

New Business Model for SMEs

By Ueno Tamotsu

Creation of the Job-Shop Service Business in the 1980s

Many small and medium-sized enterprises (SMEs) are becoming divisions of large companies. They only participate in manufacturing some parts for heavy machinery and consumer goods. It is the large companies that gather the parts, assemble them, and build the systems. The SMEs are merely content to perform a subcontracting role, and do not undergo any major development of their own.

If you keep a close watch on the changes in the management environment that surrounds large companies, and listen to the urgent situations and latent demand, you may notice the Achilles' heel of Japan's manufacturing sector. This sector found itself in a difficult environment that includes the diversification of consumer needs and values, the shortening of product and service lifespans, and intense competition with various other countries. As a result, Japanese manufacturing industry has faced the situation in which it has to

plan attractive new technologies and products in rapid succession under limited source and time constraints, and provide them to the market. The slogan of survival was "make it more attractive and produce it faster."

Hence, there was no time to steadily develop human resources, but to introduce cutting-edge technology continuously that has had few precedents or that has produced results at high prices. Consequently, with our devices and skilled technicians for high-tech processing technology, we proposed the job shop services. R&D and partner search for trial manufacturing, testing and evaluation are the main problems to overcome in order to realize attractive product plans that meet market needs as quickly as possible. We have worked hard to promote the concept of consignment processing, which is not based on the usual subcontractor model. Rather, it is a partnership for the purpose of working together to create attractive technologies and products. Today, this is one of Tosei Electrobeam's main businesses.

New Awareness Leads to the Coordination Business in the 1990s

An even bigger crisis delivered a direct blow to Japan's reputation for manufacturing workmanship. The so called the "lost decade," after the collapse of the bubble economy mostly took place in the 1990s. Large companies all stubbornly clung to the contradictory strategy of working hard to "select and concentrate," to streamline, and to hold back on new investment, while the market competition developed.

There was a clear trend toward a shortage of outstanding purchase management staff who could comprehensively ascertain production capability, expertise, development strength, costs and delivery, and control individual orders in a unified way based on TPO, as well as personnel who could manage development projects just as before. The demand from large companies was moving from suppliers and partners to a unified contact point model (complete consignment model). At this point, it

Company Overview

Tosei Electrobeam Co., Ltd. is a job shop that provides R&D support and evaluation technology to a wide range of industries using "high density energy beams," most notably the electron beam lasers among state of the art processing technologies. Regarding the new processing technology and the processing method development that are essential for the expansion of Japan's manufacturing industry, this is a field where barriers are high and obsolescence occurs rapidly. It is a field that cannot be easily entered, even by global brands with large capital. This is due to the fact that the devices are very expensive, the device-processing databases and market results are imperfect, it takes time and money to master the devices, and the equipment and technologies become outdated very quickly due to the fast pace of technological innovation.

In order to realize attractive technological development and

perpetual new product planning, it is extremely important to have job-shops that can serve as R&D partners with the most advanced facilities and the technological expertise to fully utilize them. Since its establishment 30 years ago, Tosei Electrobeam has been located in the Tama region of Tokyo, where industry and information cluster, the R&D departments of major companies concentrate, and many government research labs are located. We have contributed to the development of basic industries including aerospace, automobiles, electronics, industrial instruments, medical equipment, construction equipment, household appliances, as well as information and telecommunications devices. Today, we are still tirelessly addressing every type of technological question, including the use of rare metals, high-melting-point materials, as well as difficult-to-process and new materials.

Figure 1 The TAMA Network : Supporting new product development and cultivation of customers by sharing information and knowledge

became important for them to join forces not just with our company, but to build organic partnerships with several providers of manufacturing workmanship that have their own expertise and management philosophies.

Tosei Electrobeam Co., Ltd. has planned new alliance schemes for value-added creation based on cooperation between government and academia, and development ventures based on locations nationwide, as well as alliances between different types of niche industries that can receive consignments for respective purchase management businesses. We have promoted these plans at lectures, opportunities for consultation with the media, governments and universities. This is due to our strong belief that is important not just for ourselves, but for the survival of the Japanese manufacturing industry as a whole. These concepts have met with a lot of support, and happily have even played some role in the activities of the Technology Advanced Metropolitan Area (TAMA) Industrial Vitalization Association, and the drafting of the relevant laws in 2005 to promote SMEs.

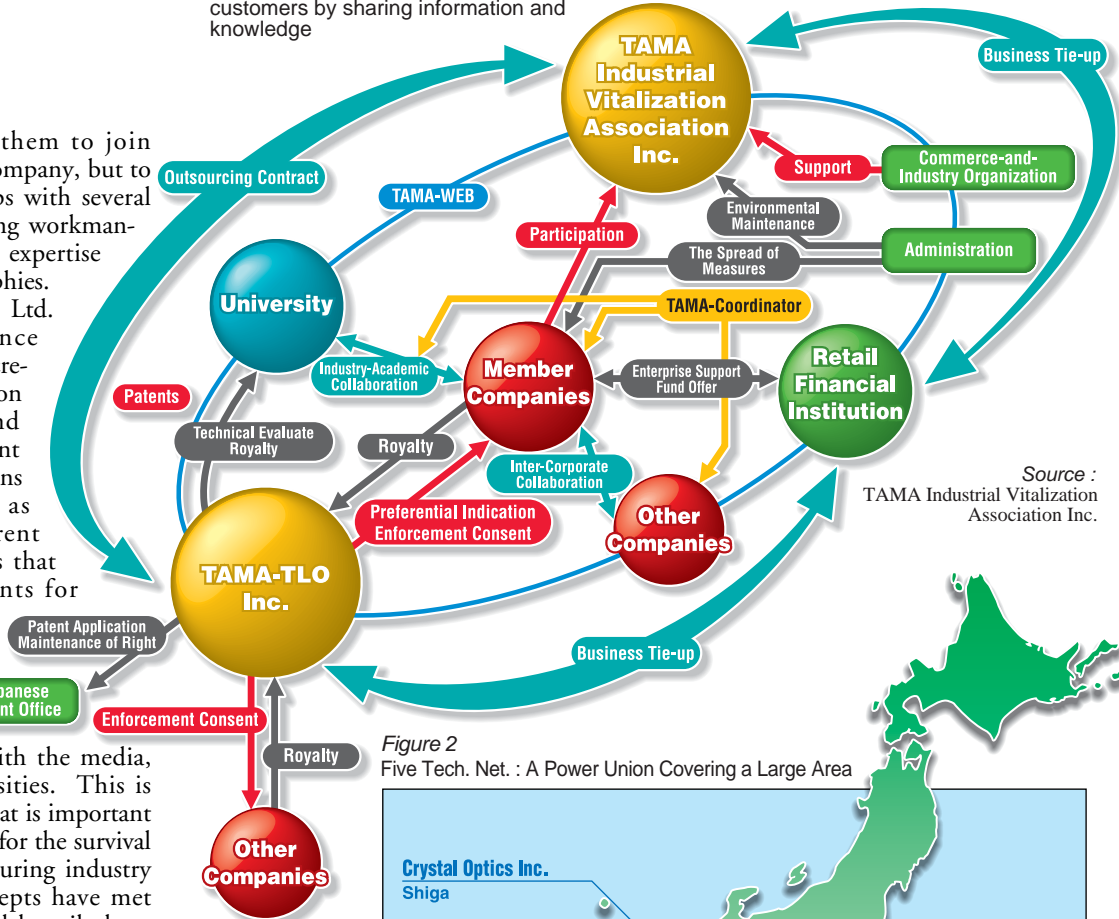
In 2003, five SMEs across Japan came together to exchange expertise, technology and personnel, and produced the concept of the Five Tech. Net, a new organization that aims to jointly create added value. This is proof that our proposals were not merely self-righteous.

The New Century: Developing Manufacturing Bases with a Strong Local Presence

With the 30th anniversary of our company's founding close at hand, we are aiming to build a system in which we can create our own products. In the 21st century, the needs of clients, large companies, continue to grow insatiably. These needs have been changed from "produce better products faster" to "pro-

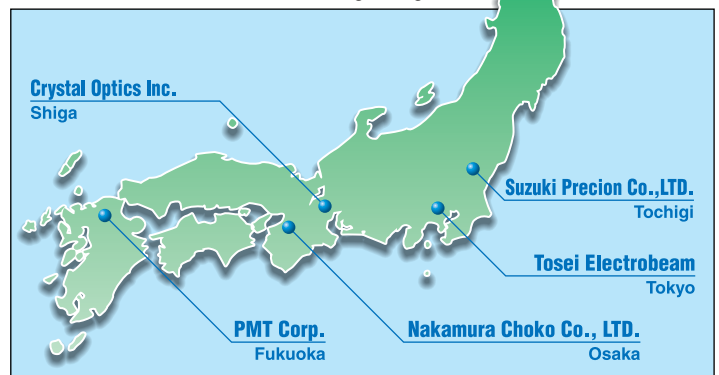
vide support for all the processes related to R&D proposals and production items" to "seek engineering support through closer partnerships." The optimal answers to all these issues will not be found right away, but we are trying to take the first step in the right direction.

In 2006, Tosei Electrobeam plans to set up a new base in Fukushima Prefecture, to integrate the three major areas of R&D, product manufacturing and job shops. This is in light of the industry transition nationwide, customer trends, the high expectations of future industrial zones, and the possible expansion of job-shop services. Establishing a system in which expertise provision takes place in two stages, at



Source : TAMA Industrial Vitalization Association Inc.

Figure 2 Five Tech. Net : A Power Union Covering a Large Area



Source : Suzuki Precision Co., Ltd.

head offices and at local production sites for high technology, is an unprecedented service model. We have great expectations for its implementation and are confident of its success. Using this as a test case, and based on its widespread development, we are looking forward to seeing new strategies for SMEs. JS

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