Manufacturing strategy
The manufacturing strategy implies finding the right mix between in-house production and assembly operations, outsourcing and purchasing certain components on the market.

Rieter produces key technology and mass production parts in house. In some cases, we also make the machines for these parts. This is how we maintain an intimate know-how within the company, which enables us to be on a competitive edge vis-à-vis competitors outside Europe and to continue realizing certain manufacturing operations in Europe.

As for cost advantage and standard parts, Rieter makes them either in-house or buys them on the market, or both. Final assembly is always done in-house. The location is selected based on diverse criteria, including quality, flexibility and origin issues.

Lessons for the machine tool industry
Machine tool markets seem to have followed a parallel development path to the textile machinery industry with a certain delay. Europe is still the biggest production base for machine tools and the supplier of metalworking technology to the rest of the world. However, Europe's leadership will be threatened.

In this respect, the experience of Rieter could provide useful insights for machine tool builders about how to cope with the internationalization challenge. With the shift of consumption to Asia, European machine tool manufacturers will be confronted with similar situations as Rieter. They can decide to be part of the evolving new world in the East. It is, first of all, a question of will and determination. ■

Bridging East-West Europe Through Innovation and Cooperation

By Dr. Hans-Martin Schneeberger
President of SCHNEEBERGER AG

Nowhere in the world but in Europe can you find such a full and comprehensive set of skills and capability within a geographical area spanning less than 2000 km in length. We have all it takes to be a world class manufacturing place.

Being an SME is an increasingly tough job
SMEs have often fewer resources than large corporations, less marketing power and they are forced time and again to do more with less. In industries such as financial services, healthcare or food processing they face regulatory burdens that even big companies find challenging. In the manufacturing sector, they lack economies of scale that help larger competitors to occupy the position of low cost producers.

Mid-sized firms are being challenged by many factors: larger rivals try to squeeze them out by heating up competition, customers gradually exercise their power in pricing and other tough contractual terms, and in many cases in their supply chain, the leverage of SMEs is minimal vis-à-vis their vendors which are in many cases several times bigger than themselves. In order to effectively respond to these market challenges, mid-sized firms must be smarter, faster, more effective and more efficient.

Successful mid-sized companies prefer focusing on building a strong niche rather than trying to dominate an entire sector. Therefore, focused innovation is a crucial pre-condition for their competitiveness. The owner of the company and executives occupy a central role in all aspects of the business of an SME, and therefore innovation is entrepreneur-driven.

What can SMEs get out of Europe?
If the entrepreneurial leadership is key to kick-start innovation in SMEs, 'innovation cooperation' is an equally important factor to enable them to fulfill their innovation potential. Innovation requires interdisciplinary capabilities spanning many different areas and, moreover, the required disciplines in

most cases change over time. This typically calls for developing and maintaining a skill and competence set which is far too broad for a typical SME to achieve alone. Therefore, SMEs need to go outside their plants to find research and innovation partners.

There is a diverse industrial landscape across the EU territories when it comes to manufacturing in terms of skills, costs and industrial structure. In Western Europe, a typical strength of manufacturing companies is their focus on skills and their capability to produce first pass yields of complex parts and assemblies in a low-volume high-mix environment. Engineers and technicians are able to work on specifications and drawings provided in foreign languages. Furthermore, a more important source of their strength is that they have an excellent capability to develop, install and improve the necessary quality feedback and control loops to enable permanent quality improvements and cost reductions at the same time. Eastern European manufacturing companies, on their end, have a strategic edge based on labor costs. This edge can be converted into cash when it is applied to producing parts in a low-mix high-volume environment quite often for less complex parts and assemblies with well-defined and structured requirements.

Here lies the unique strength of Europe! Nowhere in the world but in Europe can we find this full and comprehensive set of skills and capability within a geographical area spanning less than 2000 km in length. This set of skills and capabilities offer a great potential to enable industry to cost-competitively address 'low-volume high-mix' opportunities for complex parts and assemblies and 'high-volume low-mix' opportunities for less complex parts at the same time.

How to boost cross-border cooperation?

Several factors facilitate innovation cooperation between SMEs across regions. The first requirement is a strong base of high quality research institutions such as universities or engineering schools. Such institutions provide the required matrix for cooperation and collaboration between SMEs, and if they are also involved in industrial research or product development, they can act as a great training ground for future employees.

A second pre-requisite is the availability and accessibility to financing. SMEs need to be financially strong to excel in innovation cooperation, or they need to have facilitated access to financial support. Thirdly, a strong ICT infrastructure is needed to facilitate the effective and efficient exchange of information within research and innovation activities. It also enables businesses to communicate fast and at low cost with their business partners including the customer. SMEs can gain even enhance their competitive edge by increasing the speed at which they do business across the globe. Today, needs of the manufacturing industry are shaped by the permanent necessity to slash costs, to accelerate revenue growth and to reduce not only the time-to-market for new products but also to reduce (notably for SMEs) time-to-cash for new and innovative products. Fourthly, the industry needs motivated and skilled people who are interested to explore cooperation opportunities.

In conclusion, the key words to enable innovation cooperation among SMEs in Europe are a 'strong commitment to R&D spending', an 'adequate ICT infrastructure' and 'strong science oriented institutions for research'. Europe has unique strengths and capabilities; we have all it takes to be a world class manufacturing place. With the help of proper support from the policy makers, we can unleash our full potential to generate a large number of technology oriented high value adding jobs. ■

This article is an extract from the speech of Mr. Schneeberger 'Cooperation in innovation of manufacturing systems for Medium Size Technology Companies' that he delivered at the MANUFUTURE 2011 Conference, 24-25 October 2011 Wroclaw, Poland. The theme of the conference was "West and East Europe in global High Added Value Manufacturing".