

The Great Shikoku Shake-Up

An industrial cluster project on the island of Shikoku has brought formerly distinct sectors of the local community into close contact and is now serving to revitalize the regional economy. **Tamura Mariko** reports.

Shikoku in southwest Japan is rich in natural beauty and cultural heritage, but relatively poor in economic terms. Increasingly sparsely populated outside the main city of Kochi (pop. 60,000), the four prefectures that make up the island (Tokushima, Kagawa, Ehime, and Kochi) have been in need of an economic lift. Accordingly, the Shikoku Bureau of Economy, Trade and Industry (METI Shikoku) established the "Shikoku Techno Bridge Plan Promotion Office" that is working to form a network that links industrial, academic, and public sectors to provide support for the establishment of new businesses.

This industrial cluster project is largely being steered by the working committee of the Shikoku Techno Bridge Forum. Chaired by Ishikawa Hiroshi, dean of the Faculty of Engineering at Kagawa University, its secretariat is based in the Shikoku Industry & Technology Promotion Center. In September 2004, the Forum had 297 corporate, 56 personal, 38 associate, and 19 special members and has been

steadily developing its organization.

"The Shikoku region has a surprisingly large number of enterprises that are positive about industry-university collaboration in health, medical care, welfare, and the environment," says Yusa Shinji, deputy director of the Techno Bridge Plan Promotion Office. "Among the universities in the area, Kagawa University has the Rare Sugar Research Center, the University of Tokushima has the Institute for Genome Research and the Institute for Enzyme Research, and Ehime University has the Center for Marine Environment Studies. Shikoku has great research potential in the domains of life sciences and the environment."

In July 2004, METI Shikoku changed its organization and set up the Regional Economy Department, which has the job of supporting energetic regional businesses. It was the first major structural reform in seven years and is aimed at stimulating regional businesses in a manner that takes advantage of local characteristics.

The new Regional Economy Department runs the Shikoku Techno Bridge Plan

Promotion Office to bolster collaboration among the industrial, academic, and governmental sectors and provide support for participants in the industrial cluster project.

The Shikoku Techno Bridge Plan has three major services: an information provision service; a service for promoting cooperation among the government, businesses, and academia; and a service for assistance in the development of sales channels and commercialization.

Among these three services, the service for assistance in the development of sales channels and commercialization has already helped some small and midsize companies in Shikoku to successfully close major business deals with major enterprises in urban areas.

Dry Run

In July 2003, a fisheries processor of Marumi Corporation (based in Naruto, Tokushima-ken prefecture; president: Nakagawa Shoji) signed a manufacturing and sales contract to market its own Tensei food dryer with Fuji EIC Co. (based in Tokyo), a member of the Fuji Electric Group that wholesales industrial electric equipment.

"The Tensei instantly dries residual food waste without burning it, so that it can be recycled into food materials and livestock feed," explains Nakagawa, stressing that this dryer serves to reduce waste emissions. Marumi undertakes the OEM supply of the core, which serves as the heart of the dryer, while Fuji EIC is in charge of plant construction, assembly, and maintenance as well as sales support. Several other companies in the Fuji Electric Group participate in this business. Their order volume target is more than five billion yen (47.6 million dollars) per annum.

"It differs from other manufacturers' products in that it dries food residue at low temperatures to evaporate moisture alone, without burning it. Small ceramic balls are employed in the machine to produce a higher thermal efficiency and shorter drying time," Nakagawa emphasizes that the Tensei adopts the flash-drying system using compressed hot air. The technology may also have non-food applications.

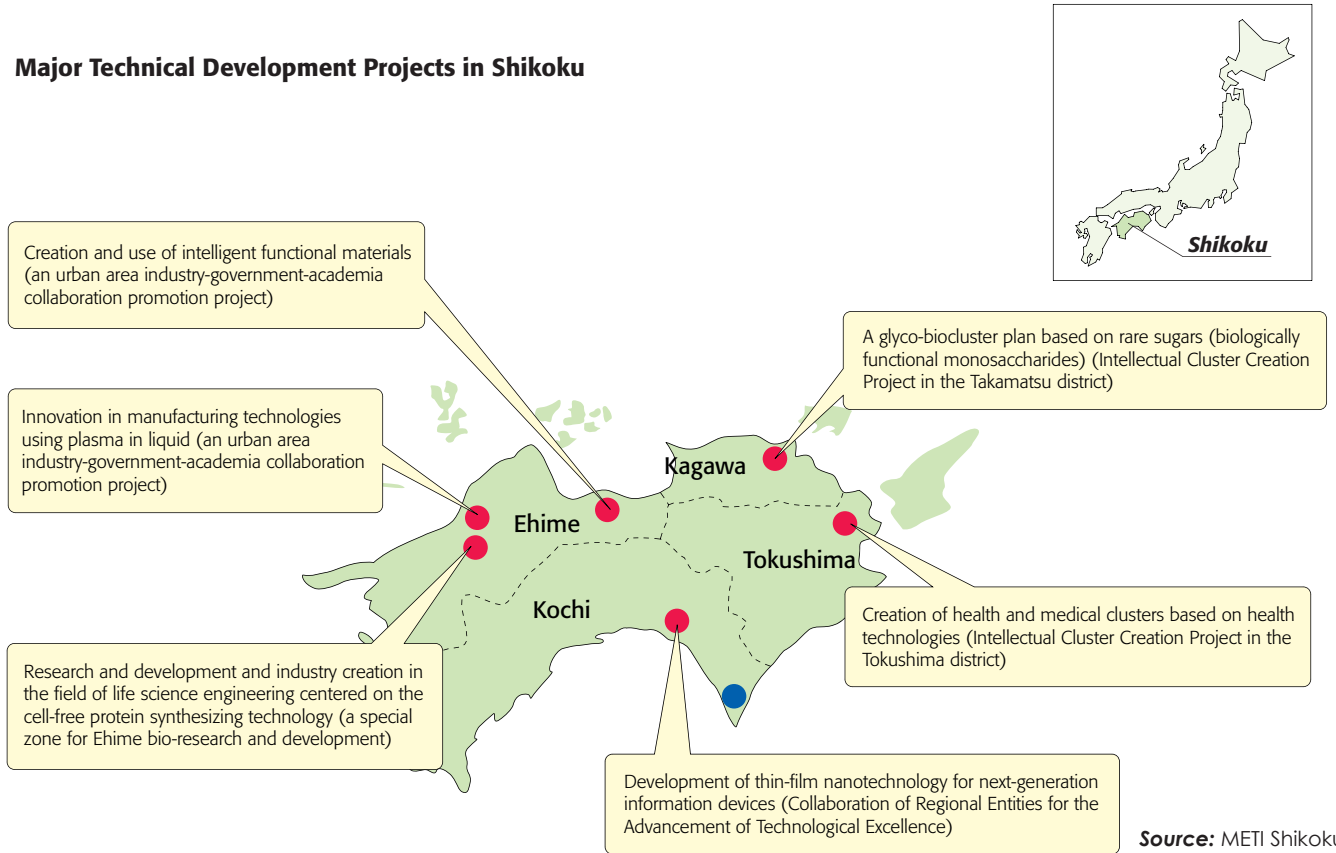
"We asked Katsuse Norio, business coordinator for the Shikoku Techno Bridge Plan, to introduce some sales channels to us, and in consequence we established a production and sales system in collaboration with Fuji EIC. That's how we have expanded our sales channels," notes Nakagawa, confirming that the Shikoku Techno Bridge Plan was helpful for concluding a contract between two companies.

Says Katsuse, "Shikoku Kakoki Co., located in Kitajima-cho, uses Marumi's dryer to dry the *okara* (bean curd refuse)



Nakagawa Shoji, president of Marumi Corporation (left), and Katsuse Norio, business coordinator for the Shikoku Techno Bridge Plan, alongside Marumi's "Tensei" food dryer. Inset, dried *okara* (bean curd refuse).

Major Technical Development Projects in Shikoku



generated from the process of making tofu. It then supplies the dried okara to food manufacturers in Osaka-fu prefecture. It is wonderful that small and midsize businesses in Shikoku can enter a market estimated at around 100 billion yen [950 million dollars].”

This success led to the launch of a matchmaking service with major companies in urban areas, as part of the service to cultivate sales channels and assist in the commercialization of the plan. To explore the needs for and feasibility of matchmaking, the project ran a questionnaire targeting some 2,500 major companies in urban zones. This effort resulted in four business contracts with large companies based in urban locations last year.

New Perspectives

The project also seeks to create alliances with general trading companies based in the region. It actually succeeded in forming a business deal with a major noodle manufacturer in connection with the food waste disposal unit manufactured by a company in Kagawa-ken prefecture.

Focusing on the design factor, the marketing and sales channel cultivation service is in full operation. Since 2002, it has undertaken matchmaking with designers. Prototypes are displayed in the exhibition held at Shinjuku Park Tower in Tokyo for the purpose of market research and im-

provement in product design. Katsuse points out that manufacturers need to develop products that customers want in collaboration with designers and buyers instead of designing their products unilaterally. They invite designers, buyers, and design goods wholesalers to participate in product development from the product-planning phase in an attempt to achieve customer-conscious manufacturing.

A form processor based in the city of Yoshinogawa, Tajimax Co., designed a lightweight and colorful ethylene vinyl-acetate (EVA) material. A plant machinery manufacturer of Fujisaki Electric Co., located in Anan City, designed a panel technology that enable LEDs to light up no matter where on a panel their terminal pins are inserted.

Moreover, the project holds several events including “Venture Plaza Kinki + Shikoku 2003 in Osaka” in partnership with METI Kansai, and “Health and Eco-Business Exchange Plaza” to raise awareness of health and environment products.

The Shikoku region is already home to a number of businesses with sophisticated expertise in niche markets. These businesses include Shikoku Kakoki, which manufactures liquid filling machines for paper containers, Nippura Co., a manufacturer of acrylic panels for aquariums, and Iura Co., which makes stretchers equipped with patient transfer systems.

Acknowledging that it is important to promote Shikoku to people outside the region, METI Shikoku now places unprecedented focus on transmitting information. These efforts include the publication of leaflets that explain METI Shikoku’s policies for small and midsize businesses and the region’s economic indices, and a magazine that features products from promising Shikoku-based companies. The magazine is called *Akinaichu: Products from Businesses Active in Shikoku*.

Yusa Shinji of METI Shikoku says, “We will continue to actively work on matchmaking between Shikoku-based businesses and trading companies and manufacturers mainly based in urban regions.”

And as his colleague Katsuse notes the importance of coming up with novel ideas that do not originate purely from a manufacturer’s perspective, another critical point is to further improve product development, involving designers from the product planning stage to add value and market awareness.

It is to be hoped that many more companies will emerge in Shikoku that make use of their technical capabilities, cultivated through their subcontracted work, to develop products that suit customer needs and in the process energize the regional economy. ■

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