

Realizing Sustainable, Innovative Management

Hitachi's Approach

Trends in Society and Hitachi Group Identity

Society is today undergoing great changes and faces a range of challenges, from energy and environmental issues to water scarcity, rapid urbanization, an aging society, insufficient infrastructure, and security. The Hitachi Group's Corporate Credo is to contribute to society through the development of superior, original technology and products. To accomplish this mission, we uphold the values of Harmony, Sincerity, and Pioneering Spirit that comprise the Hitachi Founding Spirit. Our Group Vision was created based on this mission and these values to express what the Hitachi Group aims to become in the future. Together, these three elements—Mission, Values, and Vision—make up the Hitachi Group Identity.

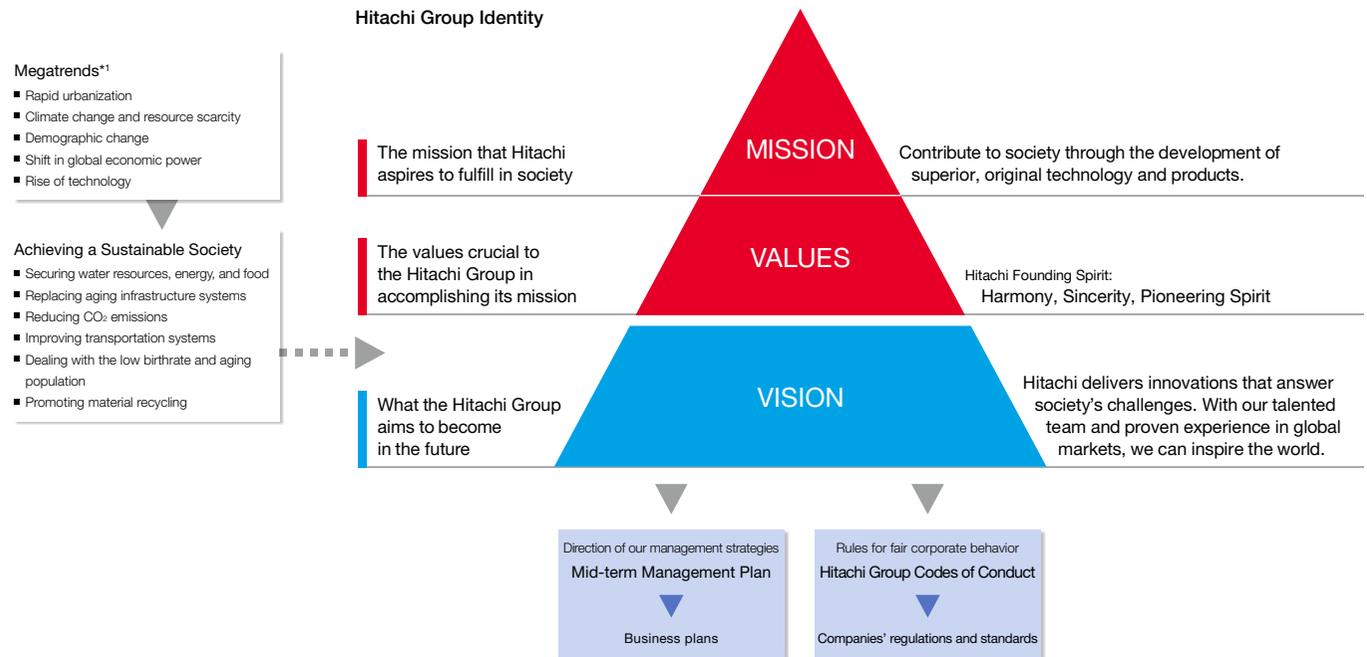
Based on our Group Identity, and continuously considering

the next generation, we promote corporate activities informed by sensitivity to the needs of a changing society. Our Mid-term Management Plan is the action plan we define to realize the Hitachi Group Vision; by integrating our management and sustainability strategies, we seek to enhance the effectiveness of this approach.

The implementation of our plan is a way for us to fulfill our

responsibilities as a good corporate citizen through robust, diverse governance; the pioneering spirit and strong ethical stance of our employees; and operations that help address social issues. We operate and pursue our activities in line with the Hitachi Group Codes of Conduct, the guidelines for ethical behavior and decision-making shared by all executives and employees of the Hitachi Group.

Trends in Society and Hitachi Group Identity



*1 As identified in "Five Megatrends and Possible Implications," published in 2014 by PwC.

Sustainability Strategy and Management

▶ Executive Sustainability Committee Initiatives

In April 2017, Hitachi, Ltd. launched the Executive Sustainability Committee to discuss and reach decisions on the Group’s sustainability strategy. The committee comprises President and CEO Toshiaki Higashihara and other members of the Senior Executive Committee, along with the CEOs of various business units (BUs).

Each BU has assigned sustainability strategy promotion officers to strengthen the measures and organizations needed to help achieve the Sustainable Development Goals (SDGs) and promote sustainability. In fiscal 2017, discussions were held to deepen understanding of sustainability and the SDGs and to clarify the relationships between our major businesses and the SDGs from the standpoint of opportunities and risks. From fiscal 2018, we will pursue new business opportunities centered on social issues.

▶ Sustainability Management Structure

In October 2013, the CSR Division and the Environmental Strategy Office at Hitachi, Ltd. merged to form the CSR and Environmental Strategy Division.

Aiming to help realize a sustainable society, in April 2017 we created the Executive Sustainability Committee and reorganized the promotion structure it heads. The committee is responsible for assessing the impact that the company has on society and responding to stakeholder expectations by building long-term corporate strategies through business activities with a focus on environment, society, and governance, as well as conventional corporate social responsibility (CSR) activities. In April 2018, the CSR and Environmental Strategy Division was renamed the Sustainability Promotion Division.

To promote sustainability policies and activities across the Group, Sustainability Promotion Meetings were convened to work with sustainability strategy promotion officers from the

various business units and Group companies using the Sustainability Promotion Division as a secretariat. As well as holding regular CSR Corporate Meetings with corporate-related departments at Hitachi, Ltd., the Sustainability Promotion Division also organized CSR Manager Meetings with the CSR departments of business units and Group companies. In addition, the committee held regular Regional CSR Meetings for regional headquarters outside Japan to share a common direction and promote sustainability strategy.

To fulfill our social responsibilities, as well as to seek sustainable growth as a global company, we conduct stakeholder dialogue on a worldwide basis in cooperation with our regional headquarters and take a proactive approach to incorporating global social issues into our management strategy while continuously striving to improve the quality of our management.

Sustainability Strategy Promotion Structure



Hitachi's Social Innovation Business

We work with stakeholders to recognize issues society and our customers face, including global environment problems, and are contributing to the resolution of social issues through our Social Innovation Business, which combines advanced IT with infrastructure technologies developed over many years.

In May 2016, we formulated our 2018 Mid-term Management Plan, which will culminate in fiscal 2018. Under the plan, we aim to become an Innovation Partner for the IoT Era centered on our Social Innovation Business, seeking to expand the sales ratio of frontline operations that develop and deploy services meeting the diverse needs of global society to 40% and to increase our overseas sales ratio as a whole to 55%. With the former ratio reaching 39% and the latter 50% as of fiscal 2017 end, we are making steady progress toward our targets.

We will expand our frontline operations by evolving and enhancing our Social Innovation Business through digital technology and promoting it overseas in the focus business domains of “power and energy,” “industry, distribution, and water,” “urban,” and “finance, social, and healthcare.”

We will continue to provide optimum solutions to society's issues with advanced network technologies that are capable of connecting social infrastructure, products, and people.

 Social Innovation Business

 2018 Mid-term Management Plan

 Progress of the 2018 Mid-term Management Plan

Focus Business Domains and Key Initiatives



Power/Energy

Transition to distributed power supply utilizing IT

- Microgrid, regional energy management
- Renewable energy

Investment Focus

- Strengthening grid and engineering
- Predictive maintenance



Urban

Improvement of quality of life in communities

From rail as a service to outcome delivery

Investment Focus

- Development of urban solutions
- Expansion of the rail business area



Industry/ Distribution/Water

Use “Lumada”^{*1} IoT platform to optimize value chains for industry and distribution

Investment Focus

- Strengthening engineering
- Predictive maintenance
- Optimized factory



Finance/Social/ Healthcare

FinTech, My Number Healthcare service (platform)

Investment Focus

- Strengthening healthcare informatics

^{*1} Hitachi's open and highly versatile IoT solution platform using software technology to obtain new information from integrating and analyzing data and running simulations.

The Key Social Challenges Hitachi Faces

Hitachi's Social Innovation Business and Sustainability

In 2015, the United Nations announced 17 Sustainable Development Goals (SDGs) to be achieved by 2030, including goals for ending poverty, fighting inequality and injustice, and tackling climate change. The SDGs are not just a blueprint but a comprehensive action plan for businesses, governments, and communities to support the shared prosperity of people and the planet. Organizations are expected to develop long-term frameworks and take ownership of this push for sustainability to realize the SDGs and create a better world.

Hitachi considers responding to these challenges to realize a sustainable society and improve quality of life to be the aim of our Social Innovation Business and a source of sustainable growth.

Accordingly, through innovative solutions and products from our Social Innovation Business, we will strive to create economic, social, and environmental value as part of our management strategy. We will also reduce negative social and environmental impacts resulting from our business and seek a deeper understanding of business risks arising from social and environmental changes to ensure greater robustness against them.

Along the way, in response to rising interest in corporate ESG initiatives, we will proactively disclose information to our stakeholders about our efforts toward achieving these SDGs.

By proactively responding to social issues, Hitachi contributes to the achievement of all SDGs through its responsible corporate conduct and its Social Innovation Business.

Corporate Commitment

Business Strategy

Hitachi contributes to the achievement of all SDGs both directly and indirectly through its business activities.

Identifying Key Social Challenges

In fiscal 2017 Executive Sustainability Committee meetings chaired by President and CEO Toshiaki Higashihara, the committee members considered the 17 SDGs, and the opportunities and risks they represented, and identified the 11 Goals that pose the most important social challenges for Hitachi: 5 Goals where Hitachi can make significant impact through its business strategy, and 6 additional Goals relevant to its corporate commitment to society, cutting across all areas of business and management strategy to affect Hitachi's very sustainability as a company.

Embracing the belief that Hitachi can contribute broadly to the achievement of the SDGs through a wide range of business activities, the company is also investigating options for supporting the remaining six Goals in the short to medium term. We are committed to supporting efforts to reach all SDGs, both directly and indirectly, especially in terms of the interaction and interdependence between them.

Tackling the SDGs with Our Business Strategy

To select the SDGs where Hitachi can make the greatest impact through its business strategy, all business units (BUs) and key Group companies spent nearly a year reviewing the 17 SDGs and 169 targets in light of the contributions Hitachi could make through its core business, making recommendations to the Executive Sustainability Committee.

Hitachi identified five SDGs where it can have a significant impact: Ensure healthy lives and promote well-being for all at all ages (Goal 3); Ensure availability and sustainable management of water and sanitation for all (6); Ensure access to affordable, reliable, sustainable, modern energy for all (7); Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation (9); and Make cities and human settlements

inclusive, safe, resilient, and sustainable (11). These are the five SDGs best aligned with our business strategy across the four focus business domains of our Social Innovation Business: "power and energy," "industry, distribution, and water," "urban," and "finance, social, and healthcare." We will continue to promote our Social Innovation Business, as we believe that working toward these goals will provide not only growth opportunities but also the chance to create social values through business.

Tackling the SDGs with Our Corporate Commitment

To meet the expectations of our stakeholders and fulfill our social responsibilities, we identified six additional SDGs we can help achieve throughout our operations: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all (Goal 4); Achieve gender equality and empower all women and girls (5); Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all (8); Ensure sustainable consumption and production patterns (12); Take urgent action to combat climate change and its impacts (13); and Strengthen the means of implementation and revitalize the global partnership for sustainable development (17). Hitachi believes that activities to help achieve these targets also have an important impact on sustainable management.

Sustainability initiatives have been developed in cooperation with divisions closely connected to sustainability issues, such as the human resources division and procurement division while ensuring compliance with management policies such as the Hitachi Group Codes of Conduct, the Hitachi Group Human Rights Policy, and Hitachi Environmental Innovation 2050. We will make steady progress by setting specific targets for each initiative.

Dialogue on Sustainability Strategy

In March 2018 a European Stakeholder Dialogue on the subject of "Hitachi's Sustainability Strategy" was held in Brussel, Belgium with 18 participants from international organizations, NGOs, sustainably advanced companies, and other groups. Yukiko Araki, executive general manager of the Sustainability Promotion Division, spoke at the event about the 11 SDGs that pose the most important social challenges for Hitachi. We received a number of constructive comments and suggestions from attendees and will share them with our corporate divisions, BUs, and key Group companies to ensure that they are reflected in our initiatives and further enhance cooperation in setting specific key performance indicators (KPIs).

Comments and Suggestions from the Stakeholder Dialogue

- Hitachi's information and communication technologies could be a key driver for achieving the SDGs.
- Though Hitachi is a B2B company, it needs to understand how its technologies are used by and for end users.
- Awareness of which SDGs a product will help achieve from the product planning stage makes a difference and gives Hitachi a competitive edge.
- Hitachi must rank its target SDGs by priority and incorporate its sustainability strategy into its global management strategy.
- Further external communication is required to specifically explain how Hitachi's Social Innovation Business will help achieve the SDGs.

Road Map for Achieving the SDGs

Creating a sustainable society will make sustainable growth possible for Hitachi too. Though we are mostly known for B2B (business to business) activities, our Social Innovation Business is intrinsically rooted in B2S (business to society). All our products and services are closely linked to social sustainability, and we aim to establish a global position as a B2S company through efforts to help achieve the SDGs.

In fiscal 2017, Hitachi officially launched activities intended to make a concrete contribution toward the SDGs. In phase 1, we began helping our business units and Group companies deepen their understanding of sustainability and the SDGs,

and sustainability workshops were held for the Water, Energy Solutions, and Healthcare Business Units. In February 2018, we held a sustainability symposium, inviting as guest speaker Mr. Toshio Arima, chairman of the board, Global Compact Network Japan. The symposium was attended by about 130 employees and directors, including President Higashihara. We also launched a sustainability newsletter in an effort to promote awareness of SDG initiatives. In phase 2, the Sustainability Promotion Division worked with the planning divisions of business units and key Group companies to clarify how their businesses are linked to the SDGs in terms of opportunity and risk.

In phase 3, starting in fiscal 2018, Hitachi will seek new business opportunities emerging from social challenges. By setting specific quantitative KPIs for social and environmental values provided by our Social Innovation Business, we will monitor progress to achieve further business development. Sustainability initiatives already launched include a requirement to describe “factors allowing a contribution to meeting the SDGs” on the internal application form for a business startup. We are determined to reflect our sustainability initiatives in our next Mid-term Management Plan. Hitachi believes that its efforts toward achieving the SDGs and sustainability will enable the company to grow.

FY 2017

Phase 1



Understand sustainability and the SDGs

Increase understanding through CEO messages, symposiums, workshops, newsletters, and so on.

FY 2017

Phase 2



Classify the existing businesses based on the SDGs

Classify social value/business opportunities and risks of existing businesses based on the SDGs in collaboration mainly with business strategy divisions in each BU/Group company.

FY 2018 and beyond

Phase 3



Explore new business possibilities based on the motives of solving social issues

Achieving a “sustainable society” (the sustainability of society) enables “Hitachi’s sustainable growth” (the sustainability of Hitachi). **Hitachi’s future business opportunities and growth depend on achieving the SDGs and sustainability (solving social issues).** Therefore, apply this concept to our medium- and long-term business strategies.

The measures will be taken in collaboration with business units, major Group companies, corporate-related departments, and global sites (regional strategies).

Our Business Units and the SDGs

Nuclear Energy Business Unit

Contributing to Effectively Using Energy Resources and Reducing CO₂ Emissions



Hidetoshi Takehara

Vice President and Executive Officer
CEO of Nuclear Energy Business Unit

Hitachi's Nuclear Energy Business Unit has been involved in nuclear power plant construction and maintenance for many years, always working to push nuclear technology forward and cultivate key core competencies

Key SDGs for Our Business Unit

Advanced Boiling Water Reactors (ABWRs) that will help Hitachi contribute to Goals 7, 9, 13, and 17.

in our people. Our current activities within Japan include early restarting of nuclear power plants and decommissioning of Fukushima Daiichi Nuclear Plant, and promoting construction planning for Advanced Boiling Water Reactors (ABWRs) for the United Kingdom.

Following the Fukushima accident in 2011, low social acceptance of nuclear power has made it difficult to attract the next generation of engineers. In Japan's neighbor, China, the amount of electricity generated by nuclear power is rapidly increasing. If an accident were to occur in a neighboring country, it could have a significant impact on Japan. Reducing the risks requires enhancing the safety of nuclear plants within Japan; working with the International Atomic Energy Agency (IAEA) to provide information about safety enhancement to neighboring countries; sustainably maintaining the technology and human resources necessary to handle incidents; and continuing to build the experience necessary to support these activities.

We are focusing our efforts on the achievement of Goals 7 and 13 of the SDGs to stabilize the energy supply and address climate change, and Goals 4, 9, and 17 to develop the nuclear industry and human resources. We will continue striving to ensure that the importance of nuclear power in the optimal mix of energy generation is recognized.

Power Business Unit

Contributing to Sustainable Development with Stable Supplies of Energy

The Power Business Unit provides an array of power generation and transmission solutions to companies engaged in the energy value chain. We are particularly focused on meeting the expanding demand for renewable energy, and we claim the top share of the Japanese market for wind power generating systems.

The business environment in which we operate is undergoing a major transformation due to climate change and the growing demand for energy in emerging economies, and business opportunities are growing. A qualitative expansion of renewable sources in Japan, though, will require enhanced adjustment mechanisms to respond to changing



Atsushi Oda

Vice President and Executive Officer
CEO of Power Business Unit

weather conditions and a reinforced power grid. We will respond to such risks as delays in the spread of renewable energy owing to lack of coordination among various systems and the potential damage that power plant construction may cause to the environment by applying the technologies and knowhow developed in building and maintaining power plants. We will also advance the digitization of power systems using Hitachi's IoT platform, Lumada, and actively offer highly reliable and high-added-value solutions to our customers.

We are committed to achieving Goals 7 and 13 and are strengthening our partnerships with national and local governments, electric power companies, and universities to also contribute to the achievement of Goal 17. We will adopt key performance indicators as a way of demonstrating how much Hitachi is contributing to the achievement of energy-related SDGs.

Key SDGs for Our Business Unit

Hitachi's Wind Power Generation System helps achieve Goals 7 and 13.

Industry & Distribution Business Unit

Offering Innovative Solutions to Overcome Worker Shortages



Jun Abe
Vice President and Executive Officer
CEO of Industry & Distribution Business Unit

The Industry & Distribution Business Unit offers a variety of digital solutions for the industrial and distribution sectors by leveraging Hitachi's strengths in

 Key SDGs for Our Business Unit



Providing digital solutions to support our customers' business operations and contribute to the achievement of Goal 9 (Brazing Skills Training Support System for Daikin Industries, Ltd.).

operational technology (OT), IT, and products.

The decline in the working-age population is not just a problem for Japan but is also an issue in China and Europe. In addition to streamlining and automation, the manufacturing and distribution sectors will need to diversify their workforce. This trend represents new business opportunities for us.

Even when production is automated, there are times when the skills and knowledge of veteran workers are required. Our business unit collects and digitizes the skills of expert workers utilizing IoT to help customers efficiently enhance the skills of their workers, develop global human resources, and improve quality.

Business expansion and higher production carry the risk of increasing emissions of greenhouse gases and the generation of industrial waste. We will counter such risks by optimizing production plans, improving quality, and reducing our environmental burden.

Our business unit is primarily engaged in achieving Goal 9. By offering solutions not only in the realm of production but also logistics and maintenance and repairs, we hope to enhance our social and environmental value, thereby contributing to the attainment of Goals 7, 8, 12, and 13.

Water Business Unit

A Stable Water Supply and Sanitary Conditions for People Worldwide

The Water Business Unit globally provides total water environment solutions, including critical infrastructure for potable water, wastewater treatment, and recycling, to contribute to the resolution of water-infrastructure-related social issues.

Recently, we have increasingly been called to not only build large-scale facilities and other water infrastructure but also meet rising operational and maintenance demand to ensure safe and stable supplies of water. The expertise we have accumulated over many years in operational technology (OT) is a strength we can apply—along with IoT and AI—to raise the efficiency of our desalination plants and enhance the reliability of water-supply and sewage-treatment operations. There are

 Key SDGs for Our Business Unit



To help achieve Goal 6, Hitachi is constructing a desalination plant in the city of Basra, Iraq (under construction).



Kenji Urase
Vice President and Executive Officer
CEO of Water Business Unit

risks that high-salinity wastewater generated as a by-product of seawater desalination can increase the burden we place on the environment, but we are developing new technologies and forging partnerships with national and local governments and other stakeholders to reduce risk and support people's lifestyles from a long-term perspective. Through these activities, we aim to build a recurring business model.

The activities of the Water Business Unit are linked directly to the achievement of Goal 6 and have relevance for Goals 9 and 13. By developing the skills of water experts, we also help achieve Goal 4. An increasing number of young Hitachi employees are eager to become engaged in the global water environment business, and we will expand arenas of activity for them as we pursue Hitachi's sustainable development toward the SDGs target date of 2030.

Industrial Products Business Unit

Hitachi's Contributions to the Achievement of the SDGs



Keizo Kobayashi

Vice President and Executive Officer
CEO of Industrial Products Business Unit

The Industrial Products Business Unit inherited the motor business with which Hitachi was founded and globally provides key products that support the Social Innovation Business for trains, offshore wind turbines,

Key SDGs for Our Business Unit



The key products that support the Social Innovation Business and that contribute to Goals 7 and 9.

renewable energy, and water and sewage treatment plants.

We believe that our products and services can contribute to the SDGs, resolving climate-change issues and improving quality of life. The growing demand for renewable energy and more efficient uses of energy and resources represents a major business opportunity. But there are also risks: the cost of renewable energy may exceed the range anticipated for the planned energy mix. Moreover, our business in itself can lead to risk as the volume of industrial waste may temporarily rise as facilities are replaced. Our business strategy will include measures to mitigate such risks.

We are proud that we can help achieve Goals 7 and 9, in particular, with our main products and services. We are also contributing to Goal 4 through our training programs at our production sites in China and India. Our business strategy already incorporates measures to contribute to the achievement of the SDGs, and we are now discussing what are the products and services that only Hitachi can provide and that will lead not only to the sustainable development of society but also to Hitachi's long-term sustainability.

Building Systems Business Unit

Providing Products and Services That Realize Safety, Security, and Comfort

Our business unit recognizes many pressing social issues including deterioration of equipment in highly urbanized countries and regions, labor shortages in aging societies, and increased incidence of natural disasters due to climate change. We see business opportunities in two areas in particular: first, reducing the energy consumption of building equipment such as elevators and escalators, lighting, and heating, ventilation, and air conditioning (HVAC); and second, providing safety, security, and comfort—an area seeing increasing interest.

Elevators tend to fade into the background, but even the healthiest person notices the inconvenience of climbing ten or more flights of stairs on foot when one goes

Key SDGs for Our Business Unit



Smart building services to help achieve Goal 11.



Hideaki Seki

Senior Vice President and Executive Officer
CEO of Building Systems Business Unit

out of service. Particularly in today's aging societies, such outages must be avoided. We have been networking building equipment such as elevators in Japan for 20 years now, detecting malfunctions and minimizing the impact on daily life through data analysis and preventative maintenance. Indispensable to resilient, sustainable communities offering safety, security, and comfort, our products and services are in themselves contributions to achieving the SDGs.

Goal 11 is a particular focus of our business, and we also support Goals 9 and 13 through environmental and technological initiatives. Our contribution to Goal 8 is the employment created by our global expansion, workstyle reforms, and efficiency gains through IoT and AI.

Railway Systems Business Unit

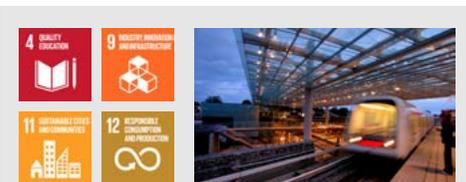
Resolving Social Issues Through Better, More Efficient Transportation



Alistair Dormer
Senior Vice President and Executive Officer
CEO of Railway Systems Business Unit

Hitachi's Railway Systems Business Unit is a fully integrated global provider of rail solutions with a presence in 27 countries. The rail sector is intimately connected to everyday life, putting it in a unique position to offer business

 Key SDGs for Our Business Unit



Railway solutions like those used on the Copenhagen Metro help achieve Goals 9 and 11.

solutions to social issues. As society seeks for ways to ease congestion, metro trains and monorails become increasingly attractive. Between cities, too, high-speed rail is an environmentally friendly alternative to car and air travel, producing 3 to 5 times less CO₂ per passenger kilometer.

Delays in production and reliability issues have the potential to undermine the unit's operations. To ensure that we deliver on our contracts and promises, we are implementing efficient production facilities, effective project management, robust testing and commissioning, and stringent quality assurance and control. Energy shortages and climate change are other risks that affect the unit.

The SDGs underpin everything we do. Our Business Strategy primarily addresses Goals 9 and 11, while our Corporate Commitment is focused mainly on Goals 4 and 12, although Goals 8 and 13 are also important in this area. Contracts around the world increasingly require proof of sustainability, and this is something we are working on with suppliers and clients alike.

Financial Institutions Business Unit

Solving the Problems of Financial Institutions and Society Through Customer Collaboration

The Financial Institutions Business Unit develops systems and integration services for megabanks, insurance and securities firms, and regional financial institutions across Japan, and is expanding to other countries.

We work closely with our customers to solve social issues in the financial industry, from financial crimes to illiquid "under the mattress" cash storing, as well as the "financial divide" (differences in available financial services) widening both within Japan as the nation's shrinking population ages and in developing areas around the world.

Cash not only creates the risk of money laundering, but is also a burden on the financial institutions that must transport and secure it.



Tsugio Yamamoto
Vice President and Executive Officer
CEO of Financial Institutions Business Unit

We believe Japan will follow other countries and become a cashless society, and that this will be a business opportunity for us.

Cyber attacks are the largest risk we face, and we make all efforts to prevent data leakage, especially of personal information.

All of the SDGs are important to us, but we focus mostly on achieving Goal 9. We also wish to contribute to Goal 8 by promoting better workstyles. Because we are closely connected to social development in terms of financial infrastructure, we have taken the SDGs as a guide for all of our employees in order to contribute to society.

 Key SDGs for Our Business Unit



Solutions that use AI and big data contribute to the achievement of Goal 9.

Social Infrastructure Systems Business Unit

Bringing New Value to the World by Realizing “Society 5.0”



Katsuya Nagano

**Vice President and Executive Officer
CEO of Social Infrastructure Systems Business Unit**

The Social Infrastructure Systems Business Unit provides solutions for customers in the public sector—for example, government offices and local governments—and social infrastructure such as the energy and rail industries.

 Key SDGs for Our Business Unit



An image of the society we aim to realize by contributing to achieving Goals 3, 9, and 11.

As part of addressing the full range of social challenges that depopulation and an aging society will bring, we are trying to contribute to realizing the Japanese government’s “Society 5.0” proposal to solve Japan’s social issues. Most themes of this proposal, including “Extending the nation’s healthy life expectancy” and “Building safe, convenient, and economical next-generation infrastructure,” are related to our business opportunities. When we plan a business, we regard the achievement of the SDGs as one of the guidelines. Then, through our actual business activities, we contribute to solving social issues.

During the “Japanese economic miracle,” our customers found value in high productivity to meet the needs of mass production. However, improving productivity is no longer valuable. We believe that we need to create new value by establishing an approach to providing targeted support that meets individual requirements. We will also treat potential changes in the systems and regulations of countries and regions as risks as we continue to contribute to society through our business.

We believe that contributing to achieve the SDGs is essential for us to survive as a company. Our business mainly contributes to achieving Goals 3, 7, 9, and 11, and, more broadly, Goal 16.

Healthcare Business Unit

Ensuring Healthier Lives for People Worldwide Through Hitachi’s Solutions

A healthy population is the foundation for a sustainable society, and the Healthcare Business Unit contributes to achieving this by providing healthcare equipment and solutions (including diagnostic imaging systems, in vitro diagnostics, particle beam therapy systems, radiation therapy systems, and smart operating rooms) to 80 countries worldwide.

Achieving basic universal health coverage (UHC) across developing countries and emerging powers will require support from international society. This issue is particularly important for developing countries, where around 800 million people lack adequate care today. In developed countries, aging populations are changing the face of healthcare, with



Masaya Watanabe

**Vice President and Executive Officer
CEO of Healthcare Business Unit**

initiatives like value-based medicine in the United States, regional comprehensive care in Japan, and data-analysis services aiming to meet new needs for sustainable social insurance and in-home care.

We aim to resolve these global issues by focusing on Goal 3 of the SDGs: Good health and well-being. This will also require addressing Goals 1 and 2, which call for the elimination of poverty and hunger. The professional development of healthcare providers needed for UHC will also make Goal 4 a necessity. We also contribute to a wide range of other SDGs through partnerships with stakeholders and provision of environmentally responsible healthcare equipment. Going forward, we will approach our daily business conscious of the importance of our work and proud of the contribution we make.

 Key SDGs for Our Business Unit



Hitachi’s smart operating room solution helps achieve Goal 3.

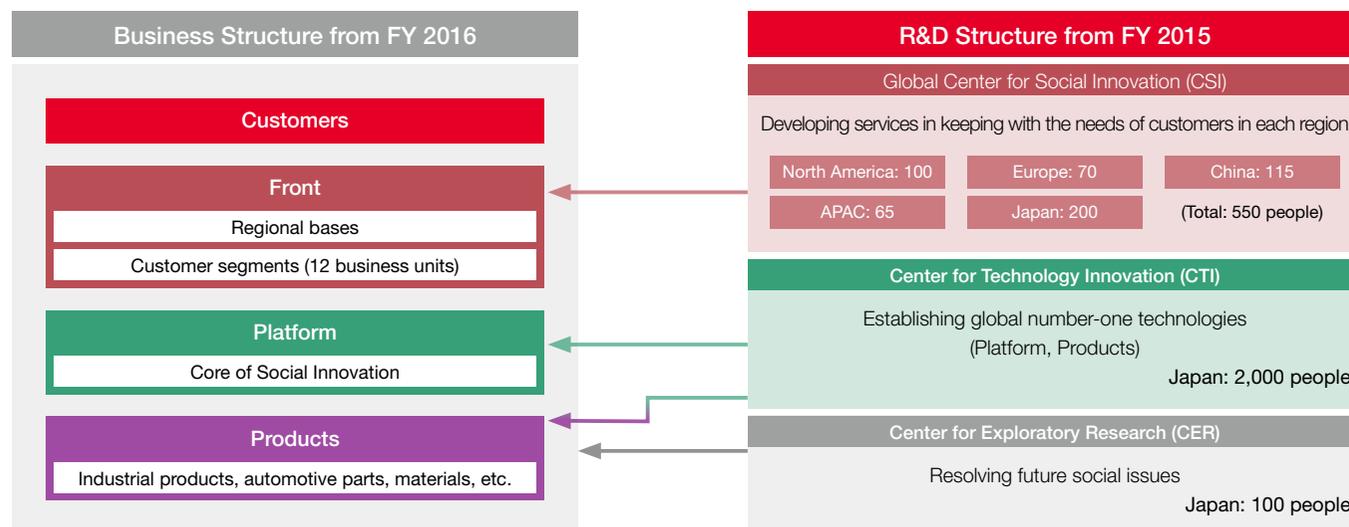
Innovation Management

A Century of Research and Development at Hitachi

The Research & Development Group, which finds its origins as the Research Team of the Hitachi Mine of the Kuhara Mining Company celebrates its centennial anniversary in 2018. The Group has delivered innovation for the future while pursuing cutting-edge research and development activities in each era to execute the Corporate Credo “to contribute to society through the development of superior, original technology and products.”

In this centennial anniversary year, the Research & Development Group reaffirms its commitment to the corporate Mission, and with the Hitachi Values of “Harmony,” “Sincerity,” and “Pioneering Spirit” deeply ingrained in our hearts, is supporting the company goal to become the “Innovation partner for the IoT era” through research and development, and lead future growth through collaborative creation with customers.

Research & Development Group Structure



Customer-Driven R&D and Hitachi's Business Structure

To accelerate collaborative creation with customers, the Research & Development Group was realigned into a more customer-driven research structure in April 2015. Three research laboratories in Japan—the Central Research Laboratory, Hitachi Research Laboratory, and Yokohama Research Laboratory—were consolidated along with the Design Division and overseas research centers and regrouped into the Global Center for Social Innovation (CSI), the Center for Technology Innovation (CTI), and the Center for Exploratory Research (CER). This R&D structure supports the new market-driven business structure created in April 2016 along the lines of the “Front” (the customer interface), “Platform,” and “Products,” to drive our Social Innovation business.

Under this structure, CSI is developing services to meet the needs of regional customers and the 12 Front business units (BUs). To carry out collaborative creation with customers

globally, CSI has locations in five key regions—Japan, Asia-Pacific (APAC), North America, China, and Europe—with about 350 of approximately 550 CSI personnel assigned outside Japan. In April 2017, a new office was opened in London to facilitate collaborative creation in Europe. Furthermore, a global research team, the Insights Laboratory, was established the same month to accelerate the delivery of digital solutions. In December 2017, two new facilities were established in China: a collaborative creation center in Beijing, and the Open Automation Laboratory in Guangzhou, a facility for collaborative creation in the field of industry. CSI will leverage these co-creation spaces to accelerate co-creation globally with customers.

CTI is delivering new value to customers in various sectors by working with the Platform BUs that provide the backbone of Social Innovation, as well as the Product BUs responsible for the highly competitive key components that support services, to generate digital solutions combining OT (operational technology) and IT.

The CER is conducting cutting-edge research to realize a human-centric society that pursues the fundamental human goals of “outcomes and well-being,” working in collaboration with various research institutions to resolve future social challenges.

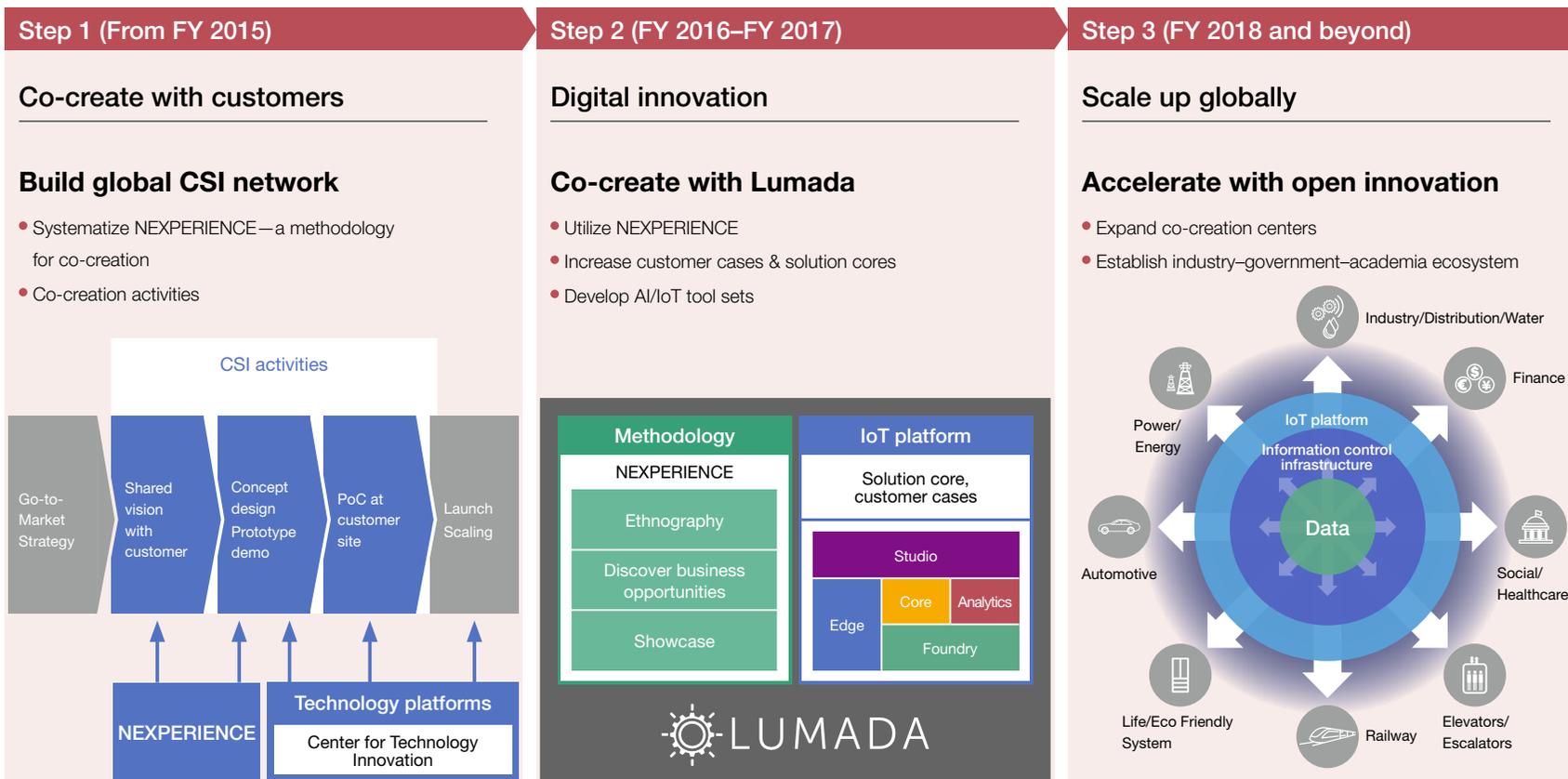
Recognition of Social Responsibility > Realizing Sustainable, Innovative Management

R&D Initiatives Toward Creating New Value Through Hitachi's Social Innovation Business

In collaborative creation with customers, new value is created by sharing challenges and visions to design a business model, and by actualizing that model through verification and simulation. This requires an open and secure platform that connects the systems of many stakeholders. To realize this, Hitachi launched the Lumada IoT platform and began offering services

in fiscal 2016. In co-creation using Lumada, the Research & Development Group is using NEXPERIENCE, a systemized methodology for collaborative creation, to enhance Lumada customer cases and solution cores. By resolving our customers' issues, we aim to not only deliver satisfaction to our customers but also strengthen our core technology. Further, a positive cycle of gaining insights into potential new business areas has also begun, building on customer cases.

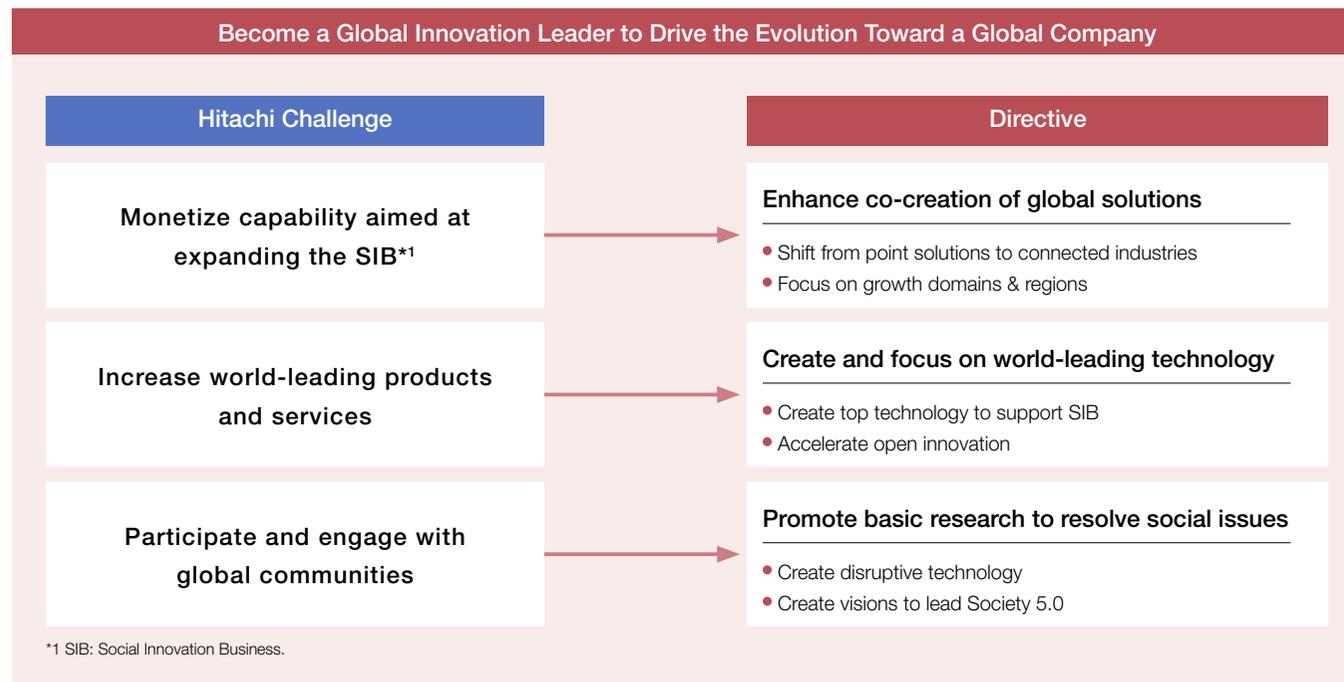
To extend these initiatives globally, the Research & Development Group will be promoting Open Innovation through activities such as building innovation ecosystems through industry–government–academia collaboration.



R&D Directives for Fiscal 2018

The Research & Development Group has a variety of ongoing initiatives as part of its mission to become a global innovation leader and drive Hitachi's evolution toward a global company. The three specific challenges the group has set for itself are "Monetize capability aimed at expanding the Social Innovation Business," "Increase world-leading products and services," and "Participate and engage with global communities." Three directives have been established to ensure that these challenges are overcome.

R&D Directives for Fiscal 2018



▶ **Enhancing Co-Creation of Global Solutions**

Shifting from Point Solutions to Connected Industries

To further enhance collaborative creation with customers, the Research & Development Group intends to shift its focus from developing point solutions for individual customers to providing "Connected Industries" solutions. These will connect the various solutions provided to customers in different industry sectors to deliver even greater value. One concrete example is connecting SME customers in the manufacturing field with financial institutions, to manage and share global supply chain

information. Digitizing customer orders to suppliers using a blockchain platform will not only improve efficiency in procurement and inventory management but will also enable financial institutions to swiftly make real-time decisions on matters such as settlement and financing. Further, the Research & Development Group will be strengthening initiatives addressing growth areas and social challenges in each global region, to contribute to the expansion of Hitachi's global solutions business.

Focusing on Growth Areas and Regions

The Research & Development Group is focusing on Hitachi's four focus business domains of "power and energy," "industry, distribution, and water," "urban," and "finance, social, and healthcare" according to the individual needs of each global region in terms of growth areas and challenges in that society.

CSI-APAC is focusing on the industry, finance, and social areas, working to create a digital infrastructure business in collaboration with governments. In Thailand, it is moving forward with the creation of a digital business centered on manufacturing.

CSI-North America is focusing on the industry and finance areas, with plans to expand from maintenance to mobility services, as well as blockchain verification and business development.

CSI-China is focusing on the healthcare and urban areas, developing its digital businesses in response to the "Healthy China 2030" policy, and aims to expand in elevator and escalator installation and maintenance and digital solutions.

CSI-Europe is focusing on the urban area as the railway business expands from rolling stock and signaling to a services business, promoting its Dynamic Headway solution for optimizing operational planning based on people flow analysis.

▶ Creating and Focusing on World-Leading Technology Creating World-Leading Technology to Support the Social Innovation Business

The Research & Development Group is also actively working on creating world-leading technology to support Hitachi's Social Innovation Business. For example, it is developing technology for high-speed railway and traffic management systems, pursuing increased safety, comfort, and convenience, to contribute to business expansion in Europe. In the field of elevator design, flow analysis developed for railways was combined with experience to redesign the elevator carriage and realize the world's fastest elevator. In the industry area, the world's first amorphous motor integrated oil-free scroll compressor that is both compact and highly energy-efficient was developed and launched as a product. We will continue to foster the development of world-leading technology in the areas of autonomous driving, smart manufacturing, AI, and robotics.

In order to create world-leading technology, it is essential to use digital technology and increase the value of Hitachi's OT, IT, and products. To realize this, human resources are extremely important. The Hitachi Group is aiming to increase the number of data scientists it employs to 3,000 by fiscal 2021, and is currently enhancing its training program as well as setting up a "professional community" of top-class researchers and experienced professionals in each area. In this community, the Research & Development Group will play a leading role in further developing core technology and value creation.

Accelerating Open Innovation

To realize innovative technology development that cannot be achieved by one company alone, the Research & Development Group is collaborating with research institutes, universities, the

open source community, customers, and start-ups both within and outside of Japan to build an open research environment to further enhance technology platforms.

In Japan, joint research laboratories were established within the University of Tokyo, Kyoto University, and Hokkaido University in June 2016 to work toward the realization of the "Super Smart Society" (Society 5.0)*¹ proposed by the Japanese government. In April 2017, the Hitachi Kobe Laboratory was opened within the Kobe Biomedical Innovation Cluster as a development facility to achieve practical applications for regenerative medicine. These centers will seek insights into future social challenges and propose visions and innovations that can both resolve those challenges and contribute to economic development. Globally, as well as its links with the University of Michigan around autonomous driving technology, Hitachi has established joint laboratories with three Chinese universities where it is currently working on joint research projects leveraging the strengths of each institution: Tsinghua University for IT, Shanghai Jiao Tong University for materials, and South China University of Technology for manufacturing.

As part of our open source community activity, we are also actively promoting participation in open projects and consortiums in areas such as blockchain and edge computing. In 2016, Hitachi became a premier member of the Hyperledger Project for blockchain technology, an area of rising interest in FinTech and other fields. Additionally, we are one of 46 groups from North America, Europe, and Asia participating in the OpenFog Consortium and play a key role in the Japan regional committee. Aiming to go beyond the traditional boundaries of business and industry to create new value in the edge computing domain, in February 2018, Hitachi joined the board of the Edgecross Consortium, which was established with the goal of contributing to IoT for manufacturing. Additionally, in April

2018, Hitachi established a joint company with Fanuc Corporation and Preferred Networks, Inc. (PFN) to lead the world in developing intelligent edge systems for the fields of industry and social infrastructure. Moving forward, Hitachi will promote open innovation with start-ups through its investment in Geodesic Capital Fund I-S.

*1 Super Smart Society (Society 5.0): A proposal from the Japanese government to create a new type of society. The proposal envisages using AI, IoT, robotics, and other innovations in science and technology and making use of a range of data within society to achieve both economic development and the resolution of social issues, creating a society where all people can live rewarding, comfortable lives.

▶ Promoting Basic Research to Resolve Social Issues Accelerating the Creation of Disruptive Technology

At Hitachi, we believe that disruptive technology is an essential part of driving technological development toward resolving social issues. Successful examples from fiscal 2017 include Ultrasound CT and the CMOS annealing machine based on quantum computing technology.

The CMOS annealing machine, which can process the enormous volume of calculations required to solve combinatorial optimization problems in a realistic time frame to find practical solutions to social challenges constantly increasing in scale and complexity, achieved a world-leading 100,000-bit processing level in June 2018. As a result, to give just one example of its applications, it was able to conduct the calculations needed to determine the optimal routing to ease traffic congestion for 2,000 cars on 160 vertical and horizontal roads.

Creating Visions to Lead Society 5.0

Sharing and reaching consensus on future visions and the creation of disruptive technology will be indispensable for resolving social issues. Through its joint research centers at the University of Tokyo, Kyoto University, and Hokkaido University,

Recognition of Social Responsibility > Realizing Sustainable, Innovative Management

Hitachi is creating visions for Society 5.0. The Hitachi The University of Tokyo Laboratory is addressing urban development and energy systems, the Hitachi Kyoto University Laboratory is addressing anticipated social challenges in 2050, and the Hitachi Hokkaido University Laboratory is addressing regional issues and food and health. All have begun sharing their visions globally. For urban planning in particular, the company is exploring visions of future cities, models for resolving social challenges, and business models that could help achieve the goals of a decarbonized, 100-year life society and regional revitalization. In June 2018, an open forum was held to deepen discussion with stakeholders.

Hitachi believes that these initiatives will also contribute to Goal 17 of the SDGs, “Partnerships for the goals,” and will identify concrete research challenges the results of which can be promoted as sources for sustainable development.

R&D Planning and Budget

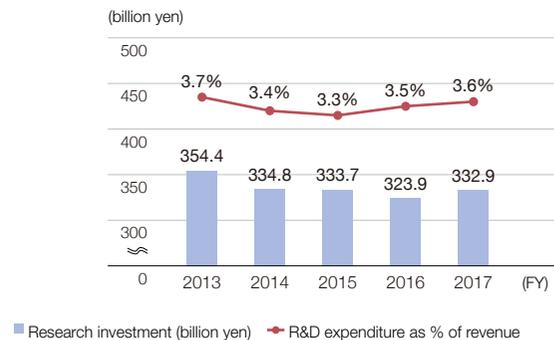
R&D investment by the Hitachi Group is equivalent to about 4% of revenue, and is used to strengthen the four focus business domains and open innovation, focusing on our Social Innovation Business. Approximately one-fifth of this amount represents the expenditure of the Research & Development Group, which can be further divided into Sponsored and Advanced Sponsored Research from the business units and Hitachi Group companies based on the Business Roadmap, and Frontier and Platform Research based on the mid-long term Technology Roadmap. The aim of Sponsored and Advanced Sponsored Research is to expand and grow core businesses with a target date for practical applications within three to five years. Frontier and Platform Research aims to strengthen collaborative creation with customers and technical platforms, and to create new businesses.

In fiscal 2017, investment in Frontier and Platform Research was concentrated on the four focus business domains identified in the 2018 Mid-term Management Plan—power and energy; industry, distribution, and water; urban; and finance, social, and healthcare—as well as digital solutions (Social Innovation Business using digital technology) that contributed to the evolution of the Lumada IoT platform.

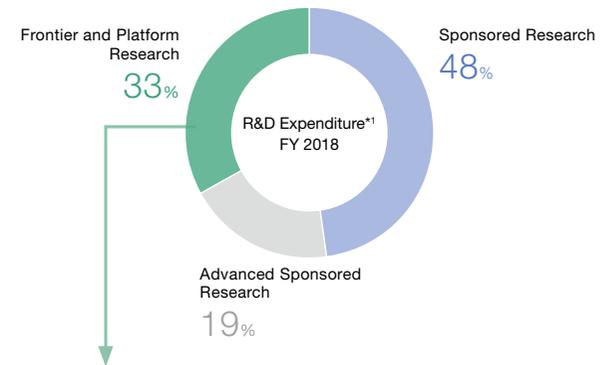
In fiscal 2018, we will strengthen our investment in Frontier and Platform Research, particularly in digital solutions. Further, in the same fiscal year, the Research & Development Group will invest toward accelerating open innovation 1.6 times the amount invested in fiscal 2015.

Key Indicators

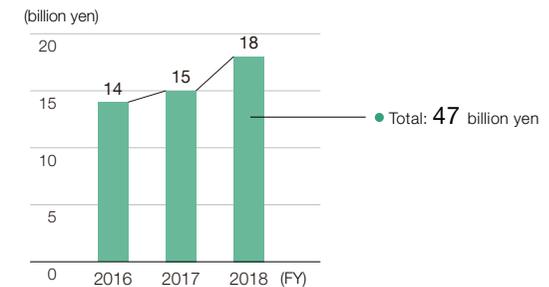
• R&D Expenditure (Hitachi Group)



• Allocation of Research & Development Group Funds



Digital Solutions



*1 Roughly 20% of total Hitachi Group R&D expenditure.

R&D Ethics Reviews

In September 2000, Hitachi established an ethical review committee to oversee the handling of information from human genome analysis. It was the first such committee to be formed by a company manufacturing medical devices in Japan. The majority of the committee members are external experts, and the committee meets two or more times a year. Currently, the committee's activity is governed by ethical guidelines based on government directives outlined in documents such as the “Ethical Guidelines for Clinical Research” and the “Ethical Guidelines for Human Genome/Gene Analysis Research.”*1

Recognition of Social Responsibility > Realizing Sustainable, Innovative Management

All Hitachi business divisions and Group companies whose activities require review are expected to demonstrate a high level of corporate social responsibility, and high ethical standards are expected of researchers and staff as well.

*1 Addressing medical research-related tasks performed at Hitachi, the ethical review committee confirms and audits research goals, legitimacy, rationality of methods, protection of the human rights of subjects, and sincere and appropriate performance of tasks.

Intellectual Property

▶ Supporting Our Social Innovation Business with IP Activities

Intellectual property (IP) is a key element of Hitachi's business strategy. In our Social Innovation Business, we plan and implement IP strategies appropriate to each area of our product and digital solution businesses.

In our product business, where IP strategies are crucial for competitiveness, we are actively working toward obtaining and using patent and other intellectual property rights (IPRs), and enhancing our competitive edge by planning and implementing an "IP master plan" customized to the nature of our business. In recognition of these efforts, in 2017 Clarivate Analytics included Hitachi in its Top 100 Global Innovators for the seventh consecutive year, and the Japan Institute of Invention and Innovation presented Hitachi with its second consecutive National Commendation for Invention.

In our digital solution business, on the other hand, IP

strategies are indispensable for collaborative creation. As collaboration with our customers and partners increases, we believe it is important to use IP to promote partnerships and to build ecosystems. We take a broad view of "intellectual property," which goes beyond patents, copyrights, and trade secrets to include other data and information assets as well. In recent years, attention has been drawn to liabilities and ethical issues arising from the application of artificial intelligence, robots, and autonomous-driving technologies. There is also a growing trend toward data localization, as seen in the European General Data Protection Regulation (GDPR). We will accelerate our IP activities by accumulating findings and knowledge

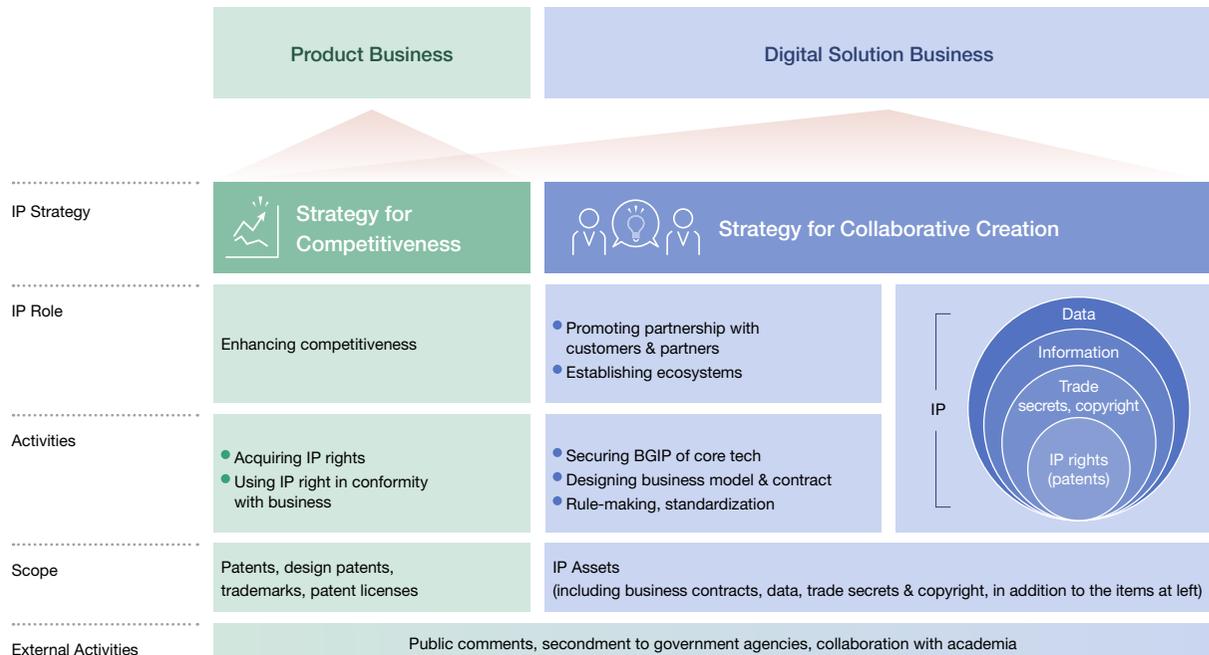
about these new technologies, along with national/regional rules and regulations.

The scope of our IP activities continues to expand as the digital transformation proceeds. We will promote new IP activities, leveraging our strengths built over long years of experience in areas requiring integrated knowledge of management, law, and technology. Through our IP activities toward promoting data use, we will contribute to our Social Innovation Business as well as to the achievement of the SDGs as we aim to realize Society 5.0.



Hitachi Group Codes of Conduct: 6. Protection of Intellectual Property and Brand

Two Types of IP Activities for Social Innovation Business



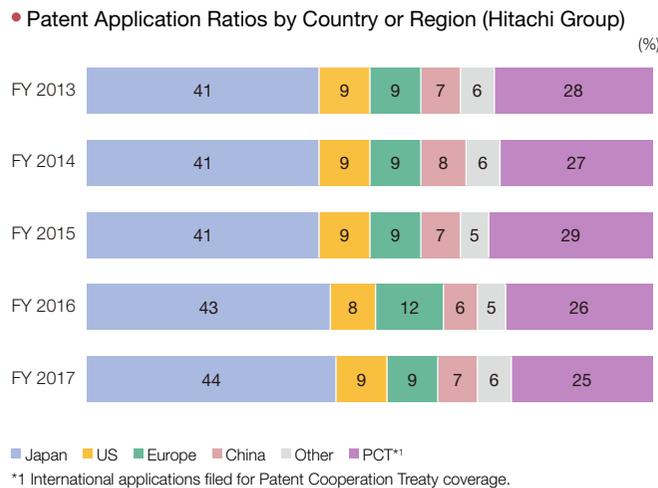
► Supporting our Global Business with IP Activities

One of the IP activities supporting our global operations is the development of a global patent portfolio to ensure worldwide protection for innovations emerging from our R&D and prevent competitors from imitating the technological advantages that set us apart. The portfolio also enables us to demonstrate the advantages of those technologies to customers and provide patent licenses to other companies, spurring further collaborative creation. We increased our patent application ratio outside Japan from 47% in fiscal 2009 to 56% in fiscal 2017, and we will continue to efficiently build and maintain our global patent portfolio.

In tandem with efforts to globalize our R&D centers, we are also globalizing our IP hubs. We currently have IP offices in New York and Santa Clara, California, in the United States, Beijing and Shanghai in China, and London in the United Kingdom to protect the innovations generated through R&D activities outside Japan.

Another key issue is developing globally minded IP human resources. Since fiscal 1964, Hitachi's Intellectual Property Division has operated an international job training system, sending trainees to IP law firms and Group companies in Europe and the United States and to study abroad. In fiscal 2017, three trainees went to the United States and one to Singapore, while one employee was sent to the United States and one to China's Special Administrative Region of Hong Kong to study.

Key Indicators



► Protecting Our Designs and Brand

Protecting Hitachi's designs and brand is crucial for promoting our Social Innovation Business and supporting our global operations. We operate a rigorous regime against such infringements as making and selling counterfeit goods copying our designs or carrying the Hitachi brand and illegally applying for or registering trademarks similar to the Hitachi brand.

Until recently, the bulk of counterfeit goods were manufactured in China, but over the past several years manufacturing methods and sales routes have become more sophisticated and diverse, which has spurred us to take further action.

To stamp out counterfeit goods, it is also important to teach general consumers not to buy them. Hitachi conducts ongoing consumer awareness activities to eliminate counterfeit goods.

► Reward System for Employee Inventions

We motivate employees in the R&D field with an ample reward system for new inventions. To make this reward system as fair and transparent as possible, we set standards to evaluate inventions and disclose these standards to employees. We also have a mechanism for receiving inquiries about the rewards, as well as opinions on the reward system.

We have established a special division within the Intellectual Property Division to plan and operate this system, while an internal Invention Management Committee made up of R&D, legal affairs, personnel management, and IP experts ensures that the system operates effectively across the whole Group. The system includes an invention information channel to promote communication between inventors and the business divisions implementing the resulting patents. Inventors can ask the business divisions for information about patent implementation and check the evaluation standards used to calculate the rewards for their inventions. To ensure transparency and inventor satisfaction, we also set up an Arbitration Committee for Invention Rewards, composed similarly to the Invention Management Committee. Inventors can appeal to this committee if they disagree with the amount they have been awarded.

From fiscal 2005, we have given President's Awards to the top 100 inventors. Since fiscal 2006, we have also given awards to the top 50 young inventors (under 35 years old) based on patent application rewards received within five years of their joining Hitachi.