

Social and Environmental Value Created through Hitachi's Business

Megatrends and Management that Prioritizes Social, Environmental, and Economic Value

The world is currently facing a number of severe global-scale problems that impact on human society and our way of life, including the over-concentration of populations in cities, shrinking workforces (driven by aging demographics and a low birthrate that are of concern in places like Japan), climate change resulting from global warming, and resource shortages. Accordingly, companies are being called on to play an active role in resolving a variety of societal challenges in the hope of bringing about future societies like those envisaged by Society 5.0 and the Sustainable Development Goals (SDGs).

Based on the Corporate Credo of its company founder, Namihei Odaira, "contributing to society through the development of superior, original technology and products," Hitachi has, since it was first established in 1910, sought to build a sustainable society through its business activities by focusing its efforts on its Social Innovation Business that is helping to resolve societal challenges.

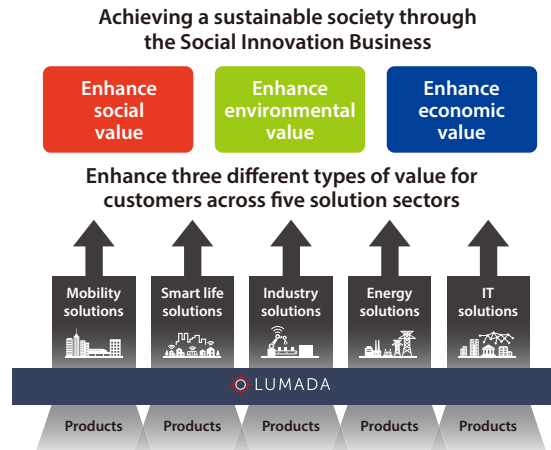
Hitachi announced its 2021 Mid-term Management Plan in May 2019. The plan expresses its intention to become a global leader through its Social Innovation Business and commits Hitachi to running its business in a way that prioritizes social, environmental, and economic value. By vigorously pursuing its Social Innovation Business and focusing on these three values for customers, Hitachi has laid out its intentions to manage its operations in a way that improves people's quality of life (QoL) and creates value for the public, the ultimate recipients of these different types of value.

Approaching Management from a Sustainability Perspective

Since FY2017, Hitachi has been discussing ways of approaching management from a sustainability perspective in its Executive Sustainability Committee chaired by the company president. These discussions have also considered the social and environmental value created by business with reference to the relationships between Hitachi's Social Innovation Business and the SDGs.

Hitachi is involved in a wide variety of business fields and is making a broad-based contribution to the achievement

Figure 1 | Three Forms of Value and Five Business Sectors Highlighted in 2021 Mid-term Management Plan



of the SDGs through collaborative creation with customers. Recognizing the ability of Lumada* to deliver the solutions demanded by the Social Innovation Business that apply digital technology to the real world in the form of cyber-physical systems (CPSs), the Hitachi 2021 Mid-term Management Plan expresses its commitment to building a sustainable society through the supply of solutions in the five different sectors of mobility, smart life, industry, energy, and IT (see Figure 1).

Activities that Boost Social Value

This section provides some examples of how each of Hitachi's key businesses intends to go about generating social value at its various business units and group companies, information that has also been presented elsewhere, including at Hitachi IR Day 2019 (June 2019) that covered the 2021 Mid-term Management Plan as well as management strategies and business overviews for each of the five sectors.

In the case of mobility solutions, Hitachi is currently helping to provide railway services that are safe and secure, comfortable, and place a low load on the environment for 18.5 billion people worldwide per year. By 2021, Hitachi's smart

* The general name for solutions, services, and technologies that utilize Hitachi's advanced digital technologies to generate value from customer data and accelerate digital innovation.

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Figure 2 | Experienced Staff Member with Trainee at Daikin Industries, Ltd.



life solutions business will have assisted with the treatment of a cumulative total of 80,000 cancer patients around the world through the supply of particle beam cancer therapy systems. Meanwhile, Hitachi is also utilizing autonomous driving technology to help eliminate traffic accidents throughout the world, including its contribution to achieving the Japanese government's target of reducing the annual road toll to below 2,500 by the end of December 2020 (the lowest per capita in the world). In the case of industrial solutions, its water industry solutions business is ensuring that 70 million people in different parts of the world enjoy safe and reliable water every day through water and sewage services and technology for seawater desalination. For energy solutions, it manages 25% of the world's substations and provides a reliable energy supply to approximately 1.8 billion people. In India, Hitachi's IT solutions are contributing to the government's Digital India programme by working with local partners to build and operate a platform for next-generation electronic payment services that cover both cash and non-cash payments, with Hitachi Payment Services Pvt. Ltd. operating approximately 60,000 automated teller machines (ATMs) and approximately 1 million point-of-sale (POS) systems in the country as of February 2019.

Another example, one that involves Hitachi's industry solutions business working with a specific customer, uses digitalization for passing on staff expertise to address the coming global shortage of workers in manufacturing, where high skill levels are needed. This project is developing a training system for an air conditioner manufacturing plant of Daikin Industries, Ltd., using cameras and other sensors to digitalize the skills and know-how of experienced staff as they work on processes that require brazing expertise. By comparing their own actions with a model developed using data captured from

experienced staff, trainees are able to see how their actions diverge from the ideal and make use of this in their training. By adopting the system, Daikin Industries aims to halve the amount of time it takes for skills acquisition (see Figure 2).

Activities that Boost Environmental Value

In the Hitachi Environmental Innovation 2050 long-term environmental targets formulated in 2016, Hitachi expressed its desire to realize a low-carbon society, resource-efficient society, and a harmonized society with nature. Hitachi has been formulating three-yearly environmental action plans in which it sets and seeks to achieve specific goals.

The 2021 Mid-term Management Plan includes targets for 2021 of reducing carbon dioxide (CO₂) emissions across the entire value chain by more than 20% and of improving the efficiency of water use and resource use within Hitachi Group by more than 26% and 12% respectively (compared to 2010) (see Figure 3).

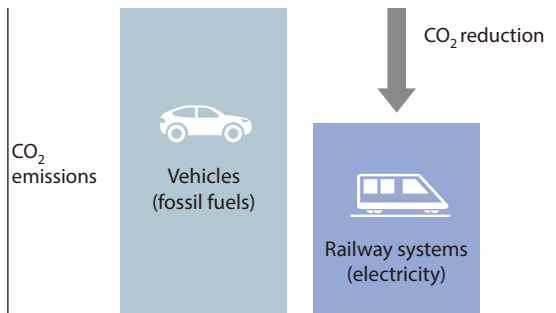
Hitachi also intends to utilize collaborative creation based on Lumada to contribute globally to the mitigation of and adaptation to climate change by supplying a variety of products, services, and solutions to the five business sectors of mobility, smart life, industry, energy, and IT to expand the "decarbonization business" along all steps of the value chain.

Hitachi is helping reduce CO₂ emissions by working to improve the energy efficiency of products and services, and, in the case of solutions, by switching to new alternatives that deliver the same level of value as the past. One example that offers an alternative mode of transportation that deliver the same benefits in terms of mobility is the Honolulu Rail Transit Project in Hawaii, USA scheduled to enter service in 2021. By using rail transportation to provide the equivalent mobility of 40,000 fossil-fuel vehicles that people would otherwise use to commute to work or school each day, it is estimated that the

Figure 3 | Environmental Measures Published in 2021 Mid-term Management Plan

Through the value chain CO₂ emissions	Water use efficiency across Hitachi Group	Resource use efficiency across Hitachi Group
20% or more reduction (compared to FY2010)	26% or more improvement (compared to FY2010)	12% or more improvement (compared to FY2010)

Figure 4 | CO₂ Emissions Reduction Achieved by Providing Alternative Solution



new service will deliver an annual reduction in CO₂ emissions of 210,000 tons. This is equivalent to 12% of Honolulu's total vehicle CO₂ emissions (see Figure 4).

Hitachi is also working to reduce CO₂ emissions at its own factories and offices.

In the case of factories, this includes work on increasing plant utilization by installing and upgrading highly efficient equipment, and progress on utilizing the Internet of Things (IoT) to make energy use more efficient, such as by installing smart meters. In offices, Hitachi is striving to reduce CO₂ emissions by constructing new buildings with high energy efficiency and by consolidating and integrating existing facilities.

Other initiatives are the adoption of the Hitachi internal carbon pricing (HICP) scheme to encourage investment in energy efficiency improvement and greater use of renewable energy.

The HICP scheme will apply to new investments from FY2019 onward, providing a mechanism for pricing the amount of carbon emission reduction in investment decisions and risk management. The aim is to encourage internal decision-making on capital expenditures to take account of decarbonization and to provide incentives to increase investment in low-carbon plants by adding the CO₂ emission reductions resulting from an investment into the traditional energy savings calculation. Through HICP, Hitachi hopes, pre-emptively and at the decision-making stage of capital expenditures, to reduce its exposure to future increases in carbon taxes or new CO₂ emissions trading regimes.

With regard to renewable energy, Hitachi is making purchases from external suppliers and also installing photovoltaic power generation systems at its own factories, offices, and other facilities. Such initiatives are already underway at a number of sites, with Hitachi High-Tech Kyushu Corporation,

for example, working toward obtaining 100% of its electricity from renewable sources in FY2019.

Future Plans

The 2021 Mid-term Management Plan includes a number of examples of what constitutes social and environmental value. Hitachi also intends to provide more information in the future about these forms of value that are created through its different business activities.

The 2021 Mid-term Management Plan also addresses sustainability considerations, including the SDGs and "environment, social, and governance" (ESG) factors and commits Hitachi to running its business in a way that prioritizes social, environmental, and economic value. Based on its corporate mission that has remained the same since it was first established, Hitachi intends to continue both contributing to society through its Social Innovation Business and pursuing new business opportunities that seek to resolve the challenges facing society.

Hitachi has adopted the phrase "Powering Good" to express its focus for the three years up to FY2021. Through its Social Innovation Business, Hitachi intends to devote itself to "doing good," namely improving QoL and building a sustainable society, outcomes that will be welcomed by people everywhere. By pursuing this policy of "Powering Good" through its Social Innovation Business, Hitachi hopes to work with customers to make the world a brighter place.

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