

# FINE SENSOR TECHNOLOGY FOR CONCRETE GROWTH FIGURES

Reliable Presence in New Markets thanks to New Network Structures

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As a global player in the manufacture of high-end measurement technology, the Swiss Kistler Group must adapt to new growth markets in a flexible way. With a total of four production centers in Switzerland, Germany and the USA and 28 affiliate companies, Kistler not only offers several thousand products but also services such as the calibration of sensors and training courses in measurement technology. Since demand for these products and services has been growing in traditional markets and around the world, Kistler has reorganized its global production and logistics network.

In a joint project with ROI, the company identified concrete policies for action for its production and logistics strategy in just five months. In the process, the project team answered questions concerning a major part of Kistler's growth plans with a timeline through to 2020, for example, how a "breathing factory" can be achieved that provides increased flexibility in production processes – or how to deal with price pressures in products for new, competitive industrial applications.

## Technology Matrix creates Reference Points

For this purpose, the team first created an exact 'snapshot' of the network

structure showing where Kistler produces which products. What are the strategic processes and core competences? What reserves are available in the current structure? The next step enabled a focused look into the future: which location is to produce what in future? What investment is therefore needed at which location up to 2020? The project was divided into four phases of work:

1. Setting-up to specify concrete objectives and the strategic framework,
2. Status analysis of factories and the supply chain as well as a statement of strategic challenges,
3. Strategy for the production/logistics network defining the reorganization and the target factory structure and
4. Master plan for implementation that Kistler can use and extend independently over the coming years after the project has ended.

However, the special challenge in all phases of the project was to understand the huge complexity of the product range and to make growth transparent.



Claudio Valeri,  
Head of Production & Logistics,  
Kistler Group

"In addition to the status analysis of factories and the determination of strengths and weaknesses in our supply chain, a major challenge was to capture growth in as concrete terms as possible – something which seemed almost impossible to us at the outset since there was no sales planning by product area," explains Claudio Valeri, Kistler's Head of Production & Logistics. "Nevertheless, we managed to break down sales planning into a volume plan with annual volume targets for each

product family. These results enabled us to create a product-technology matrix and to map the growth plan.

The matrix shows in visual form what technologies as well as plant and staff capacities are needed for each product family each year through to 2020."

"Customers provide the most important stimulus for innovation and quality."

As Kistler is also able to identify currently available capacities for each location and to compare potential thanks to the new planning system, bottlenecks and expansion requirements can be seen and solved considerably earlier than before. However, the project team did not just look at requirements in production and logistics during the analysis phase. "Our customers provide the most important stimulus for innovation and quality. For this reason we do not just examine their requirements together with the sales department, we also determine the challenges for production and logistics that arise from each of these requirements – for example regarding delivery date, delivery reliability and flexibility and market-related costs.

### Fine-tuning with Lean Production

Based on all these analyses, the project team was finally able to develop a set of concrete options for action for the global network. It became quite clear that considerable capacity potential could be achieved at all locations if Kistler continued to systematically implement its lean production policy that it had already begun to introduce.

"Lean production proved to be a hugely important factor – the perception



that we already have the potential to cover our growth plans in house without resorting to large additional investment was extremely gratifying," says Claudio Valeri. Nevertheless, it also became clear that lean principles on their own are not enough. In order to achieve maximum improvement outcomes the project team had to combine various points of leverage in a skillful manner. This included, for example, further systematic production automation as well as further systematic modularization of the product range, which brought additional advantages for production such as shorter lead times.

### Fine-tuning the Future with a Master Plan

"It was very helpful to list bottlenecks, sources of error and possible areas of improvement in a clear form. But it is not enough to concentrate solely on problem resolution from this point onwards – that would be thinking on too short a time scale," Valeri explains. After the points of leverage for realizing potential became apparent, the team developed and evaluated various scenarios dealing with what Kistler would like to produce at which locations in the future and what the production concepts have to look like for this. The scenarios describe, for example, how the structure and staff at individual plants, supply streams, general business processes and central functions will change. Using these and other results, the project team finally specified the new strategic alignment and target structure for each plant and also redefined bought-in and outsourcing volumes.

"We developed a master plan for each plant location defining the core competences of the location and showing what competences need to be developed and expanded there. It drilled down into details such as which products the plant will manufacture using which technologies and capacities through to 2020," Valeri explains. In line with the Kistler Group's overarching growth strategy, the master plan also defines:

- At which point a process or service will be outsourced;
- The technologies a location will use;
- By when certain potential from rationalization projects must be achieved;
- When and where investments will be made;
- Which modularization topics are relevant for the plant and when.

Even before the project finished, the team was also able to clearly demonstrate the development of costs in the individual sections of Kistler's supply chain and in this way to reveal further potential savings. Furthermore, Kistler is also ensuring that attention to a high level of operational excellence in all matters relating to value creation and quality will remain very much alive beyond 2020 thanks to internal project initiatives as well as projects

supported by ROI such as a global working capital program.

**"It's not enough to concentrate just on remedying problems after performing analysis."**

#### Kistler Group

The Kistler Group is one of the world's leading suppliers of sensors measuring pressure, force, torque and acceleration, as well as the related electronics and software. The company's high-end measurement technology from Kistler is used to analyze physical processes, and to control and optimize industrial processes. With around 1,200 employees the company generated sales of CHF 280 million in 2013.  
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