Corporate Initiatives for Sustainability Growth / Digital Strategy

Hitachi is pushing forward with its Social Innovation Business, which solves social issues together with customers by leveraging IT x OT x Products. Lumada is the name of methodologies, solutions and use cases that promotes the Social Innovation Business by leveraging digital technology. Hitachi will create new value by quickly achieving DX for customers through Lumada. Aiming to expand the Lumada business revenues to 2,650 billion yen during the Mid-term Management Plan 2024, Hitachi will work to expand the Lumada business while training and strengthening digital talent and acquiring assets in North America, a growth area.

Lumada's Customer Co-creation Framework

To further accelerate the Lumada business, multiple sectors and business units in each global region will work together as One Hitachi based on customers co-creation framework to enhance our competitive advantages. Lumada's customer co-creation framework is a method for the realization of circular businesses that increase the value provided to customers while continuously executing a cycle that starts with understanding our customer management challenges (PLAN: upper right quadrant), developing and implementing solutions with IT x OT x Products (BUILD: lower right quadrant), operation (OPERATE: lower left quadrant), and maintenance (MAINTAIN: upper left quadrant) by using data and technology. With the acquisition of GlobalLogic, which possesses design thinking and digital engineering capabilities able to capture customer and social issues and incorporate them into agile solutions, we will continuously and rapidly execute the four-quadrant cycle within Hitachi's business footprint to accelerate growth (click here for cases of Lumada co-creation).

Hitachi Digital—Driving the Lumada Business Globally

In April 2022, we established Hitachi Digital in Silicon Valley in the United States as a control tower for the acceleration of the global development of Lumada. Hitachi Digital leads the formulation and execution of digital strategies to expand the Lumada business globally. In fiscal 2022, the first year of its establishment, Hitachi Digital crossed the boundaries between business units and carried out various activities to accelerate the integration of IT x OT x Products. One representative initiative was the establishment of the Decision & Advisory Board in June 2022. The Board consists of the CEOs of Hitachi Energy, Hitachi Rail, GlobalLogic, and Hitachi Vantara and the heads of the business units of the DSS sector, etc. It leads regular discussion of digital strategies to promote the development and execution of digital strategies across the Hitachi Group, and approximately 20 projects had been launched as of February 2023. Another initiative was "Hitachi Digital Summit 2022," which was held for the first time in October 2022. To accelerate customer co-creation as One Hitachi, 127 executives and leaders of the Hitachi Group from across the world gathered in the United States to energetically discuss issues and exchange opinions. In addition, Hitachi Digital CEO Jun Taniguchi led the team of Chief Lumada Business Officers (CLBOs) who have been assigned in each business field and they took responsibility for the expanding Lumada business in each field and cooperated with each other. As a result, we achieved Lumada business revenues of approximately 2 trillion yen in fiscal 2022, exceeding the initial plan.

Thanks to its leadership creating synergies throughout the group, Hitachi Digital launched 13 new businesses in fiscal 2022 alone, and the expansion of the Lumada business as One Hitachi is progressing steadily.
Corporate Initiatives for Sustainability Growth / Green Strategy

A Green Strategy for Sustainable Growth

Hitachi has developed a green strategy that comprises the two pillars of “GX for CORE” and “GX for GROWTH” as it aims to become a Climate Change Innovator. Promoting GX for CORE and GX for GROWTH in tandem will accelerate the deepening of technology and know-how, allowing Hitachi to continuously improve the environmental value that it offers. Steadily executing this green strategy will accelerate the Hitachi Group's green transformation (GX) and help contribute to the GX of customers across a range of sectors and to the GX of society as a whole.

GX for CORE

Accelerating the Hitachi Group’s green transformation

Major KPIs for Green Strategy Implementation

<table>
<thead>
<tr>
<th>KPI</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon neutrality</td>
<td>Business Sites (Factories and Offices) by FY2030</td>
</tr>
<tr>
<td></td>
<td>Whole value chains (by FY2050)</td>
</tr>
<tr>
<td>Eco-design</td>
<td>Full application for all newly developed products by FY2024</td>
</tr>
<tr>
<td>Resource circulation</td>
<td>Zero(^1) waste to landfill(^2) from manufacturing sites by FY2030</td>
</tr>
</tbody>
</table>

\(^1\) Less than 0.5% \(^2\) Wherever this is compatible with local conditions and regulations

Decarbonization

- We will introduce energy-saving equipment in production lines as well as introduce and procure renewable energy and other initiatives. We estimate that this will allow us to exceed the CO\(_2\) emission reduction target (50%) for the Mid-term Management Plan 2024 with a 64% reduction by fiscal 2024 (fiscal 2010 baseline).
- Since fiscal 2022, we have introduced the third-party evaluation platform EcoVadis\(^*\) to procurement partners, strengthening our engagement with those partners.

Resource–efficient society and harmonizing society with nature

We are conducting activities to minimize our impact on the environment.
- 357 products were identified as subject of Eco-Design (fiscal 2022).
- We achieved zero waste to landfill at 199 business sites (fiscal 2022).

GX for GROWTH

Contributing to the green transformation of customers and society

Major KPIs for Green Strategy Implementation

<table>
<thead>
<tr>
<th>KPI</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amount of contribution to CO(_2) emission reductions</td>
<td>100 million metric tons/year (FY2024)</td>
</tr>
</tbody>
</table>

Decarbonization

- We contribute to the reduction of CO\(_2\) emissions of customers and society through energy transition, electrification and automation, as well as through the use of digital solutions. As of now, we expect to reach 126.1 million metric tons/year as a three-year average in FY2022-2024 (Mid-term Management Plan period).

Resource–efficient society

- Along with well-known examples like the remanufacturing of air compressors and vacuum cleaners using recyclable plastic, we have recently joined the trial of SEVEN-ELEVEN JAPAN and validate the utilization of used EV batteries.

Trial to reduce the environmental impact of a store with SEVEN-ELEVEN JAPAN (2-chome Hikonari, Misato store)\(^*\)

We developed a mobile storage battery (Battery Cube) with a used EV battery to make effective use of power generation from solar panels installed at the store. We expect energy management combined with in-store energy-saving equipment and air conditioning to reduce purchased power by about 60% and CO\(_2\) emissions by about 70% compared with fiscal 2013.
Our goal is to achieve the sustainable growth of business by firmly supporting co-creation capabilities as One Hitachi for each sector by developing enabling technologies that realize "innovation that addresses the real issues facing society" and drives "innovation that transforms the customer experience." Concretely, we are developing future Lumada solutions by taking a backcasting approach in R&D focusing on technology trends. Furthermore, we are supporting co-creation with customers in each sector through NEXPERIENCE, Hitachi’s original co-creation methodology. In addition, we are looking to solve society’s and our customers’ challenges by incorporating leading-edge technologies such as generative AI and future technologies for Hitachi’s growth through start-up investments by Hitachi Ventures.

We protect our enabling technology looking at technology trends and analyses of the competitive IP landscape to strategically build “value-driven” intellectual property portfolios based on customer benefit that our customers seek. We also provide global support to expand Lumada solutions in each sector by acquiring the patents needed to develop Lumada solutions for customers and the relevant market.

Achieving Sustainable Growth through the Development of Enabling Technology

We are capturing the issues and changes in society to backcast and drive innovation in the markets and businesses that can benefit from Lumada solutions. In relation to an “environmentally neutral society,” a “society with a 100-year active life span,” and the “co-evolution of digital technologies, people and society” – challenges that need to be resolved by 2050—we will work toward solution for our customers’ future challenges through start-up investment and joint research with leading research institutes and universities. For example, for “co-evolution of digital technologies, people and society,” we are supporting human intellectual activities with generative AI and driving innovation to increase the efficiency of such activities, having also created the third “HV Fund.”

Innovation That Transforms Customer Experience

We are supporting business growth as we facilitate innovative co-creation with customers in all sectors with the aim of solving customers’ management challenges. By using NEXPERIENCE, which systematizes know-how cultivated by Hitachi designers and researchers to solve societal issues, we envision our customers’ future growth together by catching “signs” of changes in society and in our customers. Cooperating with each sector, we will develop digital services that transform customer experience. Moreover, we are leveraging open innovation hubs such as the Lumada Innovation Hub Tokyo and Kyōsō-no-Mori to achieve co-creation with customers globally and support the expansion of Lumada businesses.

Intellectual Property Strategy Supporting Innovation

Our business growth strategies are supported by developing and implementing global value-driven intellectual property strategies and portfolios. Under the leadership of our Chief Intellectual Property Officer, we are enhancing our global IP activities to include acquired and overseas group companies, to support and accelerate group innovation through, for example, globally sharing insights from intellectual property activities around the world. The expansion of Lumada businesses is supported by facilitating the use of group IP portfolios among the group businesses. We are also strategically building intellectual property portfolios in cooperation with business divisions under group strategies. For example, for future Lumada solutions created through backcasting R&D, we develop the appropriate intellectual property portfolio to strategically protect relevant IP including applying for world wide patents and other measures to protect confidential and proprietary technologies.
Global Marketing & Sales leads growth-driving activities to deliver Hitachi’s Social Innovation Business development in global markets by bringing together the combined capabilities of the Hitachi Group for global customers. Collaborating closely with Hitachi regional headquarters and business units so this approach is realized within the Mid-term Management Plan 2024, the function focuses on seven key areas of marketing and sales development, six prioritized growth market segments and partnership development with strategic group customers. It prioritizes a customer-centric approach to growth – responding to and anticipating future customer demand.

Hitachi’s Two Growth Models Led by Global Marketing & Sales

**Model 1**
- Selecting key global accounts presenting immediate opportunity across the Hitachi Group and a strategic fit to our social innovation goals.
- Planning and execution of group account management for strategic partnership development and co-creation (Lumada) opportunities.

**Model 2**
- Identifying and pursuing new business opportunities through group level market segment prioritization and development of segment-specific market solutions from Hitachi’s portfolio.

**Six Prioritized Growth Market Segments**

<table>
<thead>
<tr>
<th>Segment</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tech</td>
<td>Financial and Insurance</td>
</tr>
<tr>
<td>Facility Management and Smart Spaces</td>
<td>Mobility</td>
</tr>
<tr>
<td>(New) Energy</td>
<td>Mining</td>
</tr>
</tbody>
</table>

**Case study – Helping Build a Sustainable Smart City**

Hitachi is working in collaboration with NEOM, a giga-project in Saudi Arabia and a key contributor to the Kingdom’s Vision 2030 plan, with the goal of delivering a world-first sustainable smart city, fully powered by renewable energy. Hitachi recently signed an agreement with NEOM’s energy and water company, ENOWA and Saudi Electricity Company to provide three HVDC projects for a total power capacity of nine gigawatts in support of clean energy provision. Ongoing engagements are under way to expand the collaboration to meet NEOM’s vast sustainable development needs across mobility, manufacturing and energy and deploy Hitachi’s digital capabilities to create seamless links between applications and services.