Hokkaido’s IT Industry Utilizes Foreign Engineers

Sadaka Inasawa
JETRO Hokkaido

Summary

Hokkaido, Japan’s northernmost main island, is a popular tourist destination for Japanese and overseas visitors alike. In recent years, the regional government has worked to stimulate the local economy by building up its IT sector. Although these efforts have steadily produced results, a shortage of engineers remains a key problem. In response, IT companies in Hokkaido have begun to seek engineers from overseas.

Hokkaido, Japan’s northernmost main island, is situated roughly on the same latitudes as many major cities of the U.S. and Europe. It accounts for more than one-fifth of Japan’s land area, making it the largest of the nation’s 47 administrative subdivisions. The island is blessed with abundant natural beauty, four distinct seasons, no rainy season and a cold but dry climate, making it a popular tourist destination for both Japanese and foreign travelers, most notably from East Asia and Australia.

Unlike other regions of Japan, Hokkaido’s industrial structure has a high proportion of primary (agriculture, forestry, fishery and livestock) and tertiary (tourism) industries, but relatively few secondary (particularly manufacturing) industries.

The Hokkaido Bureau of Economy, Trade and Industry (“METI Hokkaido”) launched the Hokkaido Super Cluster Promotion Project in 2001 to attract new enterprises, raise the competitiveness of local industries through networks linking industry, academia and government, and establish a system for governmental and financial institutions to provide local companies with support.

For many years, Hokkaido has hosted a variety of research institutions, including Hokkaido University. In the 1980s, a succession of information-related companies were set up in the capital city of Sapporo, mainly by graduates of Hokkaido University. The city now has a concentration of IT companies that make up what is commonly referred to as “Sapporo Valley.” In particular, the IT and biotechnology sectors have been targeted by the city for further development, with the expectation that this will help boost the competitiveness of a broad range of local industries.

In fiscal 2004 (ended March 2005), Hokkaido’s IT sector saw sales increase for a fourth straight year to 317.2 billion yen, and total employment rose to 17,346 (Fig. 1). According to the Preliminary Report on Census of Manufactures 2004, IT placed sixth among all manufacturing industries, just after steel, with shipments of 346.4 billion yen, accounting for 6% of total shipments (Fig. 2). In employment, it ranked second only to foodstuffs (Fig. 3).

Continued growth and development will depend, however, on the industry securing highly capable
human resources. To that end, some companies have started to hire foreign engineers, which is still a rather uncommon practice for Japanese companies. The following cases of two companies illustrate how Hokkaido IT companies are putting into practice the utilization of foreign engineers.

Fig. 1  Hokkaido IT Industry Sales and Employees

Note: 2005 is a projection.
Source: METI Hokkaido, Ministry of Economy, Trade and Industry

Fig. 2  Shipments by Hokkaido's Leading Manufacturing Industries (2004)

Source: METI Hokkaido, Ministry of Economy, Trade and Industry
Case Study 1: Papyrus Co.Ltd—Subsidiary in India

Papyrus Co.Ltd., headquartered in Sapporo, develops control software for applications such as semiconductor manufacturing. Control software engineers, who must have specialized knowledge of C programming, as well as related hardware and operating systems, are in short supply in Japan. After learning that India has a large number of such engineers, Papyrus visited the country to gather information in September 2005. Satisfied with what it learned, the company began setting up a local subsidiary just a few months later.

There were several reasons why Papyrus moved into India so quickly. First, the company has a history of employing the most capable people, irrespective of nationality. Also, English is used on a daily basis at Papyrus, because of the highly international nature of its field, so there is little resistance to foreign languages. But the most decisive factor was visiting India and learning that the two countries are more alike than had been imagined, and that Indian business is very pro-Japan and has strong interest in Japanese companies.

The city of Hyderabad was chosen as the first site for expansion into India. The area has a low frequency of natural disasters, a safe and stable society, and the convenience of relatively easy flight connections from Japan via Singapore. Furthermore, since many companies in Bangalore—the Silicon Valley of India—have been expanding into the Hyderabad area, costs such as rent were expected to rise in the near future, which also prompted Papyrus to move fast.

Once the subsidiary was set up, ICICI, one of India’s largest banks, put Papyrus in touch with an accountant who turned out to be an invaluable partner. Not only did he help set up the company at a much lower cost than if the job had been entrusted to a foreign consultant, he also enabled Papyrus
to successfully navigate its way through India’s complex tax system, which had been a stumbling block prior to the move. Moreover, he helped Papyrus confirm the transparency of local legalities, which gave the company the confidence to move ahead at full speed. As a result, Papyrus Software India Pvt.Ltd was officially launched as a wholly owned subsidiary in December 2005.

The subsidiary was soon operating as a development center, and now employs over 30 engineers. Papyrus has plans for further global expansion, including a sales hub in the U.S., so it must continue to secure new engineers. Since Indian engineers are highly capable and cost less than Japanese engineers, the subsidiary is actively looking for new prospects.

Papyrus is also looking for foreign engineers within Japan. It regularly places ads in recruitment magazines aimed at foreign residents, so it receives a continuous stream of applications from foreigners, the best of whom are tested in Tokyo. The training program for new hires includes Japanese language instruction.

Although information about India has increased due to the heightened international interest in the country as a business base, much of the information is inaccurate, according to Papyrus. For that reason, Papyrus emphasizes that if a company is interested in setting up in India, or any overseas location for that matter, it should first visit the country and grasp the actual conditions firsthand.

Case Study 2: Dgic Corp. — Joint venture with Russian partner in Sapporo

Dgic Corporation develops software on an outsourced basis from its headquarters in Sapporo. In order to develop high-quality software at competitive costs, Dgic has built up a collaborative network with companies overseas.

In 2004, Dgic visited Vladivostok, Russia and meet with Ronda Ltd., which is also a software developer. In contrast with the historic appearance and atmosphere of Vladivostok, Dgic found that Ronda is equipped with modern facilities and the engineers are of a remarkably high standard. In their discussions, the two companies identified possibilities for joint-development projects, some of which came to fruition, such as the development of control systems for semiconductors and mobile phones.

To further boost its competitiveness, Dgic decided to leverage its collaborative relationship with Ronda by setting up a joint venture company to provide outsourced software development. Assistant Development Interactive (ADI was established in Sapporo in July 2006, owned two-thirds by Dgic and one-third Ronda.

Three engineers from Ronda are currently employed at ADI to develop packaged software for graphics editing. Young Russian engineers in their 20s or 30s with high levels of technical expertise, they did not require any technical training upon entering ADI. One speaks Japanese fluently, and the other two generally communicate in Japanese as well.

Dgic likes that Ronda has previous international experience from collaborations with U.S. companies, and the work ethic of its engineers is similar to that of their Japanese colleagues, such as
being willing to work overtime if necessary. So far, there have been no special work-related problems stemming from differences in culture or values.

Dgic also appreciates that the retention ratio among Russia IT engineers is generally higher than that of East Asian engineers, and that Ronda draws on a broad range of engineers in Russia, from as close by as Vladivostok to as far away as Moscow.

Recently, a Japanese engineer was sent from Dgic to Vladivostok, where he will be permanently assigned to a Ronda subsidiary, so the two companies are continuing to deepen their collaborative relationship.

Since this has been the first case of Russian software engineers being targeted for employment in Hokkaido, the project has caught the attention of many customers of ADI. Some, however, have voiced concerns about language barriers and product quality, but ADI figures the best way to answer such concerns is to continue filling orders from its growing base of satisfied customers.

**Perception of foreign engineers shifts to “highly skilled”**

Until now, the Japanese IT sector’s use of foreign engineers has emphasized cost savings, similar to the effect of using cheap labor for offshore manufacturing. Recently, however, due to the striking lack of engineers in Japan, foreign engineers have started to be employed primarily for their technical expertise. With international competition in the IT sector expected to intensify in the years ahead, the trend towards utilizing foreign engineers for their expertise, rather than low cost, should become more and more widespread.