

Essentials of Innovation

With the advance of globalization, the world is becoming a flatter society, and at no time in the past has there been a greater need for innovation. This means altering lifestyles and social organization, and building a popular consensus for solving global problems. With this vision in mind, we spoke with Kurokawa Kiyoshi, special advisor to the Cabinet and head of the Innovation 25 Strategy Council.



The Japan Journal: The Council has released its interim Report on how innovation will change Japan over the next twenty years [www.kantei.go.jp/foreign/innovation/index_e.html]. What is the reason for the unusually long-term perspective?

KUROKAWA Kiyoshi: Information can now be shared worldwide in a matter of seconds. We confront a number of problems on a worldwide scale, including global warming, environmental degradation, poverty, the growing North-South gap, food and water shortages, and the rising population. How is Japan to respond in an age beset with such problems? It seems clear that people in industry, academia, and the government need to consider the next two decades proactively. This perspective has formed the basis for discussions by the Innovation 25 Strategy Council.

Innovation is one of the keys to Japan's contribution to global society. In energy-saving, hybrid vehicles, solar batteries, and other technologies, Japanese innovation has responded to the needs of markets. Japan can provide leadership in the world through such means as helping to reduce the burden on the global environment. Another key, in order to make the most of that advantage, is to create more Japanese entrepreneurs and investors, to develop new industries and to open markets.

Just over five months have passed since the Abe government began. Has there been enough discussion on these matters?

The government has formulated a series of policy measures, including the Basic Plan for Science and Technology, while I myself have been active in the Science Council of Japan. As a result, we were able to combine our efforts. For example, in 2002, the Science Council of Japan completed its "Japan Perspective" to offer various proposals based on discussions regarding the status of science and scientists in the twenty-first century. In 2005, it completed its "Japan Vision 2050," which provided a long-term vision for Japan and its science and technology policy. In building these reports, the Council held over twenty rounds of discussions. At each meeting, and from every possible perspective, we continued to build on dis-

Kurokawa Kiyoshi, special advisor to the Cabinet and head of the Innovation 25 Strategy Council

cussions regarding what events are happening in the world, where they are leading, and how Japan should cope with the issues it faces in that context. We've built on these discussions in compiling the present report.

We will complete our final report by the end of May. Specific measures must then be implemented in line with the guidelines of the final report. This is a critical report.

In regard to human resources, you stress the importance of encouraging "nails that stand out." What exactly is the point here?

Japanese researchers who've won Nobel Prizes for example carried out important research, but in the beginning, their work was not necessarily mainstream. They achieved results precisely because the atmosphere they worked in allowed them to pursue their work using their own intuition, and now some of their work is finding commercial application and becoming a basis of industry. The environment encouraged the nails that stood out. So the point is to accept and support nails that stand out—the iconoclasts. By doing so, different values will emerge and society will change. It is precisely in the present time of dramatic change that we need a society which encourages competition among iconoclasts with the temerity to wreak "creative destruction."

What is the key to making that possible?

Education. The relative number of Japanese children is declining, but we always have to invest in education. So long as education only means entering a university based on exams that stress rote learning, freethinking will languish. At the same time, once a society achieves wealth, children too often lose that spirit of adventure which might otherwise inspire them to venture abroad and expand their learning.

I believe that many middle and high school students should go abroad for a home-stay experience, even if only for a single month. At the same time, we should encourage non-Japanese students to visit Japan.

Giving children the opportunity to embrace a diversity of values, creating opportunities for them to share the values of children from other countries, inviting foreign children to Japan and having values shared by the entire community—these efforts form the basis for nurturing pioneering individuals. The government

needs to fund programs, in the case of high school students for instance, to provide twenty to thirty thousand young people each year with such opportunities.

So, you're saying that resources should be reallocated away from things and toward people. Maybe greater investment in international student exchange would be an effective approach?

Exactly. Going abroad when you're young makes you think again about your own country. You become aware of a number of things. For example, you have pride in yourself and your own country, and you learn the importance of respecting the pride others have in theirs. As this course of events unfolds, students destined to be future leaders would in time come from all over the world to Japanese colleges and universities. They would become friends whom Japanese could talk with by phone or via email. It would become an important approach in human resources innovation.

You spoke of technology, human resources, and social innovation in your report. What are the main points in social innovation?

Society has been going through major structural changes. With the breakdown of the extended family, the relative number of children is falling. Greater urbanization means that three fourths of the population lives in cities, while rural areas suffer depopulation. The greatest problem is the absence of any conduit between the generations for exchange and transfer of wisdom regarding the rearing and education of children as there once was in the local community. Increasingly, people no longer know their neighbors, and they lack an atmosphere in which they can casually communicate with others in the local community. The fall in the number of children has, for example, created free classrooms at elementary schools where residents can gather. Communities could be built with all generations taking part and helping each other. Such organizations could form the "trunk" which binds a community together. It would be important to combine the strength of differing generations and support young mothers who are educating their children while working, thereby helping each "branch" of the community.

With an increase in the number of people willing to help solve problems in the community, as well as the number of social entrepreneurs working to remove

barriers between the generations, their spirit will have an impact. This trend is especially pronounced in education and medical care. I'm speaking of the spirit of the commons or the local community. It is this spirit which nurtures the tender bud of innovation, where social entrepreneurs play the leading role. Increasingly, for example, helpers in the community are paid to take charge of children when mothers are unable to pick them up in time from nursery school. The government can provide support to help discover, broaden, and consolidate possibilities such as these as they appear in the community. The critical thing is to begin with this basic attitude. Without it, policy measures will be hung up on technicalities.

What issues must Japan overcome as a mature society, and what is the best course for Japan to take?

Well, consider the mold company INCS [*The Japan Journal*, April issue], which has applied IT to craftsmanship through digitalization and systemization of craftsmanship and the production process. Its business model turned tacit knowledge into implicit knowledge, reducing the mold creation process from forty-five days to around one day. The general theory is that Japanese excel in technologies for building things, given our tendency to become zealously immersed in something. But we're less adept when it comes to seeing the big picture and management.

That's why it's important for Japan, while strengthening our talent for concentrated focus, to also join forces with partners who are strong in the areas in which we have less talent. This means abandoning our go-it-alone approach—as with for example *kaizen*, which relies on improvement-based and gradualist methods—and instead pioneering new modes of thinking and social needs, creating new industries and markets, and seeking out partners with which to join forces. Without addressing both needs, we won't be able to understand international trends in the context of globalization or to develop a future strategy.

While addressing these issues, Japanese people have to muster the will to think about global issues, transform their mode of living, and change their social system. This is the essence of innovation. Creating such a movement is sure to help solve global problems. This is what Innovation 25 aims to do. ■

Interview by CHIBA Hitoshi, *The Japan Journal*