

Japan's tech park boosts industry research

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From China to Malaysia, setting up special economic zones and industrial parks that offer tax breaks, advanced telecommunications infrastructure, and other perks to businesses is nothing new.

Japan is no exception either, and in recent years, the world's second-largest economy has stepped up efforts to designate areas across the nation that are encouraging private technology-based companies in particular to flourish, and for research scientists to work more closely with private companies.

In the case of Kanazawa, such endeavors have focused largely on helping out start-ups and small, venture capital groups to engage in research with the blessing of the government and the local community.

Founded in 1999, the Ishikawa Science Park currently has about 24 companies that are taking advantage of the low-cost research facilities that the park provides to companies both big and small, including NTT West, Tokyo Process, System Laboratory, and CSN Laboratory. Once a company decides to set up a base in this zone based about 150 miles north of Tokyo, they can have a facility tailor-built to their specific research needs at a fraction of the price of the local market. One caveat of agreeing to be a tenant is that the contract to base a research facility is for a minimum of 20 years.

"We only start building the research facility once a contract is signed, so our facilities are all custom-made," said one park official, adding that buildings can be made for research efforts with as diverse needs as

biotechnology that will need precise set-ups and mechanical engineering that require sizeable facilities.

Currently, there are about 2,000 people working at the park, including about 500 scientists and 500 people who are researchers seconded from their companies, while the remaining 1,000 are students from universities across the country.

The plan is to have about 10,000 people on the site, with at least double the current number of companies.

Apart from having affordable, custom-built facilities, the park is also home to the National Institute of Information and Communications Technology, where there is a computer network that can simulate the operation of 5,000 work stations all being connected to a single program simultaneously, making it one of the biggest computer simulation centers in the world. Since its foundation four years ago, NICT has undertaken 80 projects that make use of the fact that it can provide the same environment of 5,000 personal computers being connected at the same time through 512 servers.

"We also have a number of private companies that want to use our facilities to simulate the connection environment," one NICT official said, adding that private companies can sign up to use the simulation environment so long as they are prepared to conduct their own research, as NICT only provides the computer environment and not the actual computer programmers.

Another advantage of being based in the science park is that the Japan Advanced Institute of Science and Technology is located there too. The university educates graduate students only, and studies are focused on three main areas, namely knowledge science, information science, and material science. Presently, there are about 700 students studying for a

master's degree while 300 are doctoral candidates, with over 30 percent of Ph.D candidates coming from overseas universities. The largest number of foreign students come from China, Vietnam, Cambodia, and Taiwan, and many are involved either directly or indirectly with the research that is going on in the science park laboratories.

"This is an environment that encourages the free flow of information and knowledge," said Akio Kameoka, vice chancellor of JAIST. He also pointed out that the university actively goes out of its way to tie up with the private sector in furthering scientific research, namely through joint research, conducting research on behalf of companies on a per-need basis, and pushing for technology transfer.

"Most of the research we do here has some connection to the private sector," Kameoka said, adding that the university has actively seeking to have patents. In 2004 alone, the university filed for 71 patents.

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