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Aiming for a Sustainable Society

Approach

Hitachi has identified six material topics and 15 sub-material topics as important management issues and pursues sustainable management as the core of business strategy.

The Mid-term Management Plan 2024 focuses on business that emphasizes both environmental challenges and the wellbeing of each and every person. Based on this strategy, we strive to grow and expand our Social Innovation Business.

Hitachi's Social Innovation Business

Approach

Hitachi aims to support people's quality of life with data and technology that fosters a sustainable society, while respecting planetary boundaries and realizing wellbeing for all individuals. The key to achieving this goal is the growth of our Social Innovation Business, which is business that provides solutions for social and customer challenges through co-creation with various partners by leveraging IT x OT x Products and Lumada.

In this section, we discuss examples of our Social Innovation Business at Hitachi.

Hitachi's Social Innovation Business Cases

Activities

Materiality

Advancing a Sustainable Energy Future for All

Hitachi Energy is a global technology leader that is advancing a sustainable energy future for all and supporting the world-wide efforts in reducing the impact of greenhouse gases. The elimination of SF₆ from high-voltage electrical substation equipment is widely accepted as being an important step toward reaching carbon neutrality and enabling more sustainable grid operations. EconIQ, Hitachi Energy's eco-efficient portfolio for sustainability, accelerates the industry's transition away from SF₆ with products, services, and solutions, that are proven to deliver exceptional environmental performance.

Over the last two years, Hitachi Energy has made substantial progress in commercializing high-voltage EconIQ products that eliminate SF₆ with scalable solutions for the lowest carbon footprint. Various high-voltage SF₆-free EconIQ products have been installed across the globe, including 72.5 and 145-kilovolt (kV) Live Tank Breakers, 145 kV gas-insulated switchgear, and 420 kV gas-insulated lines.

An important milestone was the launch of the 420 kV SF₆-free circuit breaker in 2022, a breakthrough technology that unlocks the widest range of eco-efficient switchgear applications and accelerates the energy transition. Another innovation, EconIQ retrofit, replaces SF₆ in installed high-voltage gas-insulated lines with an eco-efficient gas mixture to improve the environmental and life cycle performance of the equipment. The commercialization of SF₆-free alternatives is important as it unlocks new decarbonization pathways for transmission system operators. Hitachi Energy is reinforcing its commitment toward a carbon-neutral energy future through EconIQ. Addressing the growing demand for eco-efficient solutions, Hitachi Energy will continue to expand the

SF₆-free portfolio across the entire high-voltage switchgear range, demonstrating the scalability of the portfolio and strengthening the company's position as a sustainable technology leader within the industry.



EconIQ of Hitachi Energy

Providing Safe, Convenient and Enjoyable Mobility

For Hitachi Rail, Social Innovation is simply using innovation and digital technology to solve society's major problems. In this framework, the MaaS (Mobility-as-a-Service) project has been developed and launched in Genova, Italy. MaaS is an integrated system of transport aimed at optimizing urban mobility through modular solutions, which are more coordinated and efficient. The goal is to answer in a flexible way to the increasingly emerging necessity for mass transport in a sustainable mobility ecosystem.

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Genova is the first city to exploit its potential on a large scale. In detail, Hitachi Rail—in partnership with the municipal administration and AMT (the local Mobility and Transport Company)—has connected 663 buses, 2500 bus stops, the subway line, two funiculars, one rack railway, ten public elevators and two suburban routes of about 50 km of buses to the platform. An ambitious initiative that will allow the municipality, the company and its inhabitants to enjoy a series of technological innovations for the benefit of the quality of life and the environment, whilst accelerating the transition to a more sustainable and connected mobility.

As part of this project, Hitachi Rail developed a smartphone application called “GoGoGe.” It allows users to plan multimodal journeys on all public transport in the city which also includes access to parking lots, e-scooters and car-sharing services with just a single app. The most distinctive feature of the application is that it uses Bluetooth sensors and can be used “handsfree.” Users simply have to turn on the Bluetooth on their smartphones, start the app, and tap the “Activate Ticket” button. There is no need to operate the app as long as they keep the phone in their pocket or bag. Users will be able to check crowding on the buses and optimize their movements. But above all else, users can count on an intelligent payment system that will be charged at the end of the day by applying the best daily rate for the customer.

Through its Social Innovation principle, Hitachi Rail tries daily to deliver value to all the communities we are proudly part of.



Transport Using the Smartphone App GoGoGe

Hitachi Improves Healthy Life Expectancy and Wellbeing

Healthy life expectancy, the number of years a person can lead a normal life without being limited by health problems, is now regarded as one of the most important metrics of the health of a society. In collaboration with medical and pharmaceutical professionals, Hitachi improves healthy life expectancy and well-being by developing advanced diagnostics and therapy, as well as by supporting digital drug discovery.

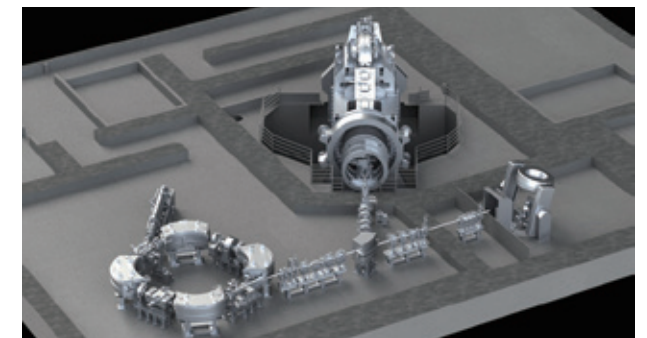
Through our work on measurement and analysis systems in the biomedical and life sciences, we contribute to accurate and reliable in-vitro diagnostics. In the field of clinical chemistry and immunological blood testing, in particular, Hitachi High-Tech analytical systems are used to conduct approximately 20 billion tests per year, supporting the advancement of diagnosis and therapy planning around the world. With regard to new in-vitro diagnostics, we have invested in U.S. company Invivoscribe, Inc., a global provider of testing services mainly for blood cancers, and have begun collaborating to advance molecular diagnostics. This collaboration will enable us to contribute to the early detection of cancer, therapy planning, and drug development by pharmaceutical companies, leading to healthier and safer societies.



Healthcare Innovation Center Tokyo

Hitachi High-Tech opened the Healthcare Innovation Center Tokyo in the Tenkubashi Station/Haneda area. This facility is an integrated laboratory, where we will engage in customer co-creation and knowledge sharing. We will use the innovations created at the center to improve the quality of life for people all over the world.

Hitachi has been actively engaged in advancing radiation cancer therapy and regenerative medicine in therapeutics. In fiscal 2022, Hitachi received a new order for a proton therapy system from the University of Wisconsin Health in the United States. While particle therapy with proton beams or carbon-ion



Proton Therapy Equipment Combined with the Hitachi 360° Rotating Gantry and the Leo Cancer Care Upright System (Artist Impression)

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beams improves the quality of life for cancer patients since the patient experiences no pain during treatment, the system to be installed at the hospital will reduce patient burden further by treating the patient in an upright position. This system will be provided by Leo Cancer Care as an additional option to conventional treatment in the supine position.

To improve the efficacy and sophistication of radiotherapy further, Hitachi and Gunma University, a leading Japanese institution in the field of radiation oncology, jointly established Advanced Particle Beam Medical Science Joint Research Course (Hitachi, Ltd.) in fiscal year 2022.

In regenerative medicine and cell therapy, we initiated joint research with Kyoto University and Rebirthel Co., Ltd. to promote the use of allogeneic T-cell therapy, an effective treatment for cancer. The widespread use of allogeneic T-cell therapy, which is more versatile and allows for the treatment of larger numbers of patients, will require the development of automated cell culture technology that supplies large quantities of cells with consistent quality. Hitachi will contribute to the practical application of this technology through this joint research.

In addition, we built—and are now providing—a platform for the management of both cell and traceability information across the entire value chain of cell and gene therapy products. We will also support operational transformation in supply chain management, help shorten lead times, and contribute to the supply of high-quality cell and gene therapy products.

We actively support digital drug discovery by pursuing the provision and development of digital solutions. For example, we provide AI analytics services to help in the search for biomarkers that indicate the efficacy and adverse effects of drugs. We are also conducting research and development with Axcelead Inc. in drug discovery solutions that utilize digital technology. Our subsidiary, Hitachi High-Tech Solutions, and Keio University in Japan apply materials informatics in joint research to improve the developmental efficiency of small molecule drugs.

Creating a Happy Workplace

The change from the mass production and consumption society of the 20th century to a 21st century society that values the environment and diversity is rapidly occurring. So there is a growing movement to review companies, work styles, and communities from the perspective of happiness or, in other words, wellbeing.

Hitachi established Happiness Planet, Ltd. in 2020 to develop software applications and services that use data to enable people and groups to be happy and productive. By analyzing large amounts of data, we discovered that people in happy and productive groups are more likely to have triangular-shaped connections, whereas those in unhappy groups have V-shaped ones. The Happiness Planet application helps to create such triangular connections, i.e. *Factor X* for happy and productive people.

The importance of triangular relationships



Triangular Relationships Essential for Wellbeing in an Organization

Since organizations tend to have V-shaped or vertical relationships with people, we use digital technology to help establish the triangular relationships that lead to the creation of happy and productive groups. Facilitated by smartphone or PC apps, people are put into groups of three each week in



Smartphone App Screenshot

order to create triangular connections and interactions that lead to mutual understanding.

In fiscal 2022, Happiness Planet provided services to 140 companies and over 10,000 users. This creation of triangular relationships was facilitated in a wide range of organizations in various sectors, from large corporations to small- and medium-sized enterprises, in areas ranging from IT, manufacturing, finance, healthcare, and nursing. The Hitachi Group used this app to create triangular relationships between new employees in fiscal 2022. Use of the app strengthened peer relationships, increased employee motivation, and improved performance in examinations for IT certifications. We have also seen a significant reduction in employee turnover, which has been a problem for many companies recently.

Working with various partners to leverage our strengths in IT, OT, and products, Hitachi will continue to pursue initiatives to create happy workplaces, happy lives, and wellbeing in society.