ray Systems as well weakened in the latter half of the year, as a result of the general slowdown and of a sharp contraction in the wheel segment. The market for inspection systems for labs and research institutions also softened somewhat. A gratifying performance was seen in Asia, the largest regional market, and especially in Japan, where a dynamic team has doubled sales over the past four years.

The program of improvement measures launched in the prior year produced results. Thanks to leaner processes, X-Ray Systems raised efficiency in areas such as sales, which was realigned; in the research and development department, which was also realigned and was placed under new management; and in defect prevention, where costs were greatly reduced. The division also achieved significant advances in the services section, which substantially improved communication with customers through the use of new software. X-Ray Systems grew profitably and significantly lifted its EBITDA earnings to CHF 12.0 million (prior year: CHF 1.0 million), with an EBITDA margin of 8.6% (prior year: 0.7%).

With new leased premises, the division also created the necessary infrastructure in Hamburg for further growth. Providing its customers with technology-award-winning new functionalities for Industry 4.0, it propelled several product families to the next level. And importantly, it developed its focus strategy geared to three core markets and to standardized systems.