

Conclusion: What We Aim to Achieve through Open Innovation in the Future

In the age of globalization and transformation, open invention—an approach that makes use of external technology and knowledge—has been used as a means to create innovation, and this approach has been gradually changed. Not only between companies does open innovation take place, but also more diverse parties, such as universities, R&D agencies, and startups, have been involved in collaboration through open innovation, and the collaborative scheme has been shifting from “between one and one,” to “between one and many,” and “between many and many” (ecosystem).

Looking at the situation in Europe, we can see a move toward solving challenges shared in society by involving citizens, customers and users in the ecosystem organized by companies, research institutions, universities, etc. This movement can be understood as Open Innovation 2.0 (Table 1-2-70). It represents a change in the focus of innovation, from “how to do” (how we should solve challenges through innovation) to “what to do” (what we should aim to achieve through innovation).

The view on the responsibility of companies has also changed. Companies used to be criticized as controlling and exploiting social resources only for their own interest, but they are now required to fulfil their responsibility towards society (corporate social responsibility; CSR). One example of this trend is companies’ commitment to fair trade public procurement.¹

A new concept, “creating shared value” or “CSV”, has been advocated by Professor Michael Porter of the Harvard Business School. The CSV approach understands that companies create social values in the course of their corporate activities for creating economic values, and that these activities do not generate “costs” but rather make a positive “investment.” For example, as the CSV pioneer, Nestle produced low-priced and individually packaged popular food while taking into consideration the nutrition conditions of low-income populations in Asia, and through this, it solved a social problem in the region and increased its corporate earnings at the same time.²

Such changes in corporate activities involving commitment to social challenges are expected to also bring about changes to the modalities of open innovation in which companies are currently playing a central role.

In Japan as well, we can see signs of a movement toward solving social challenges by creating and combining new values through open innovation.

Hirosaki University, where the Center of Innovation (COI) Program launched by the JST is based, has been working on an initiative to take samples of health data consisting of a huge number of data items (more than 600) from healthy Hirosaki citizens over 12 years. The project is in its fourth year this year. Aomori Prefecture has the population with the shortest life expectancy in Japan, and with a view to solving this social challenge, it strives to create a new social innovation by involving citizens in industry-academia-government collaboration. Specifically, this initiative aims to create both public-interest

¹ Kaeunghun Yoon and Aya Noguchi, “Kyōyū Kachi no Sōzō (CSV) no Gainen no Keisei to Kadai” (Formation and issues of the concept of creating shared value (CSV)), *Ryūkei Hogaku* (Journal of the Faculty of Law Ryutsu Keizai University) (2015)

² Kaeunghun Yoon and Aya Noguchi, “Kyōyū Kachi no Sōzō (CSV) no Gainen no Keisei to Kadai” (Formation and issues of the concept of creating shared value (CSV)), *Ryūkei Hogaku* (Journal of the Faculty of Law Ryutsu Keizai University) (2015)

values, such as enhanced health and nursing care and reduced medical expenses, and economic values, such as new services and products, in an integrated manner. It is designed as a business model in which universities play a central role, aiming to change the attitude of citizens, rather than only providing them with services on a temporary basis. In this example, all stakeholders—citizens, national and local governments, universities, and companies—work together to create a shared value, i.e. extending the healthy life expectancy.

Japan is facing challenges such as constraints on self-sufficient energy, resources and food, the declining birth rate coupled with the aging population, and impoverished local economies and communities. In order to continue growing as a developed country, our country must solve these challenges by using cutting-edge science and technology. In this process, it is important that the industrial, academic, government and private sectors collaborate to create shared values by connecting social challenges with business concepts, in order to be prepared for future changes in society. Whether social values and economic values can be created together through a new open innovation scheme with the participation of citizens will be the key to solving the challenges faced by our country, fulfilling people's hopes, and achieving economic growth.

Meanwhile, there is also a huge pile of global challenges, such as population increase, scarcity of food and water, and climate changes. Japan, as a developed country in science and technology, should strongly communicate to the world its aspiration to create new values and solve social challenges through open innovation.

■ Table 1-2-70 / Comparison between Open Innovation 1.0 and Open Innovation 2.0

Factor	Open Innovation 1.0	Open Innovation 2.0
Objective	<ul style="list-style-type: none"> Improve R&D efficiency Create new business 	<ul style="list-style-type: none"> Solve common social challenges
Collaborative scheme	<ul style="list-style-type: none"> One-to-one collaboration 	<ul style="list-style-type: none"> Ecosystem A multi-layered system in which diverse stakeholders (e.g. companies, universities, research institutions, national and local governments, citizens, and users) work together
Led by	<ul style="list-style-type: none"> Companies 	<ul style="list-style-type: none"> Citizens and users
Features	<ul style="list-style-type: none"> Citizens and users do not participate in the open innovation process. Win-win approach The process needs to be beneficial to both parties, which are private companies. 	<ul style="list-style-type: none"> Participation of citizens and co[^]creation Citizens and users are involved in the process and work together to create innovation. Orchestration Multiple players that have conflicting interests but also have common challenges are orchestrated toward the same goal.

Source: Japan Open Innovation Council, *White Paper on Open Innovation* (first edition), 2016.