

Overview

Customer Co-creation to Deliver Innovation in the Digital Era

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1. Innovation in the Digital Era

The proliferation of sensors and the Internet of Things (IoT) has allowed digital models to be generated from the vast amount of collected data. These digital models lead to new services and business models by connecting devices to an inexpensive high-performance network that makes model reference, duplication, and processing possible beyond geographic and time constraints. In this article, the approach to triggering innovation in this digital era is explained from the perspectives of “pure digital” and “plus digital.”

Pure digital innovation is defined as creating high value through new products/services by dynamically transforming behaviors, operational processes, and decision-making through digital models generated from data relating to people’s day-to-day life, business operations, society, and nature. On the other hand, “plus digital” is a term used to describe the value created from new functions and services by adding digital technologies to facilities and equipment (assets) that are used in homes and companies and on the street. The performance and efficiency of these assets will be leveraged significantly to create new value.

Global Center for Social Innovation (CSI) will contribute to realizing innovation in the digital era through customer co-creation and partners by collaborating with Hitachi’s business units from the perspectives of both pure digital and plus digital. The

following is an introduction to CSI’s activities for each perspective.

2. Activities for Innovation through Co-creation

2.1

Reducing Vulnerable Insurance Applicants (Pure Digital)

While Japan is facing an aging society with fewer children, social security costs have been increasing. It is important to provide a safety net that is efficient and effective. Particularly, the issue of vulnerable applicants who are not able to obtain insurance due to their medical history and condition has become a serious problem.

To solve this problem, CSI has engaged in co-creation activities with an insurance company along with Hitachi’s Financial Institutions Business Unit. For the first step, a digital model based on knowledge of Hitachi’s research into pathology transitions was integrated with the insurance company’s risk assessment model for medical insurance. Insurance products that are appropriate in terms of their cost and level of coverage will be offered to applicants who in the past have been unable to obtain insurance due to pre-existing conditions or other aspects of their medical history (see **Figure 1**)⁽¹⁾.

Moreover, the vision of the future of insurance is a commitment to aim at contributing to prevention in addition to insurance. By digitally connecting with

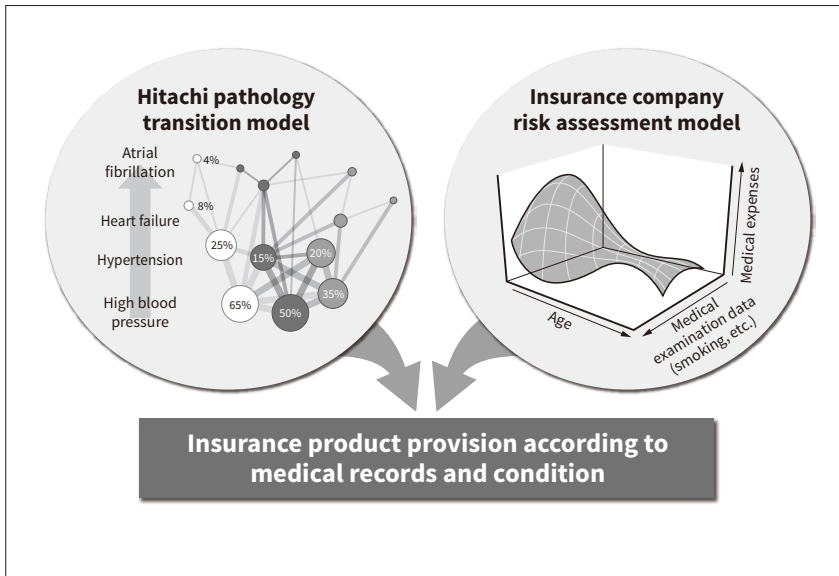


Figure 1 — Innovation of Insurance Product by Integration of Digital Models Provided by Hitachi and the Customer (Insurance Company)

Realizing insurance product provision according to applicants' medical records and condition by utilizing Hitachi's knowledge of pathology transitions cultivated in healthcare research.

industries such as food and fitness, the expansion of business practices to proactive service, which supports early detection of disease and health improvement, will be investigated⁽²⁾.

2.2

Value Enhancement of Assets (Plus Digital)

Besides factory facilities, equipment used at mining sites and oil fields and transportation assets such as rail cars and trucks are the essential components that determine the productivity of a business. By integrating digital technologies with these assets, their condition and operation can be monitored and analyzed. This type of business practice to improve operation efficiency is becoming widespread. However, since the required data and the approach will be different depending on the use, improving the effectiveness requires understanding of the usage environment and surrounding operation through dialogue with customers.

For example, CSI has engaged in activities to improve the operation rate by optimizing predictive detection of failure and maintenance procedures using data from mining machines and the field. In order to create further value, CSI has promoted to the step of investigating a solution to contribute return-on-asset improvement and business expansion for overall customer operation.

Centering on CSI-North America, the analytics technology and digital models will be accumulated.

The services on Lumada, Hitachi's IoT platform, will be delivered, applying this know-how to various industries such as the mining machines at mining sites, the field equipment used in oil wells, and the means of transportation used in logistics⁽³⁾.

3. Direction of Customer Co-creation in the Digital Era

3.1

Digital-based Innovation Design with NEXPERIENCE

Innovation in the digital era requires the digitalization of customer co-creation activities. CSI has been constructing NEXPERIENCE, which is a methodology that is capable of making digital models from innovative ideas, scenarios, and business concepts; validating their impact and value through simulations; and assessing business feasibility such as money flow and return on investment⁽⁴⁾. Including the cases mentioned previously, NEXPERIENCE has already been utilized in many fields such as manufacturing, energy, and finance (see **Figure 2**).

3.2

Value Expansion by System Advancement

Currently, innovations in both pure digital and plus digital are happening simultaneously. These eventually will be connected with each other as a networked system that advances to services, business models, and

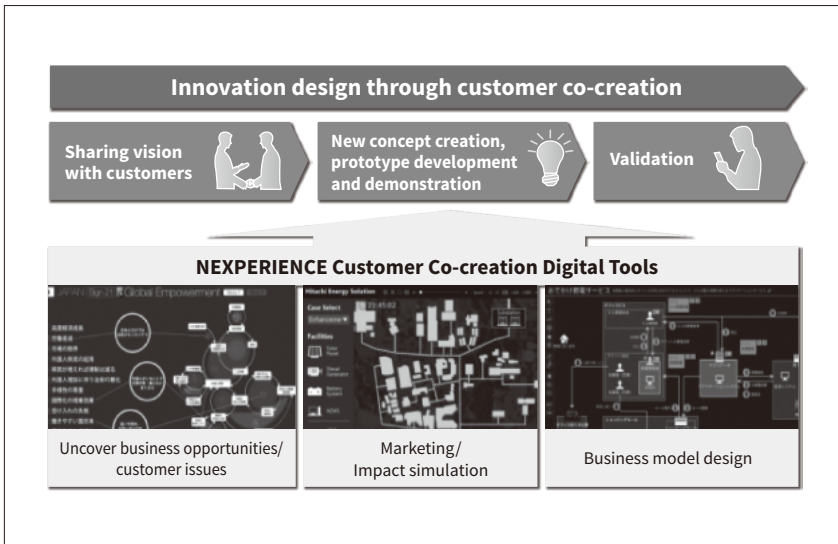


Figure 2 — Digital Tools for NEXPERIENCE

Constructing a methodology connecting the process from customer business opportunity/issues discovery to marketing/solution impact simulation and business model design with digital technologies.

social systems to create high value. This is what Social Innovation aims to realize for creating greater value by connecting multiple systems symbiotically.

4. Global Network to Foster Innovation across Regions

Through digitalization, new services and business models are able to be spread beyond geographic constraints. In such a dynamic era, the location where the technology seed is created may not be the place where the innovation occurs using that technology. CSIs in North America, Europe, China, and Asia-Pacific (APAC) as well as in Japan spread their antennas for both technology trends and innovation needs all over the world and collaborate with each other to foster social innovation at the right places. For example, the technologies cultivated at the Financial Innovation Laboratory in North America are deployed in applications in each region, and the connected car technology cultivated in developed countries can be adopted to potential solutions to be validated in emerging markets where there is demand for advanced transportation methods along with population increases.

Moreover, CSI is promoting innovation across the regions through the global network of the Insights Laboratory where all regional CSIs collaborate with each other. This network will also cooperate with the Hitachi Insight Group, which supports global expansion of the digital solution business with the IoT platform and services through customer co-creation.

5. Conclusions

This article described Hitachi’s activities to realize innovations in the digital era. Digitalization will accelerate service expansion beyond geographic constraints.

CSI will continue to contribute to creating new services and business models with Hitachi’s customers and partners.

References

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