

Helping Japan Win in Both Technology and Business

KOJIMA Akira, Chairman of World Trade Center Tokyo, Inc., Member, Board of Trustees of the National Graduate Institute for Policy Studies

We often hear it said that Japan wins in technology but loses in business. Japan's technological prowess is certainly highly regarded worldwide. According to the Global Competition Report, a yearly report published by the World Economic Forum (WEF), which is best-known for its annual meeting in Davos, Japanese companies boast world-class technological prowess. And yet Japan ranks just ninth or tenth based on its overall competitive performance. This gap is undoubtedly the gap between Japan's technological prowess itself and Japan's ability to apply and use this technology to generate profit, contribute to the economy and society, and improve people's lives.

The Japan Revitalization Strategy, officially approved in a Cabinet Decision in June 2013, often uses the word "innovation." It also talks about turning Japan into the world's most innovation-friendly country. However, it is the government itself or, more specifically, government regulation that hinders innovation.

It has also been pointed out that Japan's problem lies in the very fact that the standard translation of the word "innovation" in Japanese is *gijutsu kakushin*. If *gijutsu kakushin* simply means technological innovation and advancement, then this differs from the original meaning of the word



KOJIMA Akira, Chairman of World Trade Center Tokyo, Inc., Member, Board of Trustees of the National Graduate Institute for Policy Studies

“innovation.” Innovation means not only technological innovation but the transformation and change of all the structures that put the technology to practical use. In other words, whatever the technology, unless it is used in daily life and can contribute to economic development, improve quality of life and generate profit, this cannot be termed innovation as advocated by theorist Joseph Schumpeter.

I met up with Professor Sankai Yoshiyuki of the University of Tsukuba who developed the Robot Suit HAL (Hybrid Assistive Limb)*, and I asked him about the problems he encountered in the development of HAL and its practical application. HAL is a lightweight wearable robot suit designed so that, when the person wearing it attempts to move their body, the HAL suit registers brain signals sent to the spinal cord, motor nerves and muscles and is operated by the brain.

This technology has attracted attention in Europe, especially Germany and Sweden. From Germany, the Federal Minister of Economics and Technology and public health insurance officials came to Japan to inspect and observe the technology. Germany immediately made up its mind and set up a center of neurology using HAL. HAL is now offered as a medical device for the European market and is also covered by the public insurance program in Germany.

However, Japan lags far behind Europe in the practical application of HAL due to regulations that, for instance, allow HAL to be used for advanced patient care support but not for medical use.

The medical devices industry is attracting global attention as a growing market. The global medical devices industry was worth some US\$300 billion in 2011 and is expected to grow by more than 5% per year in the years ahead. Japan has technological potential in this field as in many others. However, as indicated by the HAL case, its development as an industry hangs in the balance. Japan's medical device imports far outweigh its exports, while the development of the medical devices industry in Germany and the United States just gets more and more remarkable.



I would like to stress that innovation consists not only in technological innovation but also in the change and transformation of all the government, social and corporate structures and systems that put the technology to practical use.

Translated from an original article in Japanese written for Discuss Japan. [May 2014]

*1: Related article on HAL: Global Companies from Japan, Economy, No.17, Discuss Japan
<http://www.japanpolicyforum.jp/en/archives/economy/pt20131125174131.html>

KOJIMA Akira

Chairman of World Trade Center Tokyo, Inc., Member, Board of Trustees of the National Graduate Institute for Policy Studies
