HITACHI
Inspire the Next

MATERIALITY BOOK 2023

Materiality Book 2023

President's Message

Through Our Strengths in Observation, Measurement, and Analysis, We Will Contribute Greatly Toward Solutions to Societal Issues.

People's lives are becoming more prosperous as the global economy develops and the world becomes more borderless. Meanwhile, the stability of our daily lives as well as of economies and markets is being significantly affected by climate change, resource depletion, economic disparity, poverty, human rights issues, and other risks and societal issues on a global scale, such as infectious diseases (pandemics) and geopolitical issues, so that the future looks uncertain.

In this world of such uncertainty, our capabilities in Observation, Measurement, and Analysis—which are our strengths—produce data from measurement and analysis that is vitally needed in society. We expect those needs to continue growing. We will visualize what we can not see. We will make it understandable. Proper understanding is the starting point for solving social issues. With our business making advantageous use of our strengths, solving customer and social problems and developing and continuously strengthening the ability to respond to these changes in society are essential for the company to achieve sustainable growth and also for society as a whole to achieve sustainability.

Our Group has identified five areas of materiality in light of the Sustainable Development Goals (SDGs), which serve as common rules for the international community and as targets to be achieved. With them we are clarifying what kinds of societal issues we should direct our efforts toward resolving, and how we can best be of use in the world, by making advantageous use of the Group's business characteristics and business models to respond to demands from society.

For example, we are working to provide environmentally-conscious products and services as well as solutions that will reduce the environmental impact of customers and undertaking within the company itself business activities that take energy- and resource-saving and reduction of environmental impact into consideration, thereby contributing to a sustainable global environment. In addition, we take action throughout the value chain for the sustainable development of science and industry through our initiatives in the medical, water and food, and public infrastructure fields to support healthy, safe, and secure lifestyles as well as research and development, higher productivity at production sites, and improved product quality by customers and partners. “Sustainability 2030” declaration is the clear statement of our stance of working from societal issues as a starting point for value creation. The 2024 Mid-Term Management Plan is a plan for directions for the Group to pursue over these three years, formulated by back-casting from our vision for what we want the Group to be in 2030. We seek to solve social issues through our Observation, Measurement, and Analysis capabilities, contributing to the sustainable development of industry, society, and the environment and continuing to grow sustainably as a business enterprise while remaining a corporation that is needed by society in the future.

Takashi Iizumi
Representative Director and President
Hitachi High-Tech Corporation

“Sustainability 2030” declaration and the Stated Aims in Each Business

Sustainability 2030

We, the Hitachi High-Tech Group, will contribute to the realization of "a sustainable global environment", "healthy, safe, secure lives" and "sustained development of science and industry". We will keep growing with our customers and partners by utilizing our Observation, Measurement, and Analysis systems on the basis of a sound management foundation which enables diverse human resources to actively participate and thrive.

Stated Aims for 2030 in Each Business Segment

Analytical & Medical Solutions

As the demand for improved quality of medical care and early treatment increases toward 2030, Hitachi High-Tech will provide molecular diagnostic solutions that make full use of genetic testing and genome information analysis technology in addition to biochemical and immunological testing in in-vitro diagnostics. Our aim is to improve the value of medical care from the patient’s perspective and advance the diagnosis of cancer and other intractable diseases, thereby contributing to improving the quality of life.

Nano-Technology Solutions

There is demand for higher performance and lower power consumption of semiconductors as well as various environmental impact reductions, including reduced power consumption during manufacturing as digitalization progresses in all industries and the use of semiconductors continues to grow. As it moves toward 2030, Hitachi High-Tech will provide solutions for semiconductor manufacturing and reduce its environmental impact, thereby contributing to the advancement of the digital society and the realization of a decarbonized society.

Value Chain Solutions

As we move toward 2030, there is a need to build a circular economy (circular value chain), and we will realize a recycling-oriented and decarbonized society through the creation of ecosystems providing pioneering, multifaceted, and optimal resolution proposals leveraging our front office capabilities and co-creation with customers to resolve issues faced by the engineering chain and the supply chain in various industrial fields that cannot be resolved by individual products alone.

Core Technology Solutions

Hitachi High-Tech will strengthen its fundamental and core technologies as molecule management becomes increasingly important in all industries. We will continue to create measurement and inspection solutions to solve customer issues, thereby contributing to the provision of social and environmental value.

Backcasting from stated aims

2024 Medium-Term Management Plan

Upholding “Sustainability 2030” declaration and Creating Value Driven by Social Issues

Materiality, Action Targets and related SDGs

From the perspective of societal demands and their importance to business, the Hitachi High-Tech Group has identified five themes as materiality to be addressed to solve social issues, based on the Sustainable Development Goals (SDGs), which are positioned as common rules and goals to be achieved by the international community.

Global developments

Technological developments

Hitachi High-Tech Group business foundation advances

	Action Targets	Related SDGs
Materiality 1 Contributing to a sustainable global environment	●Realize a decarbonized society ●Realize a recycling-oriented society ●Realize a society in harmony with nature	
Materiality 2 Contributing to healthy, safe, secure lives	●Expand access to preventive medicine ●Ensure the safety of water and food ●Ensure the safety of social infrastructure	
Materiality 3 Contributing to the sustained development of science and industry	●Development of science and technology ●Achieving resilience at production sites	
Materiality 4 Establishing a sound management foundation	●Realize sound governance ●Ensure product safety ●Realize a CSR-based supply chain	
Materiality 5 Developing and utilizing diverse human resources	●Promote diversity management ●Promote diverse cultivation of human resources ●Ensure healthy, safe workplace environments	

Materiality

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Contributing to a sustainable global environment

13 CLIMATE ACTION

[Action Targets]

1 Realize a decarbonized society

2 Realize a recycling oriented society

3 Realize a society in harmony with nature

[Action Plan]

	Content of Initiative	Social and Environmental Value	FY2022 Results	FY2023 Plan	FY2024 Plan	Action Targets	Responsible Business Segment
1	Provide high-performance, low-cost semiconductor manufacturing and testing solutions	●Contribute to curbing CO_2 emissions increase due to the advance of digital society ●Contribute to curbing CO_2 emissions increase due to power consumption in the manufacture and use of semiconductors	●Continued development of new equipment with improved power savings and processing capacity ●Launched sales of new analysis systems achieving high sensitivity and high processing capacity ●Contributed to higher efficiency in semiconductor material development by providing a combination of analysis and measurement equipment and AI-based MI solutions	●Continue development of new equipment with improved power savings and processing capacity ●Continue sales of existing products	●Initiatives toward the release of new equipment that saves power and improves processing capacity ●Reduce CO_2 emissions per wafer produced ●Reduce the amount of discarded parts by extending the service life of periodically replaced parts	1	
2	Provide measurement and inspection solutions in the R&D of materials to help achieving carbon neutrality	●Contribute to the realization of a decarbonized society	●Continued to provide measurement and inspection solutions ●Initiatives to automate particle measurement and material analysis for batteries, catalysts, electronic materials, and contaminants ●Collaborated with companies, universities, and research institutes in various countries on R&D of next-generation materials	●Continue to provide solutions for the development of next-generation batteries, including fuel cells, solar cells, and all-solid-state batteries, as well as catalyst research and materials development	●Expand the geographic reach of our solutions ●Continue initiatives to improve automation of measurement and analysis functions ●Contribute to high efficiency materials development to curb global warming and achieve carbon neutrality		
3	Provide solutions that contribute to manufacture of safe and inexpensive LiBs that drive electrification and development of next-generation LiBs	●Contribute to the spread of decarbonized mobility	●Continued to develop LiB manufacturing facilities with high mass production performance ●Introduced inline contaminant inspection system to LiB manufacturers. Upstream detection of metal contaminant that leads to defects in the final process of manufacturing contributed to production efficiency and process improvement ●Dispatched engineers to battery manufacturers aiming to develop next-generation LiBs to provide technical support	●Continue to develop LiB manufacturing facilities with high mass production performance: High-speed, high-precision technology verification and development ●Expand the range of LiB manufacturing equipment users ●Introduce inline contaminant inspection system to eliminate defects in the LiB manufacturing process and accelerate the reduction of defect rates, power consumption, and waste materials ●Increase number of engineers dispatched to customers aiming to develop next-generation batteries, and provide next-generation battery manufacturing equipment to enable customers to conduct prototyping and pilot production	●Continue to expand the range of LiB manufacturing equipment users ●Continue to develop LiB production facilities with high mass production performance ●Significantly reduce defect rates by implementing comprehensive DX-based inspection throughout the entire manufacturing process, including upstream ●Expand next-generation battery manufacturing facility users		
4	Create energy, introduce renewable energy, and conserve energy with the aim of achieving carbon neutrality in the Group's global factories and offices	●Eliminate CO_2 emissions (Scope 1, 2)	●Converted to renewable energy ●CO_2 emissions: 27,400 t-CO_2 ●Domestic sites achieving carbon neutrality in FY2022: 0 (cumulative total: 7) ●Acquired CDP "A" rating	●Convert to renewable energy ●CO_2 emissions: 23,000 t-CO2 ●Domestic sites achieving carbon neutrality in FY2023: 0 (cumulative total: 7) ●Regularly invest in environmental equipment	●Convert to renewable energy ●CO_2 emissions: 18,600 t-CO2 ●Domestic sites achieving carbon neutrality in FY2024: 1 (cumulative total: 8) ●Regularly invest in environmental equipment		Common initiatives
5	Support procurement partners in reducing CO2 emissions from products and commercialization aimed at provision to customers	●Contribute to the elimination of CO_2 emissions (Scope 3)	●Began monitoring procurement partner CO_2 emissions: Actual: 558 companies /Number of companies to be monitored: 1,590 (Company requests in FY2022: Approximately 800) Monitoring rate: 35.1% ●Launched support for environmentally advanced partner company*1 CO_2 reduction efforts	●Continue monitoring procurement partner CO_2emissions: Target: 833 companies (accumulated) /Number of companies to be monitored: 1,616 (Company requests in FY2023: 1,189) Monitoring rate: 51.5% ●Continue support for environmentally advanced partner company CO_2 reduction efforts and expand horizontally to other procurement partners ●Launch GHG calculation tool (web system) that enables the collection and aggregation of CO_2 emissions by domestic suppliers	●Continue monitoring procurement partner CO_2 emissions: Target: 1,131 companies (accumulated) /Number of companies to be monitored: 1,616 (Company requests in FY2024: 1,616) * Includes overseas procurement partners Monitoring rate: 70.0% ●Aim to monitor CO_2 emissions by overseas procurement partners ●Expand number of environmentally advanced partner companies ●Aim to develop within the Group and commercialize a GHG calculation tool (web system) that collects and aggregates supplier CO_2 emissions		Common initiatives Others

*1 Partner companies engaged in advanced environmental activities through environmental management systems, etc.

Analytical & Medical Solutions · Nano-Technology Solutions · Value Chain Solutions · Core Technology Solutions

Materiality

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Contributing to a sustainable global environment

13 CLIMATE ACTION

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[Action Plan]

	Content of Initiative	Social and Environmental Value	FY2022 Results	FY2023 Plan	FY2024 Plan	Action Targets	Responsible Business Segment
6	Develop and provide solutions to increase corporate value for customers in the value chain, including lithium-ion battery reuse/recycling and manufacturing for commercial EV fleet management operators and similar companies*2	●Promote the transition to EVs ●Extend the life of lithium-ion battery resources ●Make effective use of valuable metals ●Reduce the environmental impact of production and recycling processes	●Developed remote degradation diagnostic services for on-board automotive lithium-ion batteries, incorporated customer PoC and PoV ●Continued to develop EV transition simulation app facilitating the quantification of CO2 emission reductions and other effects associated with the transition to EVs	●Incorporate customer PoC and PoV into remote degradation diagnostic services for on-board automotive lithium-ion batteries in preparation for commercialization ●Using the app simulating the transition to EVs, incorporate PoV into the creation of proposals for the new introduction of EVs and switching from internal combustion engine vehicles (gasoline and diesel-powered vehicles, etc.)	●Together with partners on a global basis, provide these solutions to the value chain of EVs and lithium-ion batteries, including recycling and energy storage companies as well as car leasing companies and other fleet operators	1 2	Others
7	Develop and provide new manufacturing methods that enable the production of aluminum products using recycled materials	●Contribute to the realization of aluminum recycling in manufacturing	●Commercialized aluminum sheet process method (aluminum hot stamping) using 100% recycled materials, commenced collaborations with partners toward mass production ●In addition to applying 100% recycled aluminum sheets to chairs and snow shovels, we developed bicycle frames in cooperation with a domestic bicycle manufacturer that were exhibited at festivals ●Participated in the research and development of an industrial robot prototype	●Contribute to mass production and sales of bicycles with frames made from 100% recycled aluminum ●Continue participating in the practical review of industrial robots	●Expand products using 100% recycled aluminum sheet ●Expand target products: EV and compact mobility (including two-wheeled vehicles) related body parts, door panels, etc. ●Expand target customers and regions served	2	
8	Initiatives to improve resource and water use efficiency at domestic Group companies	●Resource conservation, waste reduction, and effective use of water resources	●Waste generation: Improved 38.9% per unit*3 ●Water usage: Improved 61.9% per unit*3	●Waste generation: Improve by 37.0% or higher per unit*3 ●Water usage: Improve by 48.9% or higher per unit*3	●Waste generation: Improve by 38.1% or higher per unit*3 ●Water usage: Improve by 49.5% or higher per unit*3		Common initiatives
9	Biodiversity Conservation Initiatives	●Contribute to realizing a society in harmony with nature ●Raise employee awareness and implement activities to revise operations and business from the perspective of global environmental conservation	Conducted biodiversity conservation activities, and provided employees with opportunities to participate ●Began involvement with Takao Forest Nature School activities ●Expanded and maintained insect hotels at the Woodlands of Hitachi High-Tech Science ●Planted and monitored local native species at the Hitachi High-Tech Yasato Forest ●Conducted hybrid biodiversity conservation activities that can be done at home	Continue conducting biodiversity conservation activities, and providing employees with opportunities to participate ●Expand activities at the Takao Forest Nature School ●Prune branches, and maintain and monitor birdhouses at the Hitachi High-Tech Yasato Forest ●Expand biodiversity conservation activities that can be done at home	Promote activities aimed at expanding areas and species for inclusion in biodiversity conservation ●OECM*4 certification for the Woodlands of Hitachi High-Tech Science ●Expand the area of mixed needle and broadleaf forest in the Hitachi High-Tech Yasato Forest	3	

*2 Transportation, bus, taxi, rental car, and leasing companies as well as and other businesses that operate a large number of vehicles for the purpose of moving people and goods.
*3 Base year: FY2010
*4 Natural environment conservation in cooperation with the private sector in areas other than national parks or other protected areas where biodiversity can be conserved.

Analytical & Medical Solutions
Nano-Technology Solutions
Value Chain Solutions
Core Technology Solutions

Action Targets 1 Realize a decarbonized society

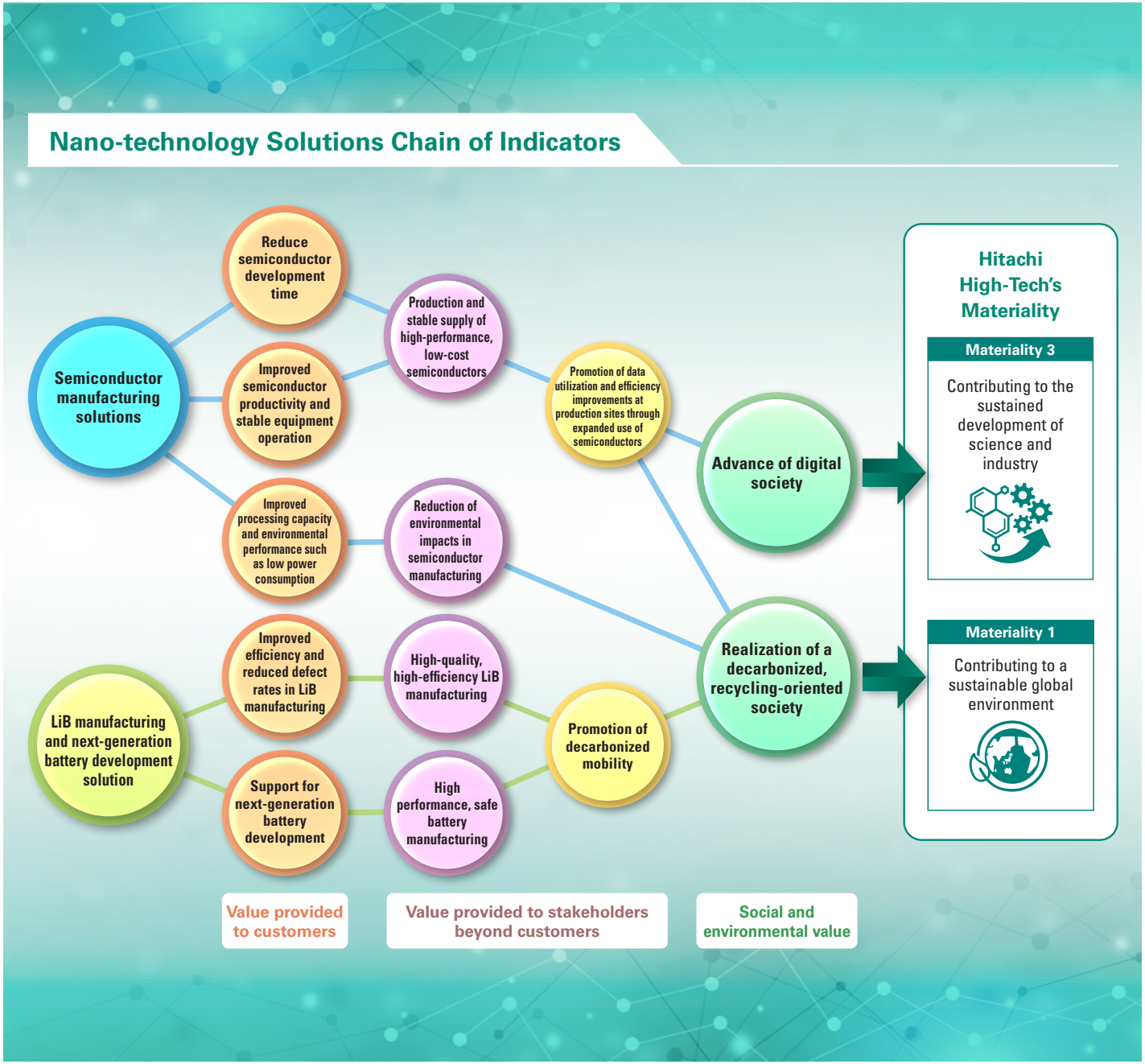
1 Providing high-performance, low-cost semiconductor manufacturing and testing solutions

FY2022 Results

Contributing to digital society decarbonization through efforts toward low-power, high-throughput semiconductor manufacturing in Japan and overseas

As demand for semiconductors grows, increases in power consumption and CO_2 emissions from semiconductor manufacturing is becoming an issue. As a developer and provider of equipment used in the processing, measurement, and inspection procedures of our customers' semiconductor manufacturing processes, we are working to address these issues from the perspectives of both the equipment we continue to manufacture and sell, and the new equipment we are developing. For existing products, we are working to extend the service life of periodically replaced parts and reduce the number of parts scrapped. Newly developed equipment will pursue high-speed processing and reduce environmental impact, including power consumption per wafer.

- In FY2022, we combined our CG7300 CD Measurement SEM for inspecting and measuring semiconductors, with Materials Informatics*1 (MI), which uses AI to enable speedy inspections previously performed by humans, and this technology was adopted by a semiconductor materials manufacturer. The combination of semiconductor measurements and MI solutions using AI to confirm this data is a proprietary technology of Hitachi High-Tech.



- We also launched the LS9600 wafer surface inspection system offering high sensitivity and high throughput, contributing to improved yields and reduced inspection costs associated with the mass production of semiconductor devices.
- Although the supply chain was disrupted by the pandemic, we were able to ensure delivery of parts needed by the customers who use our equipment by increasing procurement sources, thereby contributing to customer business continuity. We are moving forward to increase the number of parts suppliers in preparation for unforeseen circumstances in the future.
- Among efforts to reduce power consumption and increase throughput, in August 2022, we established a new collaborative base, the Nanotechnology Innovation Center Portland, in the United States. This new base will enhance collaborations with customers in each semiconductor manufacturing process, reducing time required for development and creating solutions that improve production and yield, thereby contributing to future CO_2 emissions reductions and power conservation. From a macro perspective, by contributing to the production of high-performance, low-cost semiconductors, we also contribute to the reduction of CO_2 emissions associated with the advance of digital society.

LS9600 wafer surface inspection system

Initiatives for FY2024

In addition to the US, co-creation centers will be established in Taiwan and South Korea. Strengthening relationships with customers to reduce environmental impacts

Following the establishment of a base in the US in 2022, we will establish bases for collaborative creation with customers in Taiwan and South Korea. Up to now, customers were required to bring target wafers to Japan for inspection and measurement. Establishing local bases will drastically reduce travel time and effort, as well as lower energy consumption and CO_2 emissions. We will create and provide new value by shortening the distance between Hitachi High-Tech and local customers and deepening our relationships with them at these new collaboration bases.

*1 For details, please see Materiality 3 Action Plan 1.

2 Provide measurement and inspection solutions in the R&D of materials to help achieve carbon neutrality

FY2022 Results

Supporting the development of next-generation materials to curb the acceleration of global warming

Amid concerns about the rapid advance of global warming, there is a need for the highly efficient development of next-generation materials in order to achieve carbon neutrality. In particular, the research and development of next-generation batteries, catalyst research aimed at realizing a hydrogen society, and bioplastic development are advancing all over the world to realize carbon neutrality. In the manufacturing of solid-state batteries, the development of which is also advancing within next-generation batteries, stabilizing material quality is an important issue for mass production. Hitachi High-Tech contributes to next-generation battery material quality control through the provision of analysis and testing equipment. Additionally, hydrogen is also attracting attention as a next-generation energy source that emits no CO_2. However, to realize a hydrogen society, we must first start with hydrogen production, and in order to produce and use hydrogen, a catalyst is required. Our analysis and testing equipment is also used in catalyst research. Further, there is an urgent need for the development of biodegradable and biomass plastics as alternatives to microplastics, which have a concerning impact on marine ecosystems. In developing bioplastics, one major challenge is to find materials that are safer and have less environmental impact. In all fields, material development is the vital key to protecting the global environment and mitigating the effects of global warming. Hitachi High-Tech will promote these initiatives in collaboration with companies, universities, and research institutions in various countries by leveraging our core technologies, which include electron microscopes, analytical systems, and analyzers, as well as Observation, Measurement, and Analysis technologies and knowledge.

Initiatives for FY2024

Material development efforts aimed at halting the advance of global warming

Amid a torrent of global issues, including energy shortages, global warming, and the realization of a recycling-oriented society, demands for the development of materials that resolve these challenges are becoming increasingly varied and complex. Although the development of materials targeting these issues is becoming increasingly difficult, we will continue to provide equipment to a wider range of areas, automate data analysis, and improve functionality, thereby contributing to the efficiency and acceleration of materials development aimed at resolving these issues. In developing increasingly complex materials, it is important to accelerate both data analysis as well as how the date is interpreted. Hitachi High-Tech will continue contributing to speeding up the interpretation of data using our proprietary MI solutions*1 utilizing AI-driven materials informatics.

3 Provide solutions that contribute to manufacture of safe and inexpensive LiBs that drive electrification and development of next-generation LiBs

FY2022 Results

Contributing to the development and manufacture of next-generation batteries

As the shift from gasoline- and diesel-powered vehicles to EVs accelerates, so does the development of next-generation batteries. Hitachi High-Tech continues to provide LiB manufacturing facilities and next-generation battery prototype manufacturing facilities, and dispatches engineers to manufacturers that have newly entered the next-generation

battery manufacturing market to provide technical support. In the field, after establishing relationships of trust, we listen to the expectations of manufacturers and propose concepts for manufacturing facilities. In 2022, we provided prototype facilities to some of these manufacturers and have commenced trial operations.

Applications for next-generation batteries are diversifying, and the standards and designs required for next-generation batteries are also undergoing significant changes. In particular, LiBs have been getting larger in recent years, which has led to an increase in materials used and the discovery of numerous safety issues. As defects in large LiBs can result in significant costs and safety losses, reliable defect detection is a necessity for any next-generation battery manufacturer. In 2022, we provided an in-line inspection solution utilizing electron microscopes and X-ray particle analyzers that lowered LiB manufacturing defect rates and facilitates comprehensive inspections. Changing the former random inspection process to a 100% inspection process enables the detection of possible defects in upstream processes. As battery standards and designs undergo major changes, mass production yield rates and other issues are arising. We are currently working with customers to identify defect factors and other issues in the product manufacturing process to prepare for mass production. We are also accelerating collaborations with manufacturers of next-generation batteries, both in Japan and overseas.

Initiatives for FY2024

Strengthening our cooperative structure by increasing the number of engineers dispatched to next-generation battery manufacturers. Aiming to realize a solutions and manufacturing DX that uses data to address contaminant problems

Amid rapidly growing demand for next-generation batteries, there is an urgent need to develop next-generation battery manufacturing facilities that are safe and have a low defect rate, both in Japan and overseas. Going forward, we will increase the number of engineers dispatched, share and quickly resolve issues with customers at next-generation battery manufacturing sites, and contribute to the realization of next-generation battery pilot production in FY2024.

For equipment to be safe and have a low defect rate, there is an urgent need to realize solutions and manufacturing DX that uses data to improve contaminant problems identified during inspections. Hitachi High-Tech will focus on the development of equipment and technologies with the aim of popularizing safer EVs and realizing a decarbonized and recycling-oriented society.

X-ray Particle Contaminant Analyzer EA8000A

4 Initiatives to create energy, introduce renewable energy, and conserve energy with the aim of achieving carbon neutrality in Group global factories and offices

FY2022 Results

Group global CO_2 reduction efforts aimed at addressing climate change and realizing a decarbonized society

Electric power accounts for approximately 97% of the energy used in Group business activities. Converting to the use of renewable energy for electric power is an effective way to efficiently reduce CO_2 emissions. With the aim of realizing a state of zero CO_2 emissions by FY2027, we are promoting the transition to renewable energy power as a top priority for the entire Group, including overseas companies. In FY2021, we introduced an internal carbon pricing system (internal carbon price: ¥14,000/t-CO_2), starting with domestic manufacturing site investments made in FY2022. At domestic manufacturing sites, we promoted emission reduction activities based on continuous investments in energy conservation, the transition to renewable energy electric power, and ongoing use of offset credits. At overseas sites, we explained this policy and the requisite costs, and in the future, plan to formulate and accelerate plans for achieving carbon neutrality.

In addition, the Hitachi High-Tech Group received its first Leadership: A rating from CDP*2 in FY2022 for "best practices in environmental management issues." We were also selected as a Supplier Engagement Leader, the highest rating in CDP's Supplier Engagement Rating (SER) assessment, for the second year in a row. This is the first time we have been selected for this award, which recognizes efforts to reduce greenhouse gas emissions throughout the entire supply chain. Further, we have set targets for reducing CO_2 emissions in Scope 3 and achieving carbon neutrality throughout the value chain by FY2050. For details, please see Action Plan 5.

*2 CDP: An independent non-profit organization based in the UK that researches, evaluates, and publishes information on corporate efforts related to climate change, water, and forests at the request of investors around the world.

Initiatives for FY2024

Accelerating efforts to promote conversion to renewable electricity at domestic manufacturing sites and formulate plans to reduce CO_2 emissions at overseas sites

In July 2023, we will switch to renewable electricity in the Kasado Area, a Group manufacturing base with relatively high CO_2 emissions. We also plan to continue making investments in energy conservation and the use of electricity derived from renewable energy at other sites. We also plan to formulate a CO_2 reduction plan for overseas bases, and for overseas Group companies with relatively high CO_2 emissions, we aim to launch efforts toward the realization of carbon neutrality in FY2024.

Topic

Efforts to improve product functionality and reduce environmental impacts associated with product use

1 The Schottky Field Emission Scanning Electron Microscope SU5000 is a general-purpose scanning electron microscope (SEM) developed to provide novice users with the experience of obtaining beautiful images and the experience of success in being able to learn and master the microscope on their own, while providing expert users with pleasant experiences facilitated by a wide range of functions. All chambers can be opened to the atmosphere for specimen exchange and are designed to minimize specimen size restrictions. Using the low-vacuum mode, it is also possible to observe specimens without electron conductivity, which is difficult with ordinary SEMs. The following innovations have reduced power consumption during operation and standby by approximately 56% and 58%, respectively, compared to previous models.

- The number of rotary pumps for vacuum pumping has been reduced from two to one. In the past, two rotary pumps were required to achieve both high vacuum mode and low vacuum mode, but thanks to an innovative vacuum pumping system, the rotary pumps have been integrated into a single unit.
- The Schottky electron source is a lifetime product and must be replaced by a service engineer. After the work was completed, the service engineer had to perform lengthy manual tasks such as electron source conditioning and aging, but these are now automated. The equipment automatically starts up at night when service engineers are unable to perform work, enabling the equipment to be used the next morning. In addition, in the event of a planned power outage at the facility, even if the user shuts down the equipment completely, the customer can now safely restart the equipment themselves, without the need for a service engineer to help with the start-up.
- Reducing the size of the SEM column and housing the high-voltage power supply, which used to be a separate unit, inside the display unit, reduces footprint by about 33% and contributes to higher processing efficiency per footprint area.

Compared to conventional products, this equipment aims to reduce power consumption and CO_2 emissions in each process. From a macro perspective, in contributing to the production of high-performance and low-cost semiconductors, we are helping to curb CO_2 emissions associated with the advance of digital society. Further, this equipment is used in a wide range of fields to develop micro- and nano-level materials, contributing to the development of next-generation materials for the realization of carbon neutrality.

Schottky Field Emission Scanning Electron Microscope SU5000

2 As the number of specimens tested in hospitals and laboratories is increasing due to the aging of the population, there is a need to process more specimens in a limited amount of time. Our cobas e801 immunoanalyzer used for clinical testing, maintains the same width as the previous model, and within the allowable increase in depth, the test processing speed (throughput) per specimen has been increased to approximately 176% through mechanical system acceleration and optimization.

Accordingly, power consumption per specimen during operation and standby has been improved to 75% compared to the previous model. Further, the optimized flow path length accompanying the higher speed reduce reagent consumption per test to two-thirds of that of conventional models, while also reducing the amount of chemicals used in reagents. In addition to contributing to the reduction of CO_2 emissions associated with electricity consumption, Hitachi High-Tech will contribute to the prompt provision of patient diagnostic results and other data by further accelerating testing speed, while also helping to reduce operator workload by improving the efficiency of testing operations.

Immunoanalyzer cobas e801

5 Support procurement partners in reducing CO_2 emissions from products and commercialization aimed at provision to customers

FY2022 Results

Visualizing CO_2 emissions in the entire supply chain linked to the Group

The Hitachi High-Tech Group is working toward carbon neutrality in its Scope 1 and Scope 2 CO_2 emissions by switching to renewable energy sources and other initiatives, but the challenge is Scope 3, which accounts for the majority of Group emissions. Scope 3 emissions comprise CO_2 emitted up-stream (during the procurement of raw materials and parts) and down-stream (during actual use) in the supply chain. It is difficult for the Hitachi Group to directly reduce these emissions, and impossible to reduce them unless the entire supply chain is involved.

The Group's goal is to achieve carbon neutrality throughout its value chain by FY2050, and reduce carbon emissions 50% by FY2030.

To achieve this goal, procurement partners who cooperate with the Group in various processes, such as the processing and assembling of parts for our products, must understand and cooperate with our efforts to reduce CO_2 emissions throughout the supply chain. To this end, it is essential to create systems and provide support enabling procurement partners to work toward CO_2 reductions to the extent possible without overburdening them. In FY2022, we selected environmentally advanced partner companies from among the Group's many procurement partners, and jointly launched initiatives aimed at considering how we can work together to achieve CO2 reductions. For details, please refer to Materiality 4, Action Plan 3.

Initiatives for FY2024

Visualizing CO_2 emissions per part and establishing an inflastructure facilitating reductions, incorporating GHG calculation tools in applications with the aim of providing them externally

In order to clearly state the amount of CO_2 emitted during manufacturing for each part produced by the Group going forward, we must ascertain the CO_2 emissions of purchased products.
Currently, the Group is making efforts to determine the greenhouse gas (GHG) emissions of all procurement partners involved in the manufacture of our products. In the future, we will launch efforts to ascertain the CO_2 emissions of overseas procurement partners with the aim of visualizing the CO_2 emissions associated with each part. Due to issues including the fact that CO_2 emission intensity differs in each country, a number of steps are required to accurately determine CO_2 emissions in Japan and overseas. We will systematize the calculation of CO_2 emissions in an effort to contribute to the realization of a decarbonized society.

- Global regulations are intensifying as developed countries in Europe and the US raise their reduction targets for 2030 in order to achieve carbon neutrality by 2050. As customer demands for reductions are also on the rise, the visualization and reduction of CO_2 emissions in the supply chain have become a corporate issue for companies to continue business. For this reason, Hitachi High-Tech, and indeed all companies with global supply chains, must work towards these ends.

At present, we cannot respond sufficiently to climate change only through customer efforts to reduce CO_2 emissions. Efficient visualization and management of CO_2 emissions by customers and suppliers will lead to reductions in CO_2 emissions in customer supply chains. This will also enable customers to respond to CO_2 data requests from higher level customers, leading to continued business with up-stream customers.
The Group will first promote internal efforts to collect and compile CO_2 emissions data from procurement partners, systematize and incorporate it into applications, and in the future, provide it to customers, thereby contributing to the understanding and reduction of CO_2 emissions in external supply chains.

Action Targets 1 Realize a decarbonized society

Action Targets 2 Realize a recycling oriented society

6 Developing and providing solutions to increase corporate value for customers in the value chain, including lithium-ion battery reuse, recycling, and manufacturing, starting with commercial EV fleet management companies

FY2022 Results

Contributing to a sustainable global environment at every stage of the value chain

The need for automotive electrification is increasing as we move toward the realization of a decarbonized society. Accordingly, there is a growing need to promote the shift to EVs, extend the life of lithium-ion batteries (LiBs), and effectively utilize valuable metals and reduce the environmental impact of LiB production and recycling processes.
In FY2022, we conducted a proof-of-concept (PoC) and proof-of-value (PoV) using our remote degradation diagnostic service for automotive LiBs to understand the degradation conditions of EV LiB data at the cell level from a cumulative total of several tens of thousands of units in operation. We believe that this service will lead to an environment that maximizes the use of battery life and the reuse and recycling of retired batteries. In FY2022, we also developed an EV transition simulation application that shows the cost and CO_2 reductions that would result from the introduction of EV vehicles. This application is expected to be a tool to encourage EVs in regions and business sectors that have not yet made much progress in EV conversion. We will continue to contribute to the realization of carbon neutrality by developing services and tools that contribute to a sustainable global environment in all aspects of supply chain.

Initiatives for FY2024

Aiming to resolve customer issues throughout the value chain

In countries and regions where diesel trucks are used for agriculture and forestry, switching to hybrid vehicles can reduce CO_2 emissions associated with vehicle use. We will identify issues in each business that owns and operates such vehicles and make proposals to them.

At present, we are proposing this service to car leasing and fleet operators, but in the future, we will propose this service to domestic and overseas customers, while uncovering customer issues throughout the value chain and creating solutions.

Action Targets 2 Realize a recycling oriented society

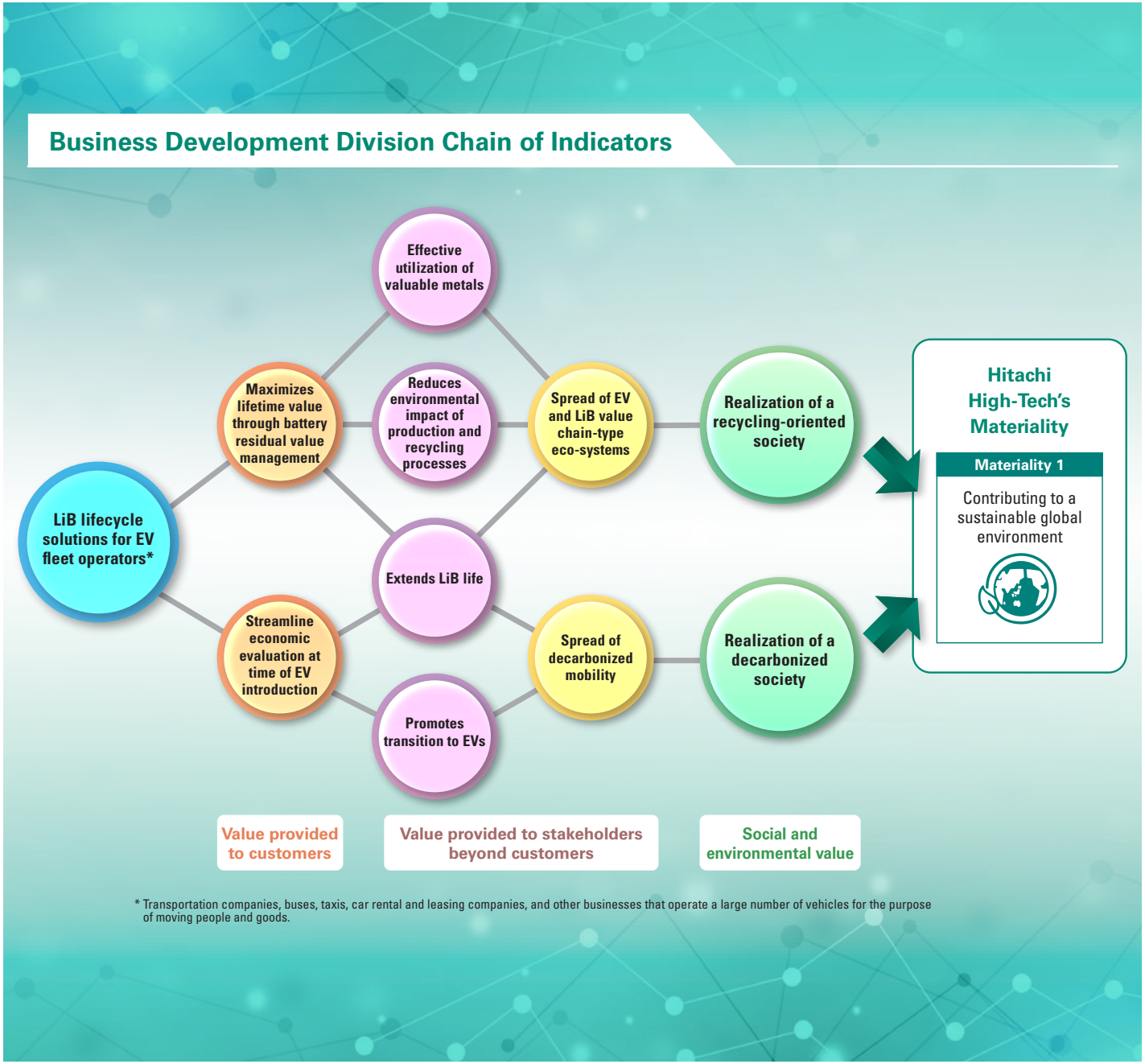
7 Developing and providing new manufacturing methods that enable the production of aluminum products using recycled materials

FY2022 Results

Development of an aluminum hot stamping processing technology using 100% recycled aluminum materials that contributes to a significant reduction in CO_2 emitted during the manufacture and use of aluminum ingots

While conventional aluminum sheet processing involves the use of bauxite to make new aluminum sheets, Hitachi High-Tech has established a technology for forming aluminum sheets from discarded aluminum, such as aluminum car wheel scrap. This reduces CO_2 emission by 97% compared to aluminum sheets formed using new ingots. Further, as recycled aluminum becomes easier to mold when heated, we also developed an aluminum hot stamping formation technology, which is a new method utilizing recycled aluminum sheets.

In 2022, Hitachi High-tech collaborated with a bicycle manufacturer to develop bicycle frames using recycled aluminum materials and aluminum hot stamping. In November that same year, this product was exhibited at the



Saitama Cycle Festa, where it attracted a significant amount of attention. Manufacturing a bicycle frame usually generates 18.4 kg of CO_2, but using aluminum hot stamping technology, we were able to reduce CO_2 emissions to 0.62 kg.

In FY2022, we also used our aluminum hot stamping technology to develop everyday products, including chairs and snow shovels, which we are currently preparing for general sales. This technology has also attracted a lot of attention for its ability to reduce CO_2 emission even when manufacturing products in small lots, such as electric wheelchairs and industrial robots.

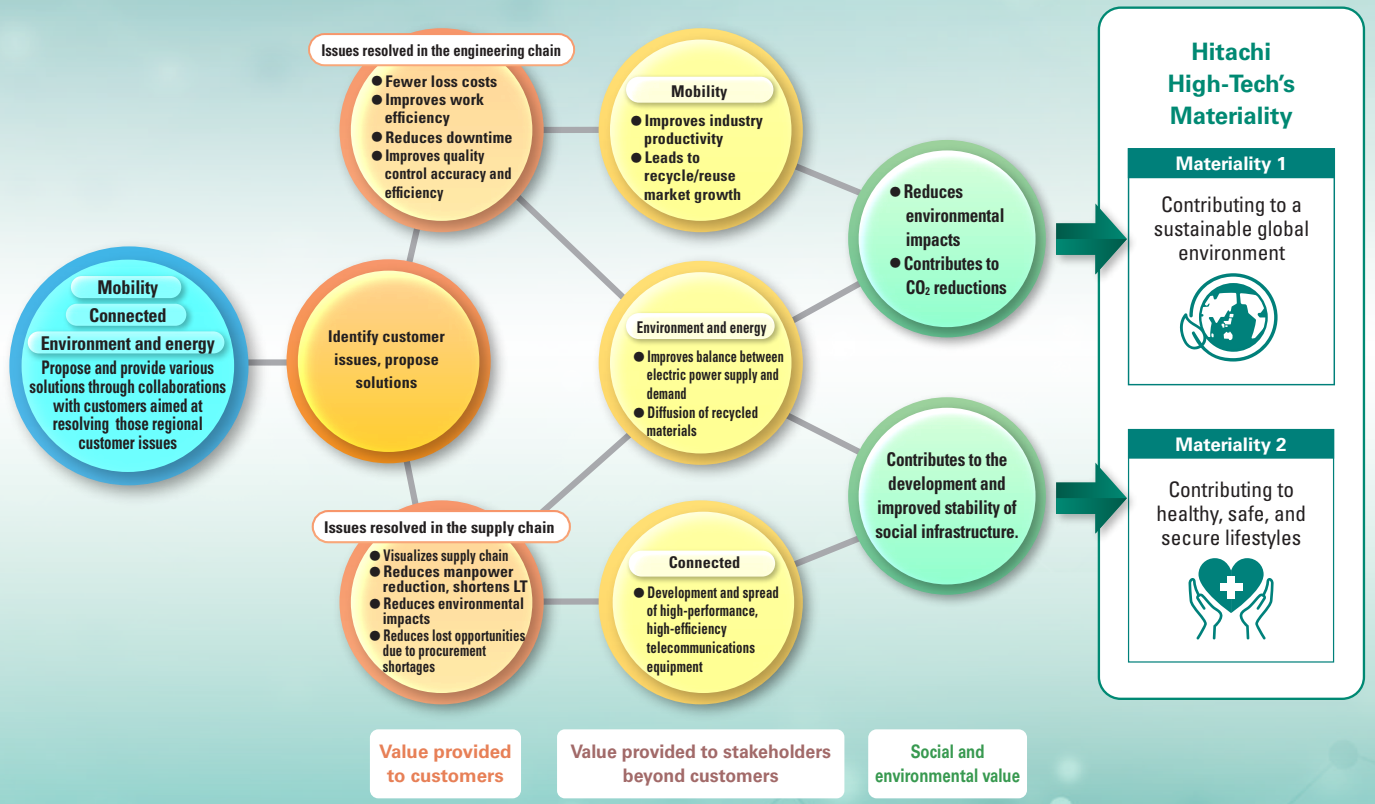
Bicycle with frame made using recycled aluminum

Initiatives for FY2024

Aiming to expand into automobiles and compact mobility

Once again in FY2023, we participate in the exhibit at the Saitama Cycle Festa, where we will announce and sell both mass-produced and final versions of 200 bicycles with frames made using recycled aluminum. We will also commence sales of chairs and snow shovels made using recycled aluminum to the general public in an effort to promote awareness of recycled aluminum as a material and products that use it.

Value Chain Solutions Chain of Indicators



The use of aluminum hot stamping technology also has the advantage of reducing product manufacturing workloads and lowering capital investment. In FY2023, we will promote these advantages and pursue technologies by applying hot stamping to products manufactured in small lots, such as robots and electric wheelchairs. In the future, we will take resolute steps toward the application and deployment of this technology in other fields, such as automobiles (including EVs) and compact mobility.

Topic

Provision of recycling test and inspection solutions

Contribute to the development of circular economies within the metals industry by enabling scrap and waste metals to be recycled as high-quality feedstock for foundries, metal fabrication and metal processing facilities.

There is a global drive to recycle end-of-life products. This is important for metals as depleted natural resources is making them increasingly difficult to extract. Mining can have a negative environmental and human impact, including widespread release of greenhouse gases and potentially hazardous working conditions.

For over four decades we have been developing analytical equipment alongside the metals industry. Today we are equipping metals recycling businesses or customers with the analytical capability to test and sort the vast amount of material that pass through their facilities each day, making it possible to rapidly recycle metals to meet feedstock demands of foundries and other metal fabricators, thereby reducing reliance on new material.

However, the correct metal alloy specification must be used for a given application. Undetected tramp or trace elements can lead to failure in the field. Within the industry, incorrect materials have caused catastrophic failure of household appliances, buildings, and aircraft. This has made metals fabricators nervous of using scrap metal that may contain hidden impurities.

Our tools are used by large and small metal recycling businesses, globally. Within Europe and Thailand, they can be used to ensure recycled material from those facilities can enter the metals trading market, reducing waste, and working towards a circular economy for metals.

For example, a handheld X-ray Fluorescence (hereinafter, "XRF") analyzer is used on incoming scrap within steel mills for chemical composition to ensure it meets specification. This steel is then passed to foundries who will use either a handheld XRF or Optical Emission Spectrometer (hereinafter, "OES") to again verify the composition and check for tramp and trace elements. Moving to the next stage of the process, metal fabrication, OES, handheld XRF analyzer and Laser Induced Breakdown Spectroscopy are all used to verify the grade and composition of incoming materials and to avoid in-house mix-ups. An XRF analyzer is used at final inspection to determine chemical composition before shipping. Finally, once the product is recycled, an XRF analyzer is also used within scrapyards or recycling companies to sort the metal scrap by composition and feed it back to steel mills or foundries, thereby completing the metals circular economy.

The facilities boast high throughput and are frequently situated outdoors, necessitating weather-proofed instruments with rapid data transfer capabilities and extended battery life. These key features make the analyzers an essential tool, empowering metals manufacturing facilities to utilize scrap metal with utmost confidence.

8 Initiatives aimed at improving resource and water use efficiency at Group companies in Japan

FY2022 Results

Reducing waste generation and water consumption on a per-unit basis, aiming for a recycling-oriented society with the goal of zero emissions in final waste disposal

Through reductions based on environmentally conscious product design, recycling facilitated by careful separation and collection, and the reuse of unused items in our product manufacturing processes, we aim to realize a recycling-oriented society by improving resource use efficiency by 50% or more compared to the base year by FY2050, with the goal of zero emissions (0.5% or less of waste emissions) in final disposal.

With regard to water resources, we are striving to improve water usage efficiency by reducing the amount of water used through productivity improvements and updates to water-saving equipment. In FY2022, there was no significant increase in water consumption due to the renewal of cooling water circulators and other equipment at manufacturing sites, leakage prevention measures, and refurbished water supply pumps and pipes. Every year, we conduct water stress assessments for the Hitachi High-Tech Group globally and water risk assessments for all of our sites in Japan. Although we do not have any business locations that are high in terms of stress or risks, we will continue periodic evaluations and make efforts to avoid risk at locations where risks can be reduced. With regard to resource recycling, we have been able to reduce cardboard and wood waste through the reuse of packaging and the use of returnable boxes for parts deliveries to suppliers and customers. We also promote resource recycling by expanding the range of products incorporating environmentally conscious design and sharing examples of reductions on the Company intranet. Further, to effectively utilize plastic waste generated during the manufacture of semiconductors, in FY2022, we devised a route for the collection of valuable materials by developing a waste acceptance company. Hazardous waste is managed centrally using Hitachi High-Tech Group proprietary data collection tools to manage the volume and export of each type of waste generated, ensuring compliance with relevant laws and regulations and proper disposal within the Group.

Initiatives for FY2024

Aiming to improve both water and resource use efficiency by 50% or more compared to the base year by FY2050.

In 2023, we plan to upgrade water supply facilities to ensure a stable supply of water, drainage facilities, and leakage prevention measures in order to strengthen production at our manufacturing sites. In 2024, we plan to replace leaking and aging drainage pipes and upgrade cooling water flow systems. We will share examples of water measures with all sites, including those overseas, through our intranet to improve the efficiency of water use throughout the Group. To effectively utilize plastic waste, we will continue developing new companies and creating new collection routes to recover plastic waste as a valuable resource. Specifically, we will examine emissions at sites where the waste plastic effective utilization rate is below 100%, survey disposal contractors, and formulate a plan to improve effective utilization rates. Implementation examples will be shared on our intranet to promote the effective utilization of these systems.

Action Targets 3 Realize a society in harmony with nature

9 Biodiversity conservation initiatives

FY2022 Results

Maintaining insect hotels and planting seedlings in their native areas to improve biodiversity, and in light of restrictions on activities due to the pandemic, employees are conducting biodiversity conservation activities at their homes

Economic development has been accompanied by the growing destruction and pollution of the natural environment and the overuse of resources, with Earth's biodiversity now facing a crisis. Hitachi High-Tech is engaged in Group-wide efforts to conserve and improve biodiversity to realize a rich future for both humans and nature. In May and November, the Takao Forest Nature School cleared bamboo grass and weeds, and removed dead trees and logs in the forest maintenance area managed by the Seven-Eleven Foundation, which serves as a base for activities in the suburbs of Tokyo that is easily accessible for employees located near our head office. Bamboo grass removed during forest maintenance work was effectively used to replace old nesting materials in the insect hotel previous installed by Hitachi High-Tech to provide a home for insects. During these activities, an orientation and lecture were held to introduce the nature school facilities and biodiversity to participating employees. Additionally, insect hotel was installed at Saitama site to observe the ecology of living organisms.

- An insect hotel was also installed at the Woodlands of Hitachi High-Tech Science, located on the premises of the Hitachi High-Tech Science Fuji Oyama Works. In recognition of ongoing efforts to conserve and restore biodiversity, this forest received the highest-ranked AAA rating from the Ecosystem Conservation Society-Japan (ECSJ) when renewing it certification under the Japan Habitat Evaluation and Certification Program (JHEP).
- At the Hitachi High-Tech Yasato Forest in Ishioka, Ibaraki Prefecture, where we continue to engage in forest conservation activities, a cypress grove was cleared to create a sunlit area where seedlings of deciduous broad-leaved trees selected from plant species native to the area were planted to convert part of the forest into an environment more hospitable to living things.
- As pandemic restrictions and other conditions forced us to limit the number of participants working in actual forests, in FY2022, we also held hybrid biodiversity conservation activities that employees conducted at their homes. This activity commenced in June with the production of bird calls (similar to a whistle, used outdoors to imitate bird sounds). The bird calls are made from oak trees harvested during forest maintenance work by the Takao Forest Nature School. Many employees signed up to make bird calls, which were popular with employees and their families, and in December, employees also made Christmas wreaths at home using natural materials collected by the Takao Forest Nature School. Going forward, we will continue to conduct hybrid biodiversity conservation activities that can be done at home, while also engaging in conservation activities that involve going out into actual forests.

Initiatives for FY2024

Preparing to acquire the Woodlands of Hitachi High-Tech Science OECM certification, and enhancing the mixed needle and broadleaf forest area in the Hitachi High-Tech Yasato Forest

As climate change is a global issue that demands an urgent response, we will continue to focus on biodiversity conservation activities, which are becoming equally important. Other places than National Parks that are protected, but have the potential for the effective and long-term conservation of biodiversity, are known as other effective area-based conservation measures (OECM), and we aim to acquire OECM certification for the Woodlands of Hitachi High-Tech Science. In FY2023, we will make preparations for certification in FY2024, while also aiming to enhance the mixed needle and broadleaf forest area in the Hitachi High-Tech Yasato Forest. We will maintain efforts to further enrich forests by reintroducing native plants to these areas on the basis of botanical surveys.

The Takao Forest Nature School replaces nesting materials in an insect hotel

Materiality

2

Contributing to healthy, safe, secure lives

[Action Targets]

1 Expand access to preventive medicine

2 Ensure the safety of water and food

3 Ensure the safety of social infrastructure

[Action Plan]

	Content of Initiative	Social and Environmental Value	FY2022 Results	FY2023 Plan	FY2024 Plan	Action Targets	Responsible Business Segment
1	Provide molecular diagnostic testing services and equipment that contribute to the diagnosis and treatment of intractable diseases (e.g., cancer)	● Contribute to the realization of both improvement of the quality of medical care and reduction of medical costs	● Established the Healthcare Innovation Center Tokyo integrated laboratory to engage in collaborative creation with customers and business partners ● Strengthened partnership with Invivoscribe to provide solutions to medical institutions and pharmaceutical companies	● Continue to consider a new inspection system, develop new applications and services	● Launch a new inspection system and expand new inspection items with the system	1	
2	Provide equipment and services to detect hazardous substances in products and materials	● Contribute to the prevention of the spread of substances that pose health hazards	● Continued to provide equipment and services for screening and testing for substances restricted under the RoHS Directive	● Develop and provide equipment and services to enable screening tests for additional (prospective) substances restricted under the RoHS Directive	● Develop and provide equipment and services to enable screening tests for additional (prospective) substances restricted under the RoHS Directive	2	
3	Provide engineering services for photonic integrated circuits (PICs) used in large-scale data centers and core communication networks	● Contribute to the development and heightened stability of telecommunications infrastructure	● Provided global photonic integrated circuit (PIC) designs and experiences for 400 gigabytes and next-generation 800 gigabytes optical communications	● Design, develop, and provide PICs for next-generation, high-speed, long-distance transmissions ● Strengthen systems and services through the introduction of additional optical wafer testing equipment	● Design, develop and provide PICs used in various fields by utilizing new design technology	3	

Analytical & Medical Solutions
Nano-Technology Solutions
Value Chain Solutions
Core Technology Solutions

Action Targets 1 Expand access to preventive medicine

1 Provide molecular diagnostic testing services and equipment that contributes to the diagnosis and treatment of intractable diseases (e.g., cancer)

FY2022 Results

Further expanding possibilities for collaborative creation with business partners and customers at the new Healthcare Innovation Center Tokyo

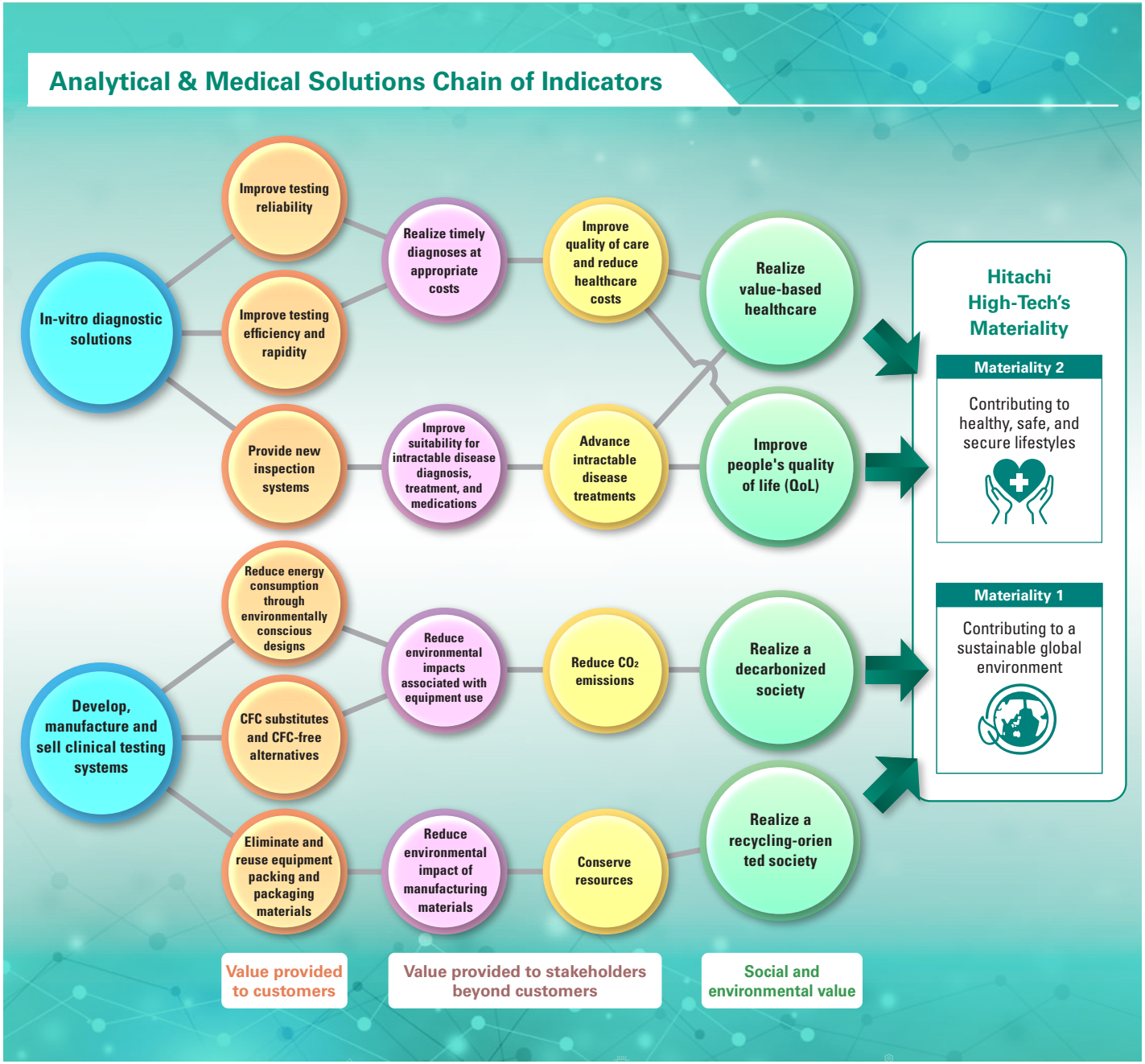
Healthcare Innovation Center Tokyo, an integrated laboratory established in October 2022, serves as a conventional showroom and facilitates equipment training and collaborative creation with business partners and customers by holding regular seminars and workshops, disseminating information, and conducting experiments. Taking advantage of its location, which provides convenient transportation access as it is directly connected to the Haneda area and Tenkubashi Station, we are promoting the use of this facility as a base for energetic interactions with business partners and customers.

Healthcare Innovation Center Tokyo

Initiatives for FY2024

Provide molecular diagnostic testing services and equipment

There is an urgent need to establish and provide clinical testing services that provide more accurate results in a shorter period of time as information necessary for the proper diagnosis of



diseases and selection of therapeutic agents in order to tackle the social issues of ever-increasing medical costs and maintenance of the national health insurance system. To address these challenges, Hitachi High-Tech is entering the molecular diagnostics business and strengthening collaborations with other companies in the development of testing services and new equipment. In May 2022, we began partnering with Invivoscribe, Inc., a US-based testing services company, and continue to enhance this partnership with the aim of providing solutions to medical institutions and pharmaceutical companies for cancers of the blood and other areas in molecular diagnostics. We continue to collaborate with US-based Nabsys Inc., in the field of structural analysis of the human genome, and in 2022, we established a technology combining Nabsys and Hitachi High-Tech technologies to analyze human genome mapping data and detect structural changes. To provide physicians and patients with test results that show the suitability and effectiveness of treatments and medications for each patient, we will continue to develop high-precision analysis systems and services that will lead to new methods of disease treatment and prevention.

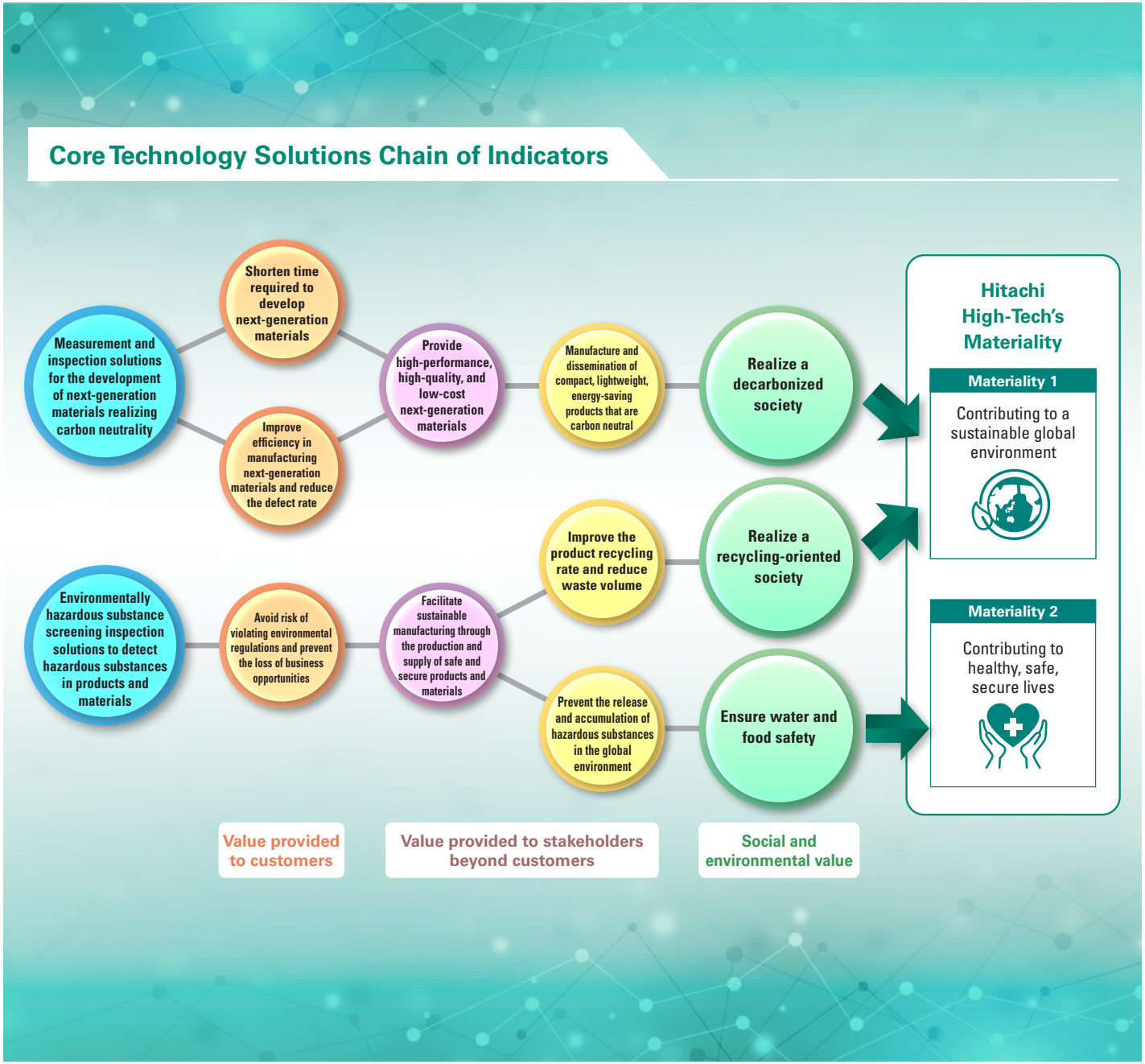
Topic

Infectious Disease Testing Support Solutions

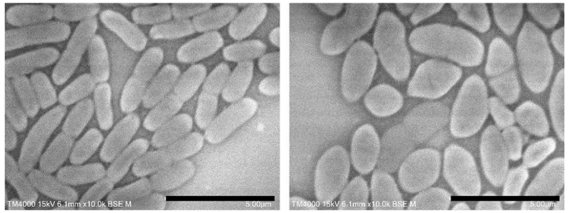
Using scanning electron microscopes to develop technologies leading to the early identification of disease pathogens

The emergence of drug-resistant bacteria due to the abuse of anti-microbials and the repeated development of additional new drugs results in pandemics and is a worldwide problem. Using scanning electron microscopes manufactured and marketed by Hitachi High-Tech in collaboration with IHU–Méditerranée (Mediterranean university hospital research institute for infectious diseases in Marseille, France), we have developed a method for identifying drug-resistant bacteria in one or two hours, whereas it normally takes about 24 hours to obtain results. This method detects minute changes in the shape of bacterial cells in a short period of time, making it possible to quickly determine whether bacteria are drug-resistant. Early

Core Technology Solutions Chain of Indicators



identification of disease pathogens enables the rapid determination of treatment plans and administration of the appropriate medication dosages, thereby reducing the physical burdens and life-threatening effects of disease on both humans and livestock. We are developing this observation method with the aim of disseminating it throughout the world through presentations at academic conferences and other events, as well as making it feasible for hospitals and other institutions to perform inspections.



Left: Bacteria before administration of pharmacological agent
Right: Bacteria after administration of pharmacological agent
(Result of reaction after 60 minutes)
Reference: Haddad, G. et al., Front. Microbiol. 2021, 12, 658322.

Action Targets 2 Ensure the safety of water and food

2 Provide equipment and services to detect hazardous substances in products and materials

FY2022 Results

Contributing to the prevention of hazardous substance leakage through the provision of hazardous substance detection equipment and services

Hazardous substances contained in electrical and electronic equipment are regulated by EU regulations (RoHS Directive) as well as by laws and regulations in each country. To contribute to preventing the spread of substances that pose health hazards, Hitachi High-Tech complies with these regulations and provides equipment that detects hazardous substances during product and material acceptance inspections.

We also connect devices at each site via a network, making it possible to access measurement results regardless of time, day, or location.

The Japanese government has set targets including a cumulative 25% reduction in the emission of one-way plastic (plastic that is discarded after one use) by 2030, and the reuse or recycling of 60% of plastic containers and packaging. Given these developments, awareness of the circular economy is growing in various industries, and the use of recycled materials in plastic materials is also beginning to attract attention.

However, as it is difficult to determine the source of recycled plastic, there are concerns about the potential leakage of substances that can impact soil, water, and the human body. Up to now, Hitachi High-Tech has developed and sold specialized systems for the control of environmentally regulated substances, and in facilitating inspections of recycled plastic materials, we aim to reduce the risk of harmful substances contaminating products made from recycled plastic materials, as well as the risk of harmful substances impacting markets or the environment.

Initiatives for FY2024

By reducing the risk of harmful substances contaminating products made from recycled plastic, we aim to prevent the leakage of harmful substances and further contribute to the recycling of plastic.

At present, additional substances are being considered for regulation under the RoHS Directive, and we are developing a device capable of measuring these substances. Measurement efficiency and data management methods for hazardous substance contamination are also important issues in using recycled plastics, which are gradually attracting attention. We are developing new measurement methods to meet these needs. If successful, these efforts will reduce the risk of hazardous substances entering products and being ingested by humans, thereby contributing to the prevention of soil contamination during disposal. In addition, by contributing to the procurement of safe plastic materials, we will also contribute to the further promotion of plastic recycling and the reduction of plastic waste.

Going forward, in consideration of impacts on the human body and the environment, we will continue rapidly responding to hazardous substances to be able to contribute to safe and secure manufacturing.

Action Targets 3 Ensure the safety of social infrastructure

3 Provide engineering services for photonic integrated circuits (PIC) used in large-scale data centers and core communication networks

FY2022 Results

Providing PIC technologies for high-speed communication networks that are indispensable for maintaining and improving a safe and comfortable communication environment

To maintain and accelerate the communication environment, IT companies with large data centers, such as GAFAM, require comfortable, reliable, and secure communications infrastructure. Hitachi High-Tech collaborates with VLC Photonics S.L., whose strength lies in silicon photonics design, to provide PICs using technology that contributes to faster optical communications. In FY2022, we contributed to the development of 400 gigabytes and next-generation 800 gigabytes optical transceivers for a customer that develops and manufactures long-distance transmission equipment, thereby contributing to the stable operation of a large-scale data center.

Initiatives for FY2024

Providing engineering services for next-generation PICs to support higher capacity and higher speed data communications and lower power consumption in data centers

In addition to conventional demands such as video streaming, generative AI, automated driving, and other needs are causing data communication fees to increase, and the accompanying surge in power consumption at data centers is becoming a social issue. To resolve this issue, optical transceivers and optical transmission systems using PIC technologies are becoming indispensable. To realize next-generation 1.6 Tbps or higher high-speed communications, VLC Photonics will enhance its PIC-related technologies and establish a system that can undertake the entire process, from designs to optical wafer measurements and packaging, which will contribute to reduced power consumption, shorter development periods, and lower costs for next-generation data centers.

PIC provided by Hitachi High-Tech

Materiality

3 Contributing to the sustained development of science and industry

[Action Targets]

1 Development of science and technology

2 Achieving resilience at production sites

[Action Plan]

	Content of Initiative	Social and Environmental Value	FY2022 Results	FY2023 Plan	FY2024 Plan	Action Targets	Responsible Business Segment
1	Provide material development solutions that accelerate development speed and contribute to the development and provision of new materials	• Contribute to the verification of new knowledge and experiments to create new materials • Realization of a smart society on a global scale through the utilization of new materials • Raising the technical and production capabilities of small and medium-sized manufacturing companies	• Commenced provision of material development solutions to companies facing material development issues	• Aim to commence provision of material development solutions to companies engaged in material development in Japan and overseas	• Expand and provide solutions resolving a wider range of customer issues by increasing use of our analyzers and other equipment to automate customer experimental data analysis	1	Others
2	Activities to support science education using tabletop microscopes	• Contribution to the development of next-generation researchers that will lead to the development of science, medical technology, etc	• Promoted online classes to areas and children in Japan that have been difficult to reach up to now • Posted YouTube videos featuring a collaboration between Group products and science artist Ichioka Genki, and held online experimental events • Supported the revitalization of local science education in cooperation with disaster prevention centers and high schools in various regions • Conducted activities in Singapore, Malaysia, and Indonesia. Expanded Group global collaborative activities • Conducted remote science classes as part of the Japan-Azerbaijan Friendship Year exchange program	• Provide learning opportunities globally through online classes reaching a wider range of students • Provide information to support education (web content production, use of YouTube)	• Provide opportunities and maintain efforts supporting students, student research, and the presentation of results and papers		Others
3	Provide digital service solutions facilitating highly efficient semiconductor production	• Contribute to the advancement of the digital society by improving and stabilizing industry productivity	• Began developing digital service solutions for customer device development and greater efficiency at the US Co-Creation Center	• Develop digital service solutions integrating customer data accumulated in each semiconductor manufacturing process, identify and resolve customer issues • Establish digital service development infrastructure at Co-Creation Centers in Taiwan and Korea	• Enhance digital service solutions, extend to additional devices, expand provision to more customers	2	
4	Provide screening and inspection agency services contributing to operational efficiency and quality improvement through visualization of the entire supply chain	• Contribute to improvement of production site efficiency and product quality • Contribute to building a flexible and robust production system	• Contributed to the prevention of defective products and redelivery loss in transactions with provision of high-quality screening and inspection agency services within the Hitachi Group	• In selecting new suppliers, we will also expand services to include quality control screenings • Expand services to include regular quality control inspections and improvement guidance for suppliers • Verify the effectiveness of screening and inspection agency work within the Hitachi Group to provide services that meet needs	• Expand service provision within the Hitachi Group, begin providing services to companies outside the Hitachi Group		Others

Analytical & Medical Solutions
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Action Targets 1 Development of science and technology

1 Provide material development solutions that accelerate development speed and contribute to the development and provision of new materials

FY2022 Results

With the launch of MI solutions and semiconductor inspection solution services, it is now possible to improve operational efficiency in the development of semiconductor and other materials

As it has become vital to shift to eco-friendly plastics and other sustainable materials, we expect the use of Materials Informatics (MI), which utilizes AI to improve material development efficiency, to become more widespread. In FY2022, we began offering MI solutions commercialized in 2021 to companies facing challenges in material development and improving efficiency in material formulation and production. These solutions use AI to replace the formulation of candidate experiments previously based on the knowledge, experience, and intuition of experts. The number of experiments can also be reduced through experiment planning support using machine learning, which enables comprehensive reductions in raw materials, labor, and time required for experiments to create new materials, reducing both power consumption and CO2 emissions. Further, we proposed the CG7300, a device used to inspect and measure semiconductors, to a company that develops semiconductor materials, and also suggested the MI solution be incorporated into the raw material blending and material image inspection processes, making it possible to improve efficiency in the analysis of images, which is usually performed by human operators. The company decided to implement these proposals. This is a strong affirmation of our strength in Group collaborations, which facilitate the highly efficient development and inspection of semiconductor materials. Going forward, we will combine MI solutions with our inspection, measurement, analysis, and analytical equipment as a unique approach to the resolution of environmental problems for companies large and small, elevating the overall level of manufacturing, technology, and production in Japan.

Initiatives for FY2024

Launching the provision of services overseas with the aim of contributing to the healthcare and pharmaceutical fields

In FY2023, we will contact Japanese material manufacturers and research institutes overseas to expand MI solutions, as well as solutions related to experimental data management overseas, with the aim of contributing to the efficiency of material development throughout the world.
Further, we will expand the functionality of these solutions by linking them to Chemicals Informatics* (CI). CI solutions will also be utilized in the field of drug discovery to expedite the process of compound discovery and selection.
Additionally, simulating how to utilize selected compounds to create new materials using MI solutions, we will contribute to improving the quality of medical care and people's quality of life (QoL) in both the conventional chemical and materials fields, as well as the drug discovery field.
Today, there is also a demand for the efficient and effective utilization of huge amounts of experimental data. We will link MI solutions with analyzers and other devices we manufacture and sell, and use MI to combine data accumulated by customers using our analyzers to automate analysis. In expanding and offering solutions that can resolve a wider range of customer issues, we aim to realize more efficient material development.

* AI-based search service for compounds needed to develop new materials.

2 Using tabletop electron microscopes in activities supporting science education

FY2022 Results

Expanding activities that strengthen our contribution to achieving the SDGs and collaborating with YouTubers to provide diverse learning opportunities throughout the world

In FY2022, to strengthen our contribution to achieving the SDGs, we expanded our remote science education support activities using tabletop electron microscopes to include small islands and adaptive guidance classrooms that up to now have been difficult to reach.

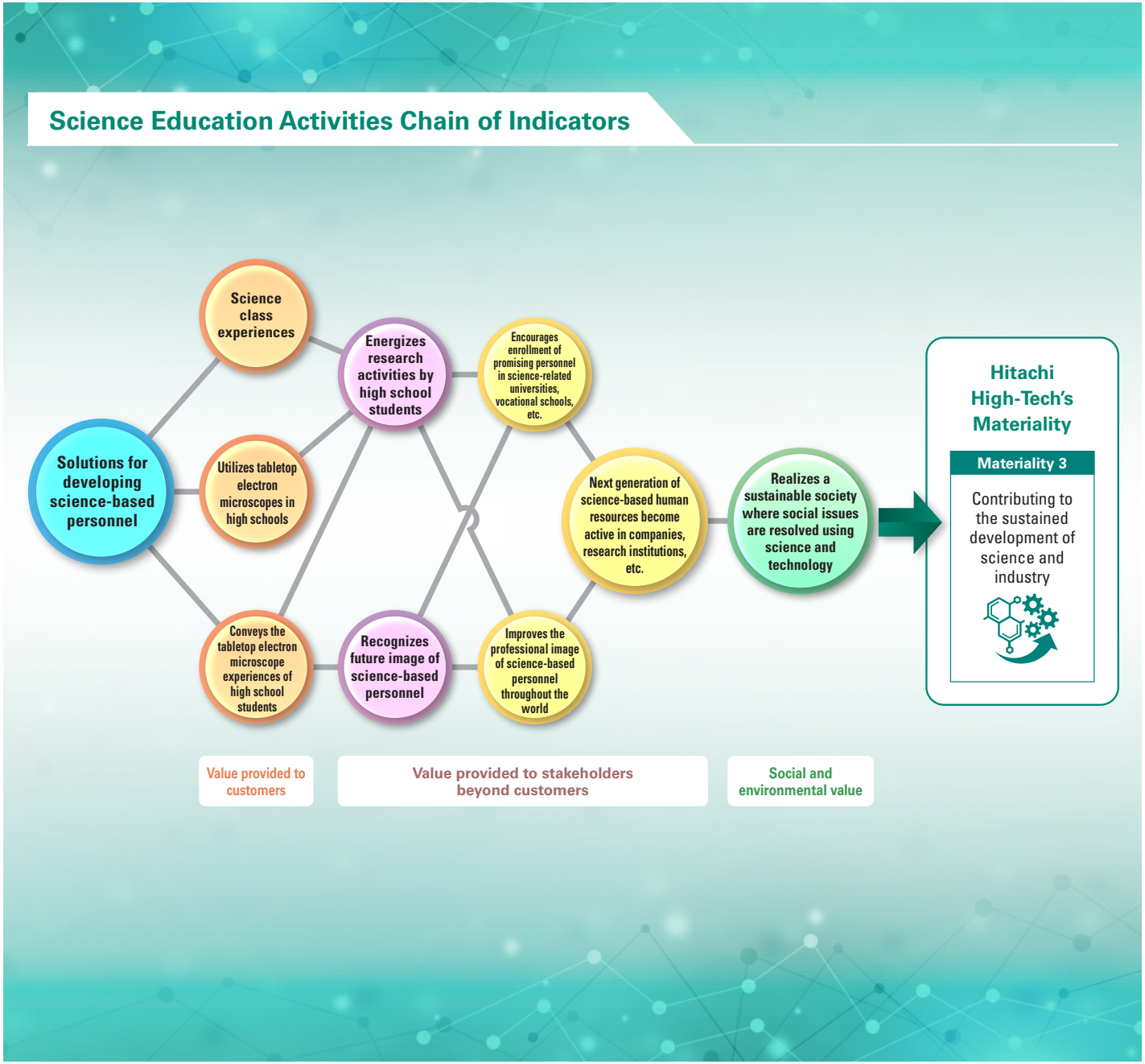
- We are also promoting a collaboration with science artist Ichioka Genki's GENKILABO to stimulate interest in science among all generations. We have posted a total of 79 YouTube videos featuring our products, amassing 48.64 million views (as of March 2023). These videos have received many comments regarding the science behind the videos, as well as interest in our equipment and technologies. In some cases, businesses that were interested in the videos ended up purchasing equipment.

- These science education support activities will continue to expand globally. To contribute to the development of young scientists in various regions, we established an activity system, and in FY2022, launched related efforts in Malaysia and Indonesia. As a result, Hitachi High-Tech has provided science education support activities to approximately 62,500 people globally.

Initiatives for FY2024

Utilizing various Hitachi High-Tech products in addition to tabletop electron microscopes to support science education activities

In FY2023, we will continue to provide science education support activities to over 50,000 people each year, while also deepening efforts to make science and social issues more accessible through the use of various Company products. We have been loaning tabletop electron microscopes to high schools across Japan for more than 10 years, inspiring many high school students to pursue a career in the sciences. Interviewing students who participated in these activities, one of them said that through research activities they discovered a new self and future dreams. Conveying an image of next-generation science-based personnel in this way contributes to improving the image of science and engineering occupations throughout the



world. It also contributes to realizing a society in which science-based personnel are active in corporations, research institutions, and other organizations.
In Singapore, we plan to lend tabletop electron microscopes to the Lee Kong Chian Natural History Museum, and also plan to conduct programs for educators involving local scientists, teachers, museum staff, and others, as well as workshops aimed at conserving the rich biodiversity of ASEAN countries. Going forward, by communicating the scientific and technological value created by our technologies and products to a wide range of people and providing opportunities for learning, Hitachi High-Tech will continue to promote activities that contribute to the development of science-based personnel.

YouTube videos presented on the GENKILABO website (in Japanese)

Action Targets 2 Achieving resilience at production sites

3 Providing digital service solutions facilitating highly efficient semiconductor production

FY2022 Results

Opening of a center in the U.S. to accelerate semiconductor production through collaboration with customers

Semiconductors are essential for a digital society, as they are used in smartphones, PCs, home appliances, and automobiles, as well as in online systems for companies and by national and local governments. Accordingly, semiconductor-related markets are expected to grow and expand in the future.
Semiconductor development requires strict quality and production controls, and must be executed with a sense of speed.
In August 2022, we completed construction of the Nanotechnology Innovation Center Portland, a new integrated development base in the United States. Based on the concept of digital services, we are developing digital service solutions that contribute to shortening the time required for development and improving productivity and yield, which are issues facing customers, by integrating and linking data accumulated in the processing, inspection, measurement, and analysis processes. We will continue to contribute to the development of Observation, Measurement, and Analysis technologies that support the semiconductor market through collaborative creation with customers.

Initiatives for FY2024

In addition to the US, we will establish co-creation centers in Taiwan and South Korea, and are strengthening relationships with customers to accelerate the sophistication and speed of semiconductor development

In FY2023, following efforts in the US, we will establish co-creation centers in Taiwan and South Korea, where advanced semiconductor technology development continues to accelerate. In establishing these facilities, we will be able to accumulate resources near customers and work with them to develop solutions aimed at shortening the time required for development and improving productivity and yield at each stage of the semiconductor manufacturing process. We will work more closely with customers at collaboration centers to develop solutions for semiconductor development and manufacturing.

Nanotechnology Innovation Center Portland exterior

4 Providing screening and inspection agency services contributing to operational efficiency and quality improvements by visualizing the entire supply chain

FY2022 Results

Commenced provision of local screening and product inspection services for overseas suppliers

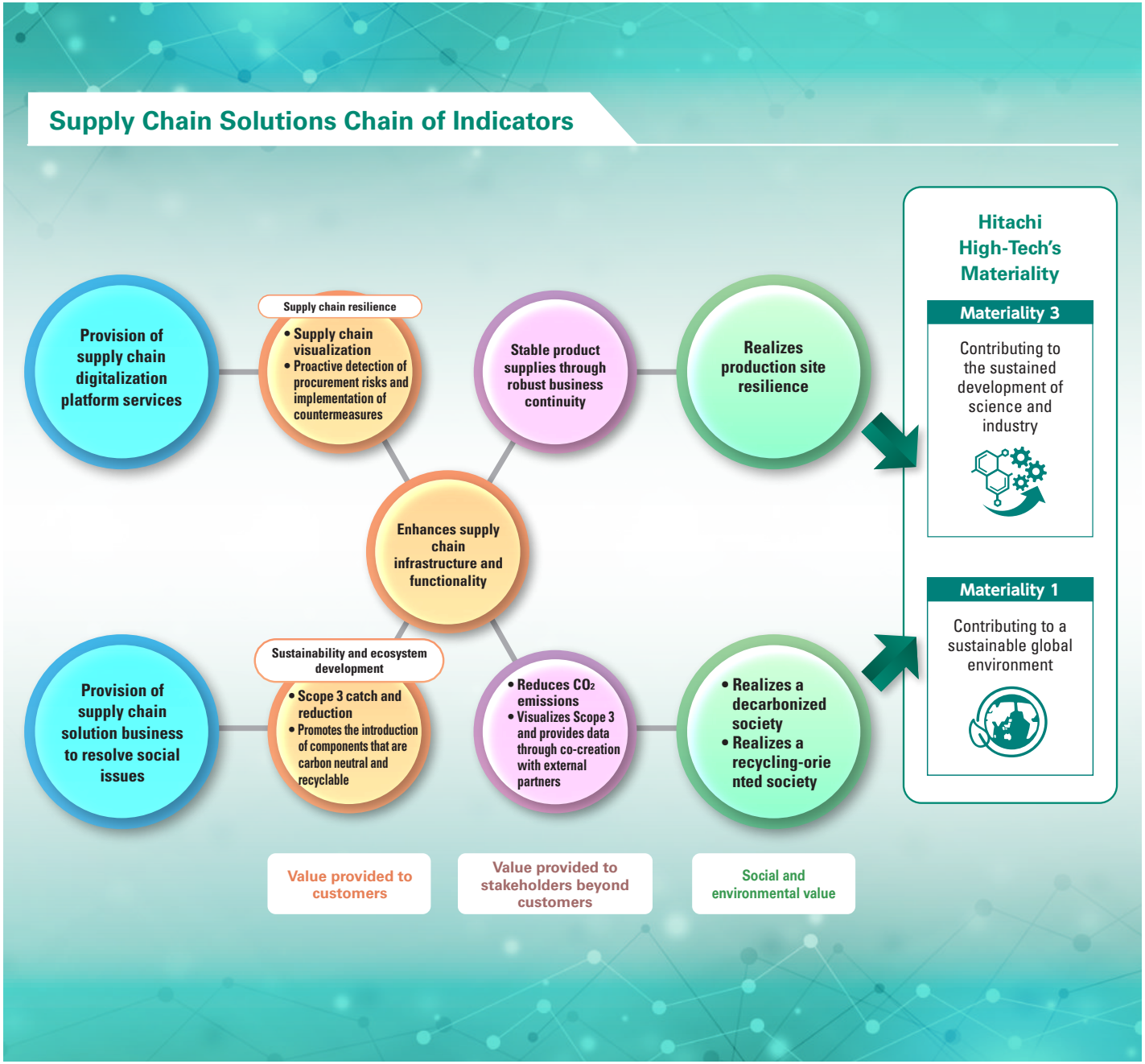
Accident prevention and quality control in manufacturing processes are essential to provide products that users can use safely with peace of mind. We have enhanced our collaboration with TRIGO, one of the world's leading providers of advanced quality services, to conduct screening and inspection operations for suppliers with the aim of providing safe and reliable products. In fiscal 2022, we conducted screenings and inspections of Hitachi Group overseas suppliers.
These efforts prevent the shipment of defective products before they are exported to Japan, and enables us to request alternative products from suppliers, as well as provide feedback and guidance on improving defects.
TRIGO local staff conducts screenings that enable suppliers to understand issues raised with minimal discrepancies. Recently, manufacturing site inspection fraud and accidents have been in the news,

but by conducting more thorough screenings and inspections, we will improve safety at manufacturing sites and reduce defective product rates, contributing to the provision of safe and reliable products.

Initiatives for FY2024

Aiming to enhance safety throughout the supply chain and increase manufacturing site efficiency

Amid an increasing awareness of environmental considerations and quality improvements at manufacturing sites, there has been a growing number of situations in recent years where more in-depth screening and inspection services have been required. At present, we are preparing for the future provision of screening and guidance services for chemical substances that have an impact on the environment. Further, with regard to manufacturing processes, we aim to improve the quality of screenings and inspections and expand the scope of work handled, which includes enabling the confirmation of quality control (QC) process charts and actual manufacturing sites. Leveraging TRIGO's strength in utilizing local staff to conduct screenings and inspections of local suppliers, even in the event of a pandemic such as COVID-19, we will strengthen this collaboration so that the services can be provided not only within the Hitachi Group but also to customers outside the Hitachi Group.



Materiality

4

Establishing a sound management foundation

[Action Targets]

1 Realize sound governance

2 Ensure product safety

3 Realize a CSR-based supply chain

[Action Plan]

	Content of Initiative	Social and Environmental Value	FY2022 Results	FY2023 Plan	FY2024 Plan	Action Targets
1	Initiatives to improve corporate governance, which is the foundation of the Hitachi High-Tech Group's fair business activities	• Contribute to the maintenance of a healthy and orderly society as a member of society	• As a member of the Hitachi Group, revised decision-making standards and rules, and updated the Hitachi Group Code of Ethics and Business Conduct • Revised systems and measures in response to global compliance risks, improved system reliability	• Implement timely updates to decision-making standards and rules in light of Hitachi Group governance • Enhance measures and systems for responding to global compliance risks and initiatives improving the effectiveness of each system and mechanism to appropriately manage risk and establish a framework for quick and flexible responses when incidents occur	• Continue and consider deepening the initiatives listed on the left	1
2	Initiatives to ensure product safety	• Provide safe and secure products and services	• Implemented product safety audits: Identified issues and provided guidance for improvement at design and manufacturing sites and 12 group company sites • Maintained efforts to draw attention to the prevention of accidents related to long-term use products at customer sites • Identified trends in revisions and issuance of related laws and regulations and shared them with relevant internal departments to accelerate compliance with laws and regulations • Serious product safety accidents: 0	• Implement product safety audits • Maintain efforts to prevent accidents related to long-term use products at customer sites • Identify trends in revisions and issuance of related laws and regulations and continue sharing them with relevant internal departments to accelerate compliance with laws and regulations	• Continue to promote the FY2023 plan for product safety	2
3	Promote business operations throughout the Hitachi High-Tech Group's supply chain with a strong awareness of CSR	• Contribute to the realization of CSR in the Hitachi High-Tech Group's supply chain • Continue business through stable shipments of our products	• CSR procurement briefings for ongoing suppliers: Held twice • Selected advanced environmental partner company, began providing support for CO_2 reduction • Conducted new supplier self-audits using the Procurement CSR Check Sheet • CSR-related accidents: 0	• Hold CSR procurement briefings for ongoing suppliers • Maintain support for CO_2 reductions at advanced environmental partner companies, expand horizontally to other procurement partners • Conduct new supplier self-audits using the Procurement CSR Check Sheet	• Expand the number of advanced environmental partner companies • Execute procurement partner selection based on CO_2 reduction results • Continue promotion of the initiative listed oh the left	3

Action Targets 1 Realize sound governance

1 Initiatives to improve corporate governance, which is the foundation of the Hitachi High-Tech Group's fair business activities

FY2022 Results

Enhancing governance and compliance as a Group

- As a member of the Hitachi Group, we are aligned with Group efforts to realize appropriate and prompt business execution. We have worked to revise decision-making standards and rules constituting the framework for important decisions affecting Hitachi, Ltd., and Hitachi High-Tech Group companies, as well as clarified the division of roles and decision-making processes for Hitachi, Ltd., and Hitachi High-Tech Group companies.
- In March 2023, we revised the Hitachi Group Code of Ethics and Business Conduct, which are guidelines for ethical behavior and decision-making shared by all executives and employees of the Hitachi Group. While maintaining a strong awareness of the Hitachi Group identity, we revised the content and format in line with global standards, and have made the guidelines clear and easy to understand so that it serves as a foundation for ethical behavior by all executives and employees.
- We continuously provide compliance education to all executives and employees, from new hires to senior management, to promote understanding of the Hitachi Group compliance approach and systems, as well as internal reporting and other systems. In FY2022, in line with Hitachi Group-wide policies, we provided interactive education that included case studies to further raise compliance awareness in each workplace.
- The Group established a global whistleblower hotline shared by all Hitachi Group companies to quickly detect and respond to signs of legal and regulatory infractions or misconduct in an attempt to enhance the Group's self-correcting function. In FY2022, mainly in response to legal revisions in Japan, we developed an operational framework that places even greater emphasis on whistleblower protections than before, including clarification and dissemination of the confidentiality obligations of employees engaged in responding to whistleblowers. This enables executives and employees to seek consultations with peace of mind.

Initiatives for FY2024

As a member of the Hitachi Group, we are working to develop and enhance our governance and compliance frameworks with an awareness of global standards

In line with the global expansion of Hitachi High-Tech Group Business, business risks faced by the Group, including compliance risks, are becoming increasingly diverse and complex. We will further enhance our governance and compliance frameworks to properly manage these risks and respond to them in a timely manner.

Action Targets 2 Ensure product safety

2 Initiatives to ensure product safety

FY2022 Results

Implementing various measures to ensure product safety

- To improve product quality and reduce the risk of product safety accidents, we implemented product safety audits at design and manufacturing sites and Group companies to identify issues and provide guidance on improvements. In confirming the current status of product safety in line with these diagnostic items, we check relevant laws and regulations in destination countries, product safety design procedures, risk assessments, and other references to identify issues and provide guidance in areas that need improvement. We also conducted quality Compliance Audits at overseas sites.
- We attempt to raise awareness among customers regarding long-term use products with expired warranties. These audits and reminders are measures aimed at preventing accidents during product use and ensuring safe product use, even after warranty periods have expired.
- We also accelerated legal measures by maintaining an awareness regarding revisions and enforcement of relevant laws and regulations, and sharing this information with relevant internal departments.
- To continuously improve the skills of engineers in design, quality assurance, and other product engineering divisions, twice each year we hold product safety-related lectures presented by outside speakers. In FY2022, lectures were held remotely from each site using an online conference system.
- Serious product safety accidents: 0

Action Targets 3 Realize a CSR-based supply chain

3 Promote business operations throughout the Hitachi High-Tech Group's supply chain with a strong awareness of CSR

FY2022 Results

Implementing efforts to reduce risks related to the environment, human rights, and other issues in order to realize a sustainable supply chain

- We regularly communicate and share information with our partners to promote understanding of our CSR initiatives and raise awareness of environmental and human rights risks. At CSR briefings, we request cooperation in reducing CO_2 emissions to realize a decarbonized society,and also share information on legal revisions regarding chemical substances contained in raw materials. A total of 600 procurement partners (1,300 people) participated in these briefings.
- The Hitachi High-Tech Group Human Rights Policy clearly stipulates that the Group will conduct human rights due diligence*1 based on the United Nations Guiding Principles on Business and Human Rights. Based on this policy, we respect the human rights of all Group employees and all stakeholders with whom we interact through Group business activities, products, and services. When commencing new business transactions, we strive to reduce risks by requesting self-audits for potential human rights violations in accordance with the Hitachi Group Sustainable Procurement Guidelines. In FY2022, the Hitachi Group used EcoVadis,*2 a third-party evaluation platform, to assess and monitor sustainability performance related to human rights, including efforts to address forced labor and child labor, and to ascertain and document actual business conditions. Using responses to written surveys as a reference, we also conduct sustainability audits that include labor and human rights, explain findings identified through audits to our procurement partners, and request that they make improvements. Going forward, we will formulate and implement measures to promote an understanding of actual supply chain conditions related to aspects other than human rights.
- In addition to requesting that procurement partners reduce their CO_2 emissions, we selected advanced environmental partner companies from among numerous procurement partners and began working with them to find new ways of reducing CO_2 emissions. Specifically, we confirmed company achievements regarding CO_2 emissions and CO_2 reduction plan details, and commenced support of these companies in their efforts to reduce emissions.

*1 Human rights due diligence: Involves identifying, assessing, and responding to business-related human rights impacts, taking measures to prevent, mitigate, and remedy negative impacts, then continuously verifying and disclosing the effectiveness of these measures.

*2 EcoVadis: Sustainability assessment service platform facilitating comprehensive evaluations in four areas: Environment, labor and human rights, ethics, and sustainable materials procurement.

Initiatives for FY2024

Aiming to expand advanced environmental partner company initiatives

We will strive to increase the number of advanced environmental partners (partner companies promoting environmental activities through environmental management systems, and other policies) by encouraging other procurement partners to adopt initiatives promoted by companies selected as advanced environmental partners. Specifically, we will prepare examples of initiatives by advanced environmental partners and create an FAQ, both of which will be made available to the public. As collaborations with all suppliers are essential to achieve carbon neutrality, in 2023, we will promote the creation of an environment facilitating carbon neutrality throughout the supply chain. For details, please refer to Materiality 1, Activity Plan 5.

Materiality

5

Developing and utilizing diverse human resources

[Action Targets]

1 Promote diversity management

2 Promote diverse cultivation of human resources

3 Ensure healthy, safe workplace environments

[Action Plan]

	Content of Initiative	Social and Environmental Value	FY2022 Results	FY2023 Plan	FY2024 Plan	Action Targets
1	Creating an organization in which diverse human resources can play an active role that leads to innovation	● Human resources with various attributes (gender, nationality, background, etc.), skills, and knowledge play active roles	Creation of innovation through diverse human resources ● Average of 26.7 hours of overtime per person per month ● Take paid leave 18.3 days per person per year ● Women in managerial positions 5.2% ● New graduate recruitment 27.3% female, 14.5% foreign nationals ● Diversity in decision-making layer: 7 diverse board directors, executive officers and managing officers (including 4 women) ● Male employees utilizing childcare leave: 75.2% ● Wage difference between men and women: 71.4% (all employees)	Creation of innovation through diverse human resources ● Average of 20 hours of overtime per person per month or less ● Take paid leave 20 days per person per year or more ● Women in managerial positions 6.6% ● New graduate recruitment 30% female, 5% foreign nationals ● Diversity in decision-making layer: 5 diverse board directors, executive officers and managing officers (including 2 women) ● Male employees taking childcare leave 100%	● Continue implementation of FY2023 plan to create an organization where diverse human resources can play an active role	1
2	Ongoing implementation of diverse education and training programs to develop human resources	● Contribute to the development of each country through the activities of the trained employees in each region	Early development of global human resources ● Ratio of employees with overseas experience within 7 years of employment 39%	Early development of global human resources ● Ratio of employees with overseas experience within 7 years of employment 50% or more	● Implement plans to further strengthen early development of global human resources	2
3	Establish a workplace with zero accidents by raising awareness of health and safety	● Employees are active in various areas of society through the enhancement of their mental and physical health	Initiatives for workplace safety and employee health maintenance ● Lost-workday accidents 0 ● Utilized specialists to implement measures aimed at addressing issues in light of workplace stress check analyses and conduct efforts to reduce the number of high-stress employees ● Maintain certification as Health & Productivity Management Outstanding Organization ● Implemented measures tailored to business sites and workplaces	Initiatives for workplace safety and employee health maintenance ● Lost-workday accidents 0 ● Reduce ratio of employees identified during stress checks as experiencing high stress to 10% or less ● Maintain certification as Health & Productivity Management Outstanding Organization ● Steadily implement measures tailored to business sites and workplaces	● Continue to implement the FY2023 plan to achieve a better workplace environment	3

Action Targets 1 Promote diversity management

1 Creating an organization in which diverse human resources can play an active role that leads to innovation

FY2022 Results

We will deepen workstyle reforms efforts, develop and utilize diverse human resources, and create innovations as key measures for achieving growth.

- We attempted to foster a workplace culture that recognizes the diversity of each and every employee while enhancing mechanisms enabling employees to fully demonstrate their capabilities.

  - We expanded networking opportunities through Female Manager Meetings and other events to raise awareness among women. In past leadership training where participants learned from role models, female employees on their way to becoming managers interviewed various role models within and outside the Company, and created an action statement declaring the mindset and skills they aim to acquire going forward.
  - We promoted the "All-out Childcare Support Project" aiming for 100% of male employees taking childcare leave, and up to now have provided a childcare support website, cooking classes for men, and "Ikuboss" seminars. Efforts were made to change the mindset of all employees and foster a culture in which men can balance work and life while also enjoying childrearing. Many male employees declared their desire to support their partners' career development by balancing family and work.
  - Although there is no gender-based wage differences in the Company's personnel treatment system, the reason for the wage difference between men and women is the high ratio of male employees in upper management positions and the higher ratio of female employees working shorter hours than men. We believe that promoting women to more senior positions will help to eliminate wage differences between men and women. Please refer to our website for more information.
  - In order to maximize the performance of organizations and individuals, we promote "hybrid work," a flexible work and leave system enabling employees to autonomously choose their own workstyles without restrictions on where or when they work.
  - As part of our efforts to attract human resources with diverse careers, we hold online events for experienced professionals and distribute videos introducing the Company. After viewing these videos, many people become interested in Hitachi High-Tech, which leads to subsequent recruitment activities.

Action Targets 2 Promote diverse cultivation of human resources

2 Ongoing implementation of diverse education and training programs to develop human resources

FY2022 Results

Promoting the development of autonomous and global human resources through various types of education and training

- We organize and systematically implement educational programs based on supporting the growth of self-directed human resources who learn, think, and act on their own as well as supporting the activities of diverse human resources. The following activities were carried out in FY2022.

  - Developed online learning materials enabling employees to learn the latest knowledge and skills
  - Introduced a tool supporting one-on-one meetings, in which managers share career goals with their subordinates and support their growth.

- Rapidly developing human resources able to support business from a global perspective

  We continue to dispatch young employees overseas. The ratio of employees with overseas experience within seven years of joining the Company decreased to 39% in FY2022, compared to 51% in FY2021, as the number of employees dispatched was reduced in line with to the limited number of regions to which they could be dispatched due to the pandemic. Going forward, we will consider implementing virtual training programs enabling participants to gain experience without having to travel to other locations.

- Received a silver medal in the lathe category and fighting spirit awards in the milling machine and mechatronics categories at the 60th National Skills Competition

  In FY2022, eight employees participated in four category competitions at the 60th National Skills Competition, winning a silver medal in the lathe category and fighting spirit awards in the milling machine and mechatronics categories. Three employees also participated in three categories at the 42nd National Skill Competition for the Disabled (National Abilympics). For many years, we have been sending our employees to compete in the National Skills Competition and the National Abilympics with the aim of passing on skills and fostering young engineers by linking the challenge of competing in the National Skills Competition to the starting point of manufacturing.

National Skills Competition award winners

Action Targets 3 Ensure healthy, safe workplace environments

3 Establish a workplace with zero accidents by raising awareness of health and safety

FY2022 Results

Creating open and safe workplace environments through continuous health and safety activities aimed at raising employee awareness and promoting health measures for all employees

- In FY2022, there were zero lost-workday accidents.
- Based on the results of stress checks conducted on all employees, we provide support for those determined to be highly stressed in conjunction with occupational health care staff as well as by utilizing outside experts to propose remedial measures to address these issues, and provide support in accordance with employee circumstances.
- To enhance employee mental health care and improve the openness of the workplace, we provide training and education for managers aimed at improving their ability to understand and detect the mental state of their subordinates.
- We have resumed on-site safety diagnostics, which we had suspended for some time due to the pandemic. In FY2022, we conducted safety diagnostics in South Korea and the United States in addition to sites in Japan. We also conducted safety awareness surveys during safety diagnostics. Employee awareness of safety is gradually increasing, and we are starting to see signs of the import and outcomes of regularly conducting safety diagnostics.
- Hitachi High-Tech has been certified as Health & Productivity Management Outstanding Organization 2023 (Large Enterprise Category), joint initiative of the Ministry of Economy, Trade and Industry, and the Nippon Kenko Kaigi. This is the sixth consecutive we have been certified as an Health & Productivity Management Outstanding Organization, with eight companies in the overall Hitachi High-Tech Group, including seven domestic Group companies, certified as a Health & Productivity Management Outstanding Organization 2023.
- With the pandemic subsiding, in-person and remote work are being used in tandem. As society in general is concerned about the resulting lack of communication among employees, going forward, we will consider measures to balance the merits of remote and in-person work in an attempt to facilitate smoother communication among employees.

External Evaluations

Selected for Top-ranked A List in CDP Climate Change Scoring

We have been selected as an A List Company for 2022 by CDP, a non-governmental organization engaged in global environmental research and information disclosure, out of more than 10,000 companies that were subject to scoring, in recognition of our efforts toward climate change and transparent information disclosure. Although Hitachi High-Tech registered with the CDP in 2010 and has maintained efforts to decarbonize and coexist in harmony with nature, this is the first time that we have been selected for the highest ranking in the area of climate change disclosure. We have also been selected as a CDP Supplier Engagement Leader, the highest rating in the CDP Supplier Engagement Rating (SER). This places Hitachi High-Tech among the top 8% of companies evaluated for their supplier engagement efforts.

New Diversity Management Selection 100

The Ministry of Economy, Trade and Industry promotes the New Diversity Management Selection 100 program to expand the base of companies that engage in diversity management by presenting awards to companies that are creating value by leveraging the capabilities of their diverse human resources. Hitachi High-Tech's ongoing efforts to improve the working environment and foster an organizational culture, including the development of systems facilitating diverse workstyles and initiatives supporting female employee career development, were recognized as diversity management achievements leading to the expansion of business performance.

Eruboshi Certification

Eruboshi certification is conferred by the Minister of Health, Labor and Welfare to companies that have made outstanding efforts after formulating and submitting action plans for the promotion of women's active participation in the workplace. Hitachi High-Tech satisfied criteria in all five evaluation items and received the third highest evaluation.

PRIDE Index Gold Award

Hitachi High-Tech received the Gold Award in the PRIDE Index for sexual minority initiatives certified by work with Pride (wwP), a voluntary organization that supports diversity management related to LGBTQIA+. To further deepen our understanding of LGBTQIA+, we will respect diverse sensitivities and values and further promote the creation of workplaces where employees with various attributes can play active roles.

J-Win Diversity Award

At the 2022 J-Win Diversity Awards held by NPO J-Win, Hitachi High-Tech received the Basic Achievement Grand Prize in the Company Prize: Basic Category. The J-Win Diversity Awards recognize leading companies that promote diversity and inclusion (D&I), and are intended to accelerate the promotion of D&I in Japanese companies. Within the Company Prize segment, we received the Basic Achievement Grand Prize, the top award in the Basic Category, which is conferred to companies that exemplify the significance and purpose of women's active participation, set targets, and establish mechanisms and systems that are put into practice as a first step in promoting D&I.

Platinum Kurumin Certification

Platinum Kurumin certification is granted to companies that have acquired Kurumin certification under the Act on Advancement of Measures to Support Raising Next-Generation Children that are engaged in higher-level efforts as companies that support childcare. Hitachi High-Tech is working to create systems and a culture that enables all employees to continue playing active roles long after various life events by establishing systems that support a balance between work and childcare that exceed legal requirements, diversifying childcare leave systems, and implementing the All-Out Childcare Support Project aiming for 100% male employee participation in childcare leave.

2023 Health and Productivity Management Organization (Large Enterprise Category) Certification

Hitachi High-Tech has been certified as a 2023 Health and Productivity Management Organization (Large Enterprise Category), jointly implemented by the Ministry of Economy, Trade and Industry, and the Nippon Kenko kaigi. This is the sixth consecutive year that we been certified as a Health and Productivity Management Organization, and along with seven domestic Group companies,* a total of eight Hitachi High-Tech Group companies have been certified as a 2023 Health and Productivity Management Organizations.

These certifications are mainly based on evaluations recognizing senior management internal communications aimed at promoting health management, an increase in consultation rates for specific health guidance, and in addition to efforts related to the prevention of infections during the pandemic, the promotion of second-hand smoke countermeasures.

* Seven domestic Group companies: Hitachi High-Tech Manufacturing & Service Corporation, Hitachi High-Tech Science Corporation, Hitachi High-Tech Nexus Corporation, Hitachi High-Tech Fielding Corporation, Hitachi High-Tech Kyushu Corporation, Hitachi High-Tech Solutions Corporation, and Hitachi High-Tech Support Corporation

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