

## **Delivery period as an advantage** **23rd Dr Acél & Partner Zurich logistics congress**

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The Zurich logistics congress took place in Zurich's technology park for the 23rd time recently. This year's event was categorised as an anniversary, as it was the tenth time that the congress was organised by the logistics consultancy Dr Acél & Partner, in cooperation with the Institute for Manufacturing Automation of the Federal Institute of Technology Zurich (ETH).

Event organiser Dr Peter Acél, in visibly good spirits, welcomed more than 50 participants to the congress, which was celebrating an anniversary this year, namely ten years of cooperation between the Zurich Federal Institute of Technology's Institute for Manufacturing Automation and the consultancy Dr Acél & Partner. His guests were treated to four highly-interesting short talks (35 minutes per speech, plus five minutes of discussion) on four widely-differing subjects from the world of logistics and manufacturing during the course of the afternoon.

The (manageable) bouquet of presentations was launched by Armin Lederer, COO of the company Maxon Motor AG, based in Sachseln (Switzerland), which specialises in manufacturing high-precision microdrives. He spoke about reducing the delivery period in his talk entitled "The production cycle (Toyota principle) as a factor in competition – the challenges presented by customer-oriented manufacturing of small batches".

### **Significantly shortened production cycle**

Maxon manufactures high-precision microdrives – with and without gearboxes – for diverse fields of deployment, such as medical surgery, robotics, automatic ticket machines, professional tools and the "Rover" Mars mobile at its headquarters in Switzerland, as well as at further production locations in Germany and Hungary.

Just under two years ago, Maxon started improving its ability to supply its products not by keeping larger stocks of manufactured goods, but rather by introducing «on-demand» manufacturing. The high-tech company, which has achieved an annual sales growth of more than 20% in the past five years, produces its motors mainly in small batches, offering up to 10,000 different variations of its products. It sought to shorten the production cycle for orders over the whole process chain, and completely revamped its supply chain, in order to be able to deliver its goods quickly despite the enormous unit variations. Maxon's first step was to reorganise its manufacturing divisions, re-orient the materials procurement process and reform the order-handling process. Various departments were merged in the manufacturing and assembly divisions and new so-called "self-steered manufacturing cells" were established, in which employees manufacture the products hand in hand (the principle of flow manufacturing). The initial results of the reorganisation are impressive. Productivity per head has increased by 50% in the manufacturing and assembly segments. When the project was launched in early 2005, the average production cycle of the goods Maxon manufactures amounted to 58 days, a figure which has been reduced to 10–12 days in the meantime.

At a first glance it may seem surprising that a motor manufacturer continues to produce in Switzerland, where prices are relatively high. It is not news that rising worldwide cost pressures in particular are forcing (industrial manufacturing) companies in many highly-industrialised western countries to transfer their production facilities to countries or regions of the world where low wages (still) prevail. Maxon is a special case in more ways than one, however. The company has attained an excellent position in the world market thanks to its outstanding and highly-specialised products (microdrives), its product innovation, the high quality of its goods, its strong customer orientation and its high degree of readiness to deliver.

### **Chaos and quality assurance systems**

Walter Kobel, in charge of reorganising the letters division of the Swiss post office, and the two ETH professors Konrad Wegener (of the Institute of Machine Tools and Manufacturing), and Urs Meyer (of the Institute for Manufacturing Automation) were also amongst the speakers at the Zurich logistics congress. In his talk entitled "Why engineer new mail processes? Swiss post office builds most modern letters centres worldwide", Kobel showed clearly how the Swiss post office was preparing well for the foreseeable complete liberalisation of the Swiss mail market. Professor Wegener spoke at breathtaking speed on the subject of flow manufacturing in his talk entitled "On living with chaos – flow manufacturing. Managing variations in the machine tools and plant construction sector". His fellow professor Meyer advocated more professional quality assurance systems in his talk entitled "Quality assurance. Culture or System".