

Japan technology's focus shift to dreams

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A dog that can sniff out whether his owner is feeling under the weather or not? A T-shirt that allows the wearer's intestines to be in full view so that an X-ray is no longer necessary? Or an elevator that connects the planet Earth to a space station in an outer orbit?

Such items might sound fairly far-fetched to most people and not even that desirable to many, but some of Japan's top science researchers don't think the day when such ideas might be turned into reality will be too long in the future.

Last Friday the University of Tokyo, the country's most prestigious academic institution, joined forces with Nomura Research Institute, a private think tank, to hold a conference to discuss just what sort of products may or may not be available in 2055.

"Japan's science and technology is good at solving complex problems, but it has been weak in coming up with new images of new technology," said the university's Vice Chancellor Masatoshi Ishikawa.

His sentiment was shared by many in Japan's scientific community, which led the university to gather a group of researchers from a diverse array of fields including information technology and aerospace in their 30s and 40s not only to consider what could be done with existing knowledge, but to debate at length about what sort of technologies and products would be good to have in 50 years' time.

"This isn't just science fiction, though," said Ishikawa, adding that the

biggest objective for the group is for researchers themselves to seek out new possibilities in their fields, rather than merely being problem-solvers, albeit good ones.

Certainly, there is much to be said in Ishikawa's theory about Japanese scientific research. Since the end of World War II there have been strong ties between major manufacturers and researchers to the extent that the bulk of the country's best scientific minds go on to get jobs in a corporate research institution rather than staying on at a university or other academic institutions. Indeed, many of the nation's top researchers, including one recent Nobel Prize-winning scientist who had conducted all of his cutting-edge research at a corporate laboratory, Koichi Tanaka, who one the prize in 2002, had even eschewed getting a Ph.D. in chemistry from a university and instead chose solely to work for Shimadzu Corporation's research labs since obtaining a master's degree, a move that is virtually unheard of in the world of basic scientific research, let alone among Nobel winners. As a result, while a number of Japanese nationals have won numerous internationally renowned scientific awards, most of them have made their biggest breakthroughs in university research centers overseas, most notably in the United States.

There is, however, growing fear that simply excelling as innovators will not allow Japan to keep its edge in the sciences, and that it is in the nation's interest to allow those devoted to basic research to flourish, and not simply to value engineers who concentrate more on applying existing technology to products and services.

Tokyo University's Ishikawa acknowledged that much of the items proposed by researchers at the latest conference, including robotic private tutors for children or sand that detects and absorbs the shocks of an earthquake, might sound more like something out of a science-fiction novel than something researchers might seriously undertake.

At the same time, he pointed out that the group of scientists banded together with the understanding that their studies will be driven by market demand -- hence the university's tie-up with Nomura Research, which is the research arm of Japan's biggest brokerage house, Nomura Securities.

The core belief that will be motivating researchers is the idea of "wouldn't it be great to have something like this," Ishikawa added.

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