

MESSAGE

Smart Life Solutions that Deliver New Value to Society Using Lifestyle Data to Shape a Happy Future

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Two Hitachi companies with an intimate involvement in homes and lifestyles merged on April 1, 2019 to form a new company, Hitachi Global Life Solutions. The new company works in the Smart Life sector, one of the five key fields of activity identified by Hitachi in the objectives of its 2021 Mid-term Management Plan published in May. The company is accelerating its efforts to build living spaces suitable for everyone through products, services, and solutions for air conditioners and other home appliances. Here, Jun Taniguchi, the inaugural president of the new company, describes how Hitachi Global Life Solutions sees itself, its management vision, and his own role.

Using Life Data to Devise New Solutions



Hitachi Global Life Solutions can be said to play a unique role within Hitachi and its Social Innovation Business in the sense that it is one of the few divisions that has direct dealings with consumers, supplying them with products and services that include the development, sale, and servicing of air conditioning solutions and the refrigerators, washing machines, and other appliances familiar from daily life. Another way of putting it is that the company is continually in search of human-centric value, paying close attention to how people live, connecting with people, and connecting people with each other.

Having the broad perspective that comes from operating in the business-to-business-to-consumer (B2B2C) sector as well as in the business-to-business (B2B) sector with our social infrastructure business and energy business gives greater depth to Hitachi's Social Innovation Business in that this direct interaction with

consumers is extremely important for social design and the creation of social value, making it a major strength for Hitachi as a whole.

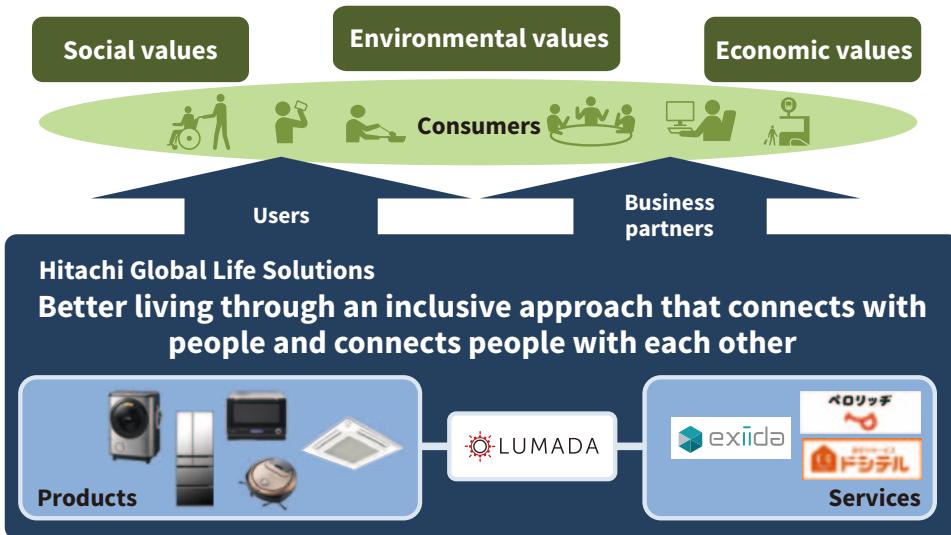
While our past activities have delivered convenience and comfort through products that featured advanced functions and high reliability, we are treating the establishment of the new company as an opportunity to take advantage of this interaction with consumers to pick up the pace of new initiatives. One way we are going about this is by making active use of digital technologies and life data (data on how customers live) to supply new solutions that suit customers' different lifestyles.

Looking at power consumption in Japan and other developed nations, for example, tells us that a high percentage of it (around 20 to 30%) is used in the home, on a par with the amount of electricity used in industry, transportation, and other social infrastructure. Moreover, total consumption continues to rise despite improvements in the energy efficiency of individual home appliances. Two products responsible for a comparatively large proportion of this domestic power use are refrigerators and air conditioners. This has prompted us to wonder whether monitoring how

these appliances are used can help predict their power consumption and be utilized for the efficient balancing of energy supply and demand.

If information could be acquired about how each product is used, it could help resolve a variety of different issues facing society by enhancing the value chain as a whole. Food loss, for example, is a major problem for society and the home refrigerator is one of the places where this happens. Given access to knowledge about individual households, such as how much food they consume, how much they have left, and what its use-by date is, the information would prove very valuable not only to consumers themselves, but to all of the stakeholders involved in the supply of food, namely retailers, distributors, and crop and livestock farmers.

If we were able to make use of this data to establish the infrastructure for delivering what consumers really need, when they need it, and in the quantity they require, it seems likely that it would enable progress to be made on resolving the problem of food loss. Given our direct interaction with consumers, we are in a position to understand what is happening in different areas of people's lives, what their concerns are, and how



Hitachi Global Life Solutions pays close attention to all consumers to supply life solutions that provide them with better living spaces.

much time is needed to resolve them, and also what is going on in society at large, and to link this with solutions to the challenges facing society.

This use of life data from people's homes will be essential if society as a whole is to be able to continue to grow sustainably, and as such we see this as part of our mission.

Seeking to become a Lifestyle Solutions Company that Enriches People's Lives

In our pursuit of these new initiatives, we have adopted a vision of getting up close with individual consumers. Consumer lifestyles are in the midst of major change. Whereas stay-at-home housewives were the norm for Japan in the past, the number of double-income households is now rising. As the periods before going to work in the morning and after coming home at night represent important family time for such households where both partners work, we hope to accommodate this by doing what we can to make housework easier.

Lifestyles also change significantly as we move through the different stages of life. Families with children in junior high school who pack lunches each day, for example, often have a fully stocked freezer compartment in their refrigerator. Such families need a large freezer. In contrast, an elderly couple living alone who eat a lot of vegetables out of concern for their health will find a vegetable compartment located in the mid-section of the refrigerator to be more convenient. Despite this, it is not practical for people to buy a new refrigerator each time their circumstances change.

Accordingly, we have developed a reconfigurable refrigerator with two pull-out sections that users can select to be either chiller, vegetable, or freezer compartments. While this made for a difficult mix of technologies, the product was conceived as one that would be closely entwined with people's lifestyles.

Improving the design and appearance of products is also important if different users are to find them

appealing. Through an initiative entitled, "Hitachi meets design PROJECT," we are currently making a genuine attempt to reform how we go about design in collaboration with designers from both inside and outside Hitachi. An air purifier on which we worked with Naoto Fukasawa, an internationally renowned Japanese designer, was well received when it went on sale in China in March 2019.

Given times like these when needs are becoming increasingly diverse, our aim is to deliver services and solutions in an all-encompassing manner, taking a close interest in the specific concerns of different households and seeking to identify even those issues that have yet to come to a head. This way of thinking is embodied in our catchphrase of "360-degrees of happiness: a happy life for each and every customer." Moreover, the use of life data discussed above will also be essential to getting up close to the specific concerns of different households.

Collaborative Creation Key to Business Growth

Although it has been only half a year since Hitachi Global Life Solutions came into being, we have already received sympathetic feedback from consumers and other stakeholders regarding our new initiatives that utilize life data and digital technologies to add value to existing products and services and supply them as solutions. My senior management team is responsible for picking up the pace of this work and for demonstrating leadership as we grow the business.

My own background includes working at Hitachi as an engineer on IT and control systems for manufacturing that were aimed at enhancing productivity and quality, and more recently has included launching Internet of Things (IoT) solution businesses that utilize data from these systems and getting them established. One area in which Hitachi has put a lot of effort, over recent years especially, is collaborative creation, where the aim is to speed up business by working in



Joined Hitachi, Ltd. in 1995. Worked as a system engineer and consultant on improvements and enhancements to manufacturing production lines. Appointed General Manager of Information & Control Systems Division 3, Control System Platform Division, Services & Platforms Business Unit in 2018. Appointed president of Hitachi Global Life Solutions, Inc., a company formed on April 1, 2019 through the merger of Hitachi Consumer Marketing, Inc. and Hitachi Appliances, Inc.

collaboration with a variety of different corporate partners as needed.

I hope that I will also be able to put this experience to good use at Hitachi Global Life Solutions, a lifestyle solutions company. There is a limit to how much any one company can do on its own, particularly when it comes to strengthening global operations. Whether partnering with other companies in the industry that have different strengths or with companies that offer a global platform, I hope that we will be able to speed up the global deployment of our operations by working cooperatively to bolster each other's strengths and weaknesses. In order to work faster and enhance the value of our services, I hope that we can proceed in an agile manner through collaborative creation rather than trying to do everything on our own.

Hitachi chain stores (regional home appliance retailers), for example, stock Sony among their range of non-whiteware products such as televisions and audio equipment. By doing so, the business operates in such

a way that Hitachi's strength in whiteware and Sony's strength in consumer electronics are mutually reinforcing. This is another example of a partnership in which the two sides complement one another.

We have also launched initiatives that seek to collaborate with consumers themselves through social media services. One of these is Peloridge, a food-themed smartphone app. By serving as a forum where users can post their personal food experiences, the app provides an easy way for users to share experiences of good food among themselves, such as their own food discoveries or simple recipes. I hope you will download it for yourself and give it a try.

Helping Resolve Societal Challenges by Working on Growth Strategy

Our future growth strategy is based around the two pillars of strengthening and expanding our product business and developing a solutions business. One

example of how this is being put into practice is the “exiida” remote monitoring/predictive diagnosis service provided by our air conditioning business. This IoT service prevents equipment outages by monitoring the operation of customers’ air conditioning and other heating and cooling equipment 24x7, 365-days-a-year, notifying customers if a problem arises so that action can be taken before a fault occurs. To make maintenance easier for customers, data on equipment operation can be viewed on the web or downloaded.

By identifying warning signs so that maintenance can be done before faults happen, the service can prevent incidents at sites such as hospitals, care homes, or customer facilities in particular where air conditioning is a mission-critical utility and where outages can have severe consequences. In this way, by augmenting past services that have involved the supply of products, we have started to expand the scope of our business in ways that facilitate the use of these supplied products.

Moreover, we are also seeking to develop new services and solutions through collaborative creation by treating connected appliances and air conditioning services as service platforms and using Hitachi’s Lumada to analyze the machine data, life data, and business data they collect.

One such example is the Doshiteru service for monitoring the elderly. This service provides a way for family to use a smartphone to see what is happening in the home of an elderly person living alone. It uses motion sensors mounted on the walls to detect the level of activity in a room and provide information in a way that does not compromise the person’s privacy. There are also plans to provide a more detailed view of activity level by integrating the system with the refrigerator or Hitachi’s other connected appliances.

Amid the rising unease among family members that comes with the shift from extended family homes to the nuclear family and the increasing number of elderly people living alone, a way of alleviating these concerns can be thought of as a new form of “social value.”

Enhancing environmental value, another of the challenges facing society, has become one of the major topics of our times. Along with developing products with excellent energy efficiency as we have done in the past, we are also helping to reduce waste by providing ways of adding after-sales features to suit consumers’ changing lifestyles, thereby extending the length of time people keep appliances before replacing them. Also of importance when supplying products is to provide people with suggestions on how to use them in ways that are more energy efficient. Through measures like these, we are coming up with technologies and solutions that help improve environmental value.

Accelerating Development through Trial and Error

A new challenge for the future is to put even more effort into operating globally, as indicated in our new name. In Southeast Asia, a market we have been developing for many years, and around the world, we intend to enhance lifestyle solutions that are unique to Hitachi so that, along with continuing to deliver highly reliable products, we can closely tailor what we have to offer to consumers’ individual preferences and concerns.

When it comes to using digital solutions to provide new forms of value, we intend to start small with initiatives for fine-tuning these services through having users try them out and experience what we offer, taking note of their responses and utilizing the issues identified as feedback. Enhancing value through trial and error is essential in the digital realm. To this end, we intend to deliver better solutions in a speedy manner by engaging in collaborative creation and resolute trial and error without fear of failure while continuing our practice of making enhancements around a core of strong technical capabilities. I invite you to follow our progress in the future.