Expert Insights

Open Innovation Accelerating Social Innovation

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Doctor of Economics (The University of Tokyo). His specialties are in social informatics, healthcare informatics, and information economics.
His appointments include chairing the government's e-Government Evaluation Committee, Planning Committee on Information Security of Information Security Policy Council (ISPC), the Study Group Considering Use of Numbering Systems by Regional Public Agencies of the Ministry of Internal Affairs and Communications, the ICT Lifestyle Resource Measures Committee of the Ministry of Internal Affairs and Communications, the Olympic and Paralympic Hosting Group of the Ministry of Internal Affairs and Communications, and the Future Vision Study Group for Use of Vehicle-related Information of the Ministry of Land, Infrastructure, Transport and Tourism.

Private use of the Internet has now been with us for around 20 years. It is fair to say that the world has experienced considerable change during this time. From the perspective of innovation, however, I believe that information and telecommunication networks have yet to fully demonstrate their inherent capacity for change.

As noted by Joseph A. Schumpeter (in The Theory of Economic Development, 1926), innovation means generating value through combining the means of production, resources, and labor in new combinations. One area of vigorous activity in recent times has been open innovation. In contrast to innovation that relies only on one's own resources, open innovation is achieved through a number of parties working together, with information networks used as a platform for making effective use of external resources. Putting this in the context of modern society, rather than a talented individual working alone to create value, open innovation means the creation of new value by using information and telecommunication networks to combine a variety of technologies, and taking advantage of the synergies between a number of parties with potential creative and collaborative capabilities.

In terms of one of the serious issues faced by Japan, namely the "super-aging society" (a term used in Japan to refer to the advanced aging of its population), significant problems will have arisen by 2025 due to the rapid rise in the number of elderly belonging to the baby boom generation, who by then will be age 75 or older. National healthcare spending will rise from 34.8 trillion yen in FY2008 to 52.3 trillion yen in 2025, with spending on the very elderly rising from 11.4 trillion yen to 24.1 trillion yen over the same period.

According to the report published by the ICT Super-aging Society Design Council of the Ministry of Internal Affairs and Communications in 2013 (chaired by Hiroshi Komiyama, Chairman, Mitsubishi Research Institute, Inc.), a continuation of present trends will see not just an increase in social security spending, but also greater demands on families to provide nursing care and a worsening of social isolation among the elderly living alone. Consequently, the report noted that the super-aging society also requires the bringing about of a paradigm shift in society so that all generations can feel secure and live active lives.

What are needed are radical investigations into the best forms of healthcare and nursing care systems and preventive medicine, and the establishment of new social systems. This will require the restructuring of a wide range of social systems, including the nature of regional communities and regional government, with support from computers and information and telecommunication networks.

Given the current need for innovation, not only in healthcare and welfare systems, but also in other existing social systems such as those used by government or to manage the supply and demand for resources and energy, we need to pick up the pace of open innovation by actively seeking to use information and communication technologies (ICT) that incorporate sensor networks, machine learning, and other forms of intelligence.